Join Your Colleagues in Orlando for ACG 2008
The Premier GI Clinical Event of the Year!

Dear Colleagues,

Welcome to ACG 2008, ACG's Annual Scientific Meeting and Postgraduate Course, the premier GI clinical event of the year. The Postgraduate Course Directors and ACG's Educational Affairs Committee, along with Friday Course Directors, have brought together internationally-recognized experts and rising stars in the field. This year's program promises to deliver the latest clinical updates in gastroenterology and hepatology, plus discuss what is on the horizon that may impact your practice.

For the Postgraduate Course, a new session on Obesity has been added. In addition, educational programming for the Annual Scientific Meeting has also been devoted to this important topic. There is no end in sight to the obesity epidemic but there is much we can learn regarding GI disorders complicated by obesity, medical management of obesity and surgical interventions and post-surgery complications. My work as ACG President this year has focused on obesity, and ACG has been actively involved in several initiatives. We will be announcing some of these initiatives during the meeting.

Again this year, ACG will offer Poster Rounds with the Experts. Each day of the poster sessions, well-known experts will lead attendees around to posters of interest. This is a great opportunity to discuss posters, garner insight from the expert, and make new contacts with other attendees in a low-key, relaxed atmosphere. Poster Rounds with the Experts runs from Sunday–Tuesday. You’ll find more information included at ACG Registration.

Also this year, ACG will offer the second annual Allied Health Professionals Symposium on Sunday, 1:30 pm-5:15 pm. We invite you to join your support staff of physician assistants, nurse practitioners and nurses at the symposium. All attendees of the Allied Health Professionals Symposium are also invited to explore the Exhibit Hall at the end of the program.

Don't miss the social event of the meeting, the President's Reception, which will take place on Monday evening from 7:00 pm-9:00 pm in Osceola Ballroom C. This year's reception is sponsored by Eisai, Inc. ACG thanks Eisai for their support of this event.

In closing, I want to thank you for the opportunity to serve you this year. It has been my great pleasure to be the ACG President and I welcome everyone to the ACG 2008 Annual Scientific Meeting and Postgraduate Course.

Sincerely,

Amy E. Foxx-Orenstein, DO, FACG
ACG President

For more information on ACG 2008 and to register, visit www.acgmeetings.org
<table>
<thead>
<tr>
<th>Thursday, October 2</th>
<th>Saturday, October 4</th>
<th>Sunday, October 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Registration</strong></td>
<td><strong>Continental Breakfast</strong></td>
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<tr>
<td>City Hall Lobby</td>
<td>Osceola Foyer</td>
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<tr>
<td><strong>Postgraduate Course</strong></td>
<td>Osceola Ballroom</td>
<td><strong>Postgraduate Course</strong></td>
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<td>Osceola Ballroom</td>
<td>7:50 am-5:00 pm</td>
<td>Osceola Ballroom</td>
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<tr>
<td><strong>ACG Store</strong></td>
<td>10:00 am-10:30 am</td>
<td>7:50 am-5:00 pm</td>
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<tr>
<td>City Hall Lobby</td>
<td><strong>Optional Learning Luncheons</strong></td>
<td><strong>Auxiliary Registration/ Hospitality Suite</strong></td>
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<tr>
<td>8:00 am-4:30 pm</td>
<td>(Ticket required. See ticket for room assignment.)</td>
<td>St. George 104 Room</td>
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<td></td>
<td>12:20 pm-1:35 pm</td>
<td>8:00 am-12:00 noon</td>
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<tr>
<td><strong>Career Opportunities for Women in GI Luncheon</strong></td>
<td><strong>Trainees Luncheon</strong></td>
<td><strong>Trainees Luncheon</strong></td>
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<tr>
<td>Osceola Ballroom A</td>
<td>Miami 1 Room</td>
<td>(Ticket required.)</td>
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<td>7:00 am-12:35 pm</td>
<td>12:20 pm-1:35 pm</td>
<td>Miami 1 Room</td>
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<td><strong>GI Jeopardy</strong></td>
<td>12:20 pm-1:35 pm</td>
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<td>Miami 1 Room</td>
<td>Sun Ballroom C</td>
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<td>5:15 pm-6:45 pm</td>
<td><strong>Alumni Receptions</strong></td>
<td><strong>Allied Health Professionals Dessert Reception</strong></td>
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<td><strong>Poster Sessions</strong></td>
<td><strong>Poster Sessions</strong></td>
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<td>Florida Exhibit Halls</td>
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<td><strong>Exhibit Hall Opens</strong></td>
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<td>12:15 pm-2:00 pm</td>
<td>3:30 pm-7:00 pm</td>
<td>5:15 pm-5:45 pm</td>
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<tr>
<td><strong>FAQ Session – Colon</strong></td>
<td><strong>FAQ Session – Endoscopy</strong></td>
<td><strong>FAQ Session – Colon</strong></td>
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<td>Florida Exhibit Halls</td>
<td>Florida Exhibit Halls</td>
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<td>6:00 pm-6:30 pm</td>
<td>12:30 pm-1:00 pm</td>
<td>1:15 pm-1:45 pm</td>
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<td><strong>FAQ Session – Liver</strong></td>
<td><strong>FAQ Session – Liver</strong></td>
<td><strong>FAQ Session – Liver</strong></td>
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<td>Florida Exhibit Halls</td>
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<td>12:30 pm-1:00 pm</td>
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<thead>
<tr>
<th>Friday, October 3</th>
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<tbody>
<tr>
<td><strong>Continental Breakfast</strong></td>
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<tr>
<td>6:30 am-8:00 am</td>
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<tr>
<td><strong>Registration</strong></td>
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<td>6:30 am-8:00 pm</td>
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<tr>
<td><strong>Pathology &amp; Imaging in the Evaluation of Gastrointestinal Disease Course</strong></td>
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<tr>
<td>7:00 am-12:35 pm</td>
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<tr>
<td><strong>Practice Management Course</strong></td>
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<tr>
<td>7:50 am-4:45 pm</td>
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<tr>
<td><strong>ASGE-Sponsored Endoscopy Course</strong></td>
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<tr>
<td>8:05 am-5:40 pm</td>
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<tr>
<td><strong>What’s New in GI Pharmacology Course</strong></td>
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<tr>
<td>1:45 pm-4:45 pm</td>
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<tr>
<td><strong>ACG Store</strong></td>
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<tr>
<td>2:00 pm-6:00 pm</td>
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<tr>
<td><strong>Recertification Preparation and Update Course</strong></td>
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<tr>
<td>6:00 pm-9:00 pm</td>
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<tr>
<td><strong>New! FAQ Session – Functional Bowel Disorders</strong></td>
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<tr>
<td>5:15 pm-6:45 pm</td>
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<table>
<thead>
<tr>
<th>Monday, October 6</th>
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<tbody>
<tr>
<td><strong>Registration</strong></td>
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<td>7:00 am-5:15 pm</td>
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<tr>
<td><strong>Auxiliary Registration/ Hospitality Suite</strong></td>
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<td>8:00 am-12:00 noon</td>
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<td><strong>ACG Store</strong></td>
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<tr>
<td>8:00 am-4:30 pm</td>
</tr>
<tr>
<td><strong>Job Forum</strong></td>
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<tr>
<td>8:00 am-5:00 pm</td>
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<tr>
<td><strong>Annual Meeting</strong></td>
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<tr>
<td>8:00 am-5:15 pm</td>
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<tr>
<td><strong>Presidential Address</strong></td>
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<tr>
<td>9:00 am-9:25 am</td>
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<tr>
<td><strong>Exhibit Hall</strong></td>
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<td>9:30 am-4:00 pm</td>
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<tr>
<td><strong>Poster Sessions</strong></td>
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<tr>
<td>10:30 am-4:00 pm</td>
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<tr>
<td><strong>Lunch Break</strong></td>
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<tr>
<td>12:15 pm-2:00 pm</td>
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<tr>
<td><strong>FAQ Session – Endoscopy</strong></td>
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<tr>
<td>12:30 pm-1:00 pm</td>
</tr>
<tr>
<td><strong>FAQ Session – Liver</strong></td>
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<tr>
<td>1:15 pm-1:45 pm</td>
</tr>
</tbody>
</table>
Thanks to Our Sponsors

ACG thanks the following sponsors of ACG 2008 exhibit hall events, networking events, meeting amenities and services, and meeting promotional material.

Abbott
AstraZeneca
Braintree Laboratories
Dannon Company
Eisai, Inc.
Ganeden Biotech
Plus Diagnostics
Procter & Gamble
Prometheus Labs
QDx Pathology Services
Salix Pharmaceuticals
Takeda Pharmaceuticals North America
UCB, Inc.

New Procedures to Claim CME

Attendees at ACG’s educational activities in Orlando may claim CME in one of two ways:

1. Visit one of the CME kiosks located in the Gaylord Palms Hotel and Convention Center. Print your CME certificate, or email yourself a copy of the certificate to print later.

OR

2. From your own computer, visit the ACG website at www.acg.gi.org to complete your evaluation and print your certificate.
ACG Registration is in the CITY HALL LOBBY

Speaker Ready is in the CAPTIVA ROOM

Job Forum is in the GAINESVILLE ROOM

Press Room is in the DAYTONA ROOM

*Saturday & Sunday Optional Learning Lunches are in the Osceola 1 - 6 rooms, Sarasota 1 - 3 rooms, and Naples 1 - 3 rooms.

*Tuesday Optional Breakfasts will be in Osceola 1, Naples 1 - 3 rooms, and Sarasota 1 - 2 rooms.

*Wednesday Optional Breakfasts will be in the Osceola 1 - 4 rooms, and the Sarasota 1 - 3 rooms.

*specific room locations will be listed on event ticket.

Events in the SUN BALLROOM:
Practice Management Course (Friday)
ASGE Endoscopy Course (Friday)
Annual Scientific Meeting (Monday-Wednesday)

Events in the OSCEOLA BALLROOM:
Pathology & Imaging Course (Friday)
GI Pharmacology Course (Friday)
Postgraduate Course (Saturday & Sunday)
Presidential Reception (Monday)
Simultaneous Symposia (Tuesday)
### Event Locations — Friday, October 3

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tr>
<td>6:45 am–8:00 am</td>
<td>Continental Breakfast</td>
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<tr>
<td>7:00 am–12:35 pm</td>
<td>Pathology and Imaging in the Evaluation of GI Disease Course</td>
<td>Osceola Ballroom A</td>
<td>36</td>
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<td></td>
<td>Registration required. Visit ACG Registration to register, however, session may be sold out.</td>
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<tr>
<td>7:50 am–4:45 pm</td>
<td>Practice Management Course</td>
<td>Sun Ballroom A</td>
<td>29</td>
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<tr>
<td>8:05 am–5:40 pm</td>
<td>ASGE-sponsored Endoscopy Course</td>
<td>Sun Ballroom C</td>
<td>32</td>
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<tr>
<td>1:45 pm–4:45 pm</td>
<td>What's New in GI Pharmacology Course</td>
<td>Osceola Ballroom A</td>
<td>38</td>
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<tr>
<td>6:00 pm–9:00 pm</td>
<td>Recertification Preparation and Update Course</td>
<td>Miami Room</td>
<td>34</td>
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<tr>
<td></td>
<td>Registration required. Visit ACG Registration to register, however, session may be sold out.</td>
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### Event Locations — Saturday, October 4

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<th>Time</th>
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<tr>
<td>7:00 am–7:45 am</td>
<td>Continental Breakfast</td>
<td>Osceola Foyer</td>
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<tr>
<td>7:50 am–5:00 pm</td>
<td>Postgraduate Course</td>
<td>Osceola Ballroom</td>
<td>41</td>
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<tr>
<td>10:00 am–10:30 am</td>
<td>David Sun Lecture</td>
<td>Osceola Ballroom</td>
<td>17</td>
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<tr>
<td></td>
<td>The Future Direction of IBD Care – <em>William J. Sandborn, MD, FACG</em></td>
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<tr>
<td>12:20 pm–1:35 pm</td>
<td>Optional Learning Luncheons</td>
<td>Room location listed on ticket</td>
<td>41</td>
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<tr>
<td></td>
<td>$50 per session. Purchase tickets at ACG Registration; some sessions may be sold out.</td>
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<tr>
<td>12:20 pm–1:35 pm</td>
<td>Career Opportunities for Women in GI Luncheon</td>
<td>Miami 1 Room</td>
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<tr>
<td></td>
<td>Advanced registration required.</td>
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<tr>
<td>5:15 pm–6:45 pm</td>
<td>GI Jeopardy Competition • All attendees are invited</td>
<td>Sun Ballroom C</td>
<td>16</td>
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### Event Locations — Sunday, October 5

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<td>Continental Breakfast</td>
<td>Osceola Foyer</td>
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<tr>
<td>7:50 am–5:00 pm</td>
<td>Postgraduate Course</td>
<td>Osceola Ballroom</td>
<td>42</td>
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<tr>
<td>12:20 pm–1:35 pm</td>
<td>Optional Learning Luncheons</td>
<td>Room location listed on ticket</td>
<td>43</td>
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<td></td>
<td>$50 per session. Purchase tickets at ACG Registration; some sessions may be sold out.</td>
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<tr>
<td>12:20 pm–1:35 pm</td>
<td>Trainees Luncheon</td>
<td>Miami 1 Room</td>
<td>16</td>
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<td></td>
<td>$25 person. Visit ACG Registration to purchase ticket, however, event may be sold out.</td>
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<tr>
<td>1:30 pm–5:15 pm</td>
<td>ACG Allied Health Professionals Symposium</td>
<td>Sanibel Room</td>
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<td>Registration required. Visit ACG Registration to register, however, session may be sold out.</td>
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<tr>
<td>3:30 pm–7:00 pm</td>
<td>Exhibit Hall Opens • Poster Sessions Open</td>
<td>Florida Exhibit Halls</td>
<td>61</td>
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<tr>
<td>5:15 pm–5:45 pm</td>
<td>FAQ Session: Functional Bowel Disorders</td>
<td>Florida Exhibit Halls</td>
<td>42</td>
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<tr>
<td>5:15 pm–6:45 pm</td>
<td>Trainees Forum • All Trainees are invited</td>
<td>Naples Room</td>
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<tr>
<td>6:00 pm–6:30 pm</td>
<td>FAQ Session: Colon</td>
<td>Florida Exhibit Halls</td>
<td>42</td>
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<tr>
<td>6:00 pm–7:00 pm</td>
<td>Alumni Receptions • Invitation required</td>
<td>See registration desk</td>
<td>15</td>
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<tr>
<td>6:00 pm–7:00 pm</td>
<td>Women and Minorities in GI Reception • All attendees are invited</td>
<td>St. George 102 Room</td>
<td>15</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
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<tr>
<td>8:00 am</td>
<td>Opening Remarks</td>
<td>Sun Ballroom</td>
<td>48</td>
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<tr>
<td>8:00 am–9:00 am</td>
<td>President’s Plenary Session</td>
<td>Sun Ballroom</td>
<td>48</td>
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<tr>
<td>9:00 am–9:25 am</td>
<td>Presidential Address  Amy E. Foxx-Orenstein, DO, FACG</td>
<td>Sun Ballroom</td>
<td>15</td>
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<tr>
<td>9:25 am–9:30 am</td>
<td>Awards Program</td>
<td>Sun Ballroom</td>
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<td>9:30 am–10:30 am</td>
<td>President’s Plenary Session</td>
<td>Sun Ballroom</td>
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<tr>
<td>10:30 am–11:00 am</td>
<td>Coffee Break • Visit Exhibits</td>
<td>Florida Exhibit Halls</td>
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<td>11:00 am–12:15 pm</td>
<td>Simultaneous Symposia 1</td>
<td>Sun Ballroom C</td>
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<tr>
<td></td>
<td>1A: Treatment of Hepatitis C: What’s New?</td>
<td>Sun Ballroom A</td>
<td>49</td>
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<td></td>
<td>1B: ACG Guidelines: An Evidence Based Approach to IBS</td>
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<tr>
<td>12:15 pm–2:00 pm</td>
<td>Lunch Break • Visit Poster Session</td>
<td>Florida Exhibit Halls</td>
<td>61</td>
</tr>
<tr>
<td>12:30 pm–1:00 pm</td>
<td>FAQ Session: Endoscopy</td>
<td>Florida Exhibit Halls</td>
<td>49</td>
</tr>
<tr>
<td>1:15 pm–1:45 pm</td>
<td>FAQ Session: Liver</td>
<td>Florida Exhibit Halls</td>
<td>49</td>
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<tr>
<td>2:00 pm–2:40 pm</td>
<td>Simultaneous Plenary Sessions</td>
<td>Sun Ballroom A</td>
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<tr>
<td></td>
<td>Session 1: IBD</td>
<td>Sun Ballroom C</td>
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<tr>
<td></td>
<td>Session 2: Pancreatic/Biliary</td>
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<tr>
<td>2:40 pm–3:20 pm</td>
<td>The American Journal of Gastroenterology Lecture</td>
<td>Sun Ballroom A</td>
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<td>Endoscopic Management of Obesity – Christopher Thompson, MD, FACG</td>
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<td>Reoperative Bariatric Surgery, When to and Not to – Michael Sarr, MD</td>
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<tr>
<td>3:20 pm–3:50 pm</td>
<td>Break • Visit Exhibits</td>
<td>Florida Exhibit Halls</td>
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<td>3:50 pm–5:15 pm</td>
<td>Simultaneous Symposia 2</td>
<td>Sun Ballroom A</td>
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<td>2A: Colon Cancer Screening: Getting to Zero Mortality</td>
<td>Sun Ballroom C</td>
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<tr>
<td></td>
<td>2B: Update in Biologic Therapies for IBD</td>
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<tr>
<td>5:30 pm–6:00 pm</td>
<td>Annual Business Meeting • College Members and Fellows invited</td>
<td>Sun Ballroom A</td>
<td>15</td>
</tr>
<tr>
<td>6:00 pm–7:00 pm</td>
<td>International Reception • All International attendees are invited</td>
<td>Osceola Ballroom A</td>
<td>15</td>
</tr>
<tr>
<td>7:00 pm–9:00 pm</td>
<td>President’s Reception • All attendees are invited</td>
<td>Osceola Ballroom C</td>
<td>15</td>
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### Event Locations — Tuesday, October 7

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<th>Time</th>
<th>Session</th>
<th>Room Location</th>
<th>Page</th>
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<tbody>
<tr>
<td>6:45 am–8:30 am</td>
<td>Optional Breakfast Sessions&lt;br&gt; $40 per session. Purchase tickets at ACG Registration; some sessions may be sold out.</td>
<td>Room location listed on ticket</td>
<td>50</td>
</tr>
<tr>
<td>8:30 am–10:00 am</td>
<td><strong>Plenary Session:</strong> Esophagus/IBD&lt;br&gt; <strong>J. Edward Berk Distinguished Lecture</strong>&lt;br&gt; Advances in Colonoscopy: New Platforms, New Techniques, New Imaging Technology: What Do They Mean?&lt;br&gt; Douglas K. Rex, MD, FACG</td>
<td>Sun Ballroom</td>
<td>51</td>
</tr>
<tr>
<td>10:00 am–10:30 am</td>
<td><strong>Simultaneous Sessions 3</strong>&lt;br&gt; 3A: CT Colonography: Current Controversies&lt;br&gt; 3B: The Hepatology Consult&lt;br&gt; 3C: The Problematic Pancreas</td>
<td>Sun Ballroom C</td>
<td>51</td>
</tr>
<tr>
<td>10:30 am–11:00 am</td>
<td><strong>Coffee Break • Visit Exhibits</strong></td>
<td>Florida Exhibit Halls</td>
<td>444</td>
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<tr>
<td>11:00 am–12:15 pm</td>
<td><strong>Simultaneous Symposia 3</strong>&lt;br&gt; 3A: CT Colonography: Current Controversies&lt;br&gt; 3B: The Hepatology Consult&lt;br&gt; 3C: The Problematic Pancreas</td>
<td>Sun Ballroom C</td>
<td>51</td>
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<tr>
<td>12:15 pm–2:00 pm</td>
<td><strong>Lunch Break • Visit Poster Session</strong></td>
<td>Florida Exhibit Halls</td>
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<tr>
<td>12:30 pm–1:00 pm</td>
<td><strong>FAQ Session:</strong> IBD</td>
<td>Florida Exhibit Halls</td>
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<tr>
<td>1:15 pm–1:45 pm</td>
<td><strong>FAQ Session:</strong> Esophagus</td>
<td>Florida Exhibit Halls</td>
<td>52</td>
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<td>2:00 pm–2:45 pm</td>
<td><strong>Emily Couric Memorial Lecture</strong>&lt;br&gt; Why Has Adenocarcinoma Moved from the Stomach to the Esophagus and Where Does Sex Come In to It All?&lt;br&gt; Kenneth E.L. McColl, MD</td>
<td>Sun Ballroom A</td>
<td>17</td>
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<tr>
<td>2:45 pm–4:15 pm</td>
<td><strong>Simultaneous Plenary Sessions</strong>&lt;br&gt; Session 1: Colon / Functional Bowel Disorders / Pediatrics&lt;br&gt; Session 2: Endoscopy / Stomach</td>
<td>Sun Ballroom A</td>
<td>52</td>
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<td>4:15 pm–4:45 pm</td>
<td><strong>Break • Visit Exhibits</strong></td>
<td>Florida Exhibit Halls</td>
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<td>4:45 pm–6:00 pm</td>
<td><strong>Simultaneous Symposia 4</strong>&lt;br&gt; 4A: Current Issues in GI Bleeding&lt;br&gt; 4B: Dysplasia Dilemmas in IBD&lt;br&gt; 4C: Obesity: What's the Big Deal?</td>
<td>Sun Ballroom A</td>
<td>52</td>
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<td>Osceola Ballroom C</td>
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### Event Locations — Wednesday, October 8

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Room Location</th>
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<tbody>
<tr>
<td>6:45 am–8:30 am</td>
<td>Optional Breakfast Sessions&lt;br&gt; $40 per session. Purchase tickets at ACG Registration; some sessions may be sold out.</td>
<td>Room location listed on ticket</td>
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<tr>
<td>8:30 am–10:15 am</td>
<td><strong>Simultaneous Plenary Sessions</strong>&lt;br&gt; Session 1: Liver&lt;br&gt; Session 2: Outcomes / Colorectal Cancer Prevention / Small Intestine</td>
<td>Sun Ballroom A</td>
<td>54</td>
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<tr>
<td>10:15 am–10:45 am</td>
<td><strong>David Y. Graham Lecture</strong>&lt;br&gt; Colon Ischemia: Respice, Adspice, Prospice&lt;br&gt; Lawrence J. Brandt, MD, MACG</td>
<td>Sun Ballroom A</td>
<td>17</td>
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<tr>
<td>10:45 am–11:15 am</td>
<td><strong>Coffee Break • Visit Exhibits</strong></td>
<td>Florida Exhibit Halls</td>
<td>444</td>
</tr>
<tr>
<td>11:15 am–12:30 pm</td>
<td><strong>Simultaneous Symposia 5</strong>&lt;br&gt; 5A: What's New and Old in Barrett's Esophagus&lt;br&gt; 5B: The Gut Microbiota: Friend and Foe</td>
<td>Sun Ballroom A</td>
<td>56</td>
</tr>
<tr>
<td>12:30 pm</td>
<td><strong>Meeting Adjourns</strong></td>
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General Information
The 73rd Annual Scientific Meeting of the American College of Gastroenterology will be conducted on Monday, Tuesday and Wednesday, October 6–8, 2008, in conjunction with the Annual Postgraduate Course on Saturday and Sunday, October 4–5, 2008, at the Gaylord Palms Resort & Convention Center in Orlando, Florida. The optional Annual Practice Management Course will be held on Friday, October 3 for a full day of practice management tips. Four additional optional programs will be held on Friday, October 3: (1) a half-day Pathology and Imaging course, (2) a full-day ASGE-sponsored endoscopy course, (3) a half-day GI Pharmacology course, and (4) a half-day course focusing on recertification preparation. There will also be an optional program on Sunday, October 5, the Allied Health Professionals Symposium.

Registration (City Hall Lobby)
Registration will be open in the City Hall Lobby of the Gaylord Palms Resort & Convention Center during the following hours:
- Thursday, October 2 .............. 6:00 pm - 8:00 pm
- Friday, October 3 ................. 6:30 am - 8:00 pm
- Saturday, October 4 ............. 7:00 am - 5:15 pm
- Sunday, October 5 ............... 7:00 am - 6:30 pm
- Monday, October 6 .............. 7:00 am - 5:15 pm
- Tuesday, October 7 .......... 6:45 am - 6:00 pm
- Wednesday, October 8 ....... 6:45 am - 12:30 pm

Meeting Materials
Meeting materials (including name badges and optional event tickets) will be available for pick-up on-site at the ACG Registration Desk beginning at 6:00 pm on Thursday, October 2 in the City Hall Lobby.

Cancellation
Written notice of cancellation and requests for refunds must be received by the College’s office by September 21, 2008. After this date, no refunds will be possible. Registration cancellations are not accepted by telephone. An explanation must be provided in writing.

Annual Scientific Meeting (Sun Ballroom)
There is no registration fee for ACG Members (including FACG and MACG), Residents/Trainee/Candidate Members, and Allied Health Members. In addition, Non-Member Residents/Trainees will have their registration fee waived if they provide a letter from their Program Director indicating they are currently in training. Guests/Non-Member Physicians/Exhibitors are required to submit a registration fee. Non-Member Allied Health Professionals are also required to submit a registration fee. Tickets for the optional breakfast sessions on Tuesday and Wednesday may be purchased for $40. Please visit the ACG Registration Desk in the City Hall Lobby to purchase tickets. All registrants of the Annual Scientific Meeting will receive a copy of the meeting syllabus. Attendees of the optional Breakfast Sessions will receive a syllabus which includes the presentations for all breakfast sessions. For course details, see page 48.

Annual Postgraduate Course (Osceola Ballroom)
A comprehensive syllabus with a separate self-assessment examination will be included. The Postgraduate Course again offers registrants the opportunity to participate in the optional Learning Luncheon programs. There are a limited number of participants who may attend each Learning Luncheon. There is a separate charge of $50 per ticket for the Learning Luncheons. Please visit the ACG Registration Desk in the City Hall Lobby to purchase tickets. For course details, see page 41.

Optional Friday Courses – Friday, October 3
Optional Sunday Course – Sunday, October 5
Details for optional Friday and Sunday courses begin on page 27.

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The American College of Gastroenterology designates these educational activities for a maximum as noted below of AMA PRA Category 1 Credits™. Each physician should claim credit commensurate with the extent of their participation in the activity.

- Annual Scientific Meeting .................. 16.25
- Postgraduate Course ..................... 13.5
- Practice Management Course .......... 6.75
- Pathology and Imaging Course .......... 5
- What's New in GI Pharmacology? ...... 3
- Recertification Course ..................... 3
- Allied Health Professionals Symposium .... 3

Exhibit Hall (Florida Exhibit Halls)
The science and technology of medicine is ever changing and advancing the practice of gastroenterology. Showcasing these latest advances in technology and therapeutics is the ACG 2008 Exhibit Hall where more than 150 companies will display and demonstrate their products and services. With the variety of exhibitors expected to participate, there are certain to be displays of interest for all attendees. Companies who exhibit include pharmaceuticals manufacturers, medical instrument suppliers, research companies, technology companies, publishers, non-profit organizations, recruiters and many others.

Exhibit Hall Scavenger Hunt. Again this year ACG will offer the Exhibit Hall Scavenger Hunt. The vast amount of new information available in the Hall is reason enough to visit, but attendees now have the opportunity to be entered into a drawing to win fabulous prizes by visiting certain areas of the Hall. The Exhibit Hall will be open from Sunday, October 5 to Wednesday, October 8. Don’t miss the chance to benefit your practice by exploring what the Exhibit Hall has to offer, and have some fun while doing so! Exhibit Hall hours are:

- Sunday, October 5 .......... 3:30 pm-7:00 pm
- Monday, October 6 ....... 9:30 am-4:00 pm
- Tuesday, October 7 ...... 9:30 am-4:00 pm
- Wednesday, October 8 .. 9:30 am-12:00 noon
The ACG Store (City Hall Lobby)
Postgraduate Course and Annual Meeting syllabi, as well as other educational materials will be available for purchase at the ACG Store. ACG logo items, such as jackets, golf shirts, mugs, and mouse pads will also be available. ACG Store hours are:

- Friday, October 3: 2:00 pm - 6:00 pm
- Saturday, October 4: 8:00 am - 4:30 pm
- Sunday, October 5: 8:00 am - 4:30 pm
- Monday, October 6: 8:00 am - 4:30 pm
- Tuesday, October 7: 8:00 am - 4:30 pm
- Wednesday, October 8: 8:00 am - 11:15 am

Americans With Disability Act (ADA)
Attendees at the ACG Annual Scientific Meeting and Postgraduate Course who need additional reasonable accommodations or who have special needs should contact the ACG office no later than September 15, 2008.

On-Site Child Care Information
Attendees interested in child care should sign up directly with the Gaylord Palms Resort & Convention Center which has an on-site daycare center. For information, contact La Petite Kids Station at 1-866-KIDS-STATION or 407-586-2505.

The Scientific Poster Sessions (Florida Exhibit Halls)
The Scientific Poster Programs will be conducted in the Exhibit Hall of the Gaylord Palms Resort & Convention Center during the following hours:

- Sunday, October 5: 3:30 pm - 7:00 pm
- Monday, October 6: 10:30 am - 4:00 pm
- Tuesday, October 7: 10:30 am - 4:00 pm
- Wednesday, October 8: 10:30 am - 4:00 pm

Speaker Ready Room (Captiva Room)
All faculty members are requested to check in their slides at least 60 minutes prior to the opening of the session in which they are to speak. The Speaker Ready Room will be open beginning on Thursday, October 2 from 6:00 pm – 8:00 pm, on Friday, October 3 from 6:00 am – 9:00 pm, on Saturday, October 4 through Monday, October 6 from 7:00 am – 5:00 pm, on Tuesday, October 7 from 5:30 am – 6:00 pm and on Wednesday, October 8 from 5:30 am – 12:30 pm.

Press Room (Daytona Room)
The Press Room will be open on the following days: Sunday, October 5 from 3:00 pm – 5:00 pm; Monday, October 6 and Tuesday, October 7 from 7:00 am – 5:00 pm; and Wednesday, October 8 from 8:00 am – 12:30 pm. Authors are requested to check the Press Room for interviews. No announcements will be made in the Scientific Sessions.

ASGE Learning Center (Florida Exhibit Halls)
The American College of Gastroenterology is once again pleased to have the opportunity to include at its 2008 Annual Scientific Meeting highlights from the ASGE Learning Center. This program will be available in the Exhibit Hall at the Gaylord Palms Resort & Convention Center and will be open on Sunday, October 5 from 3:30 pm – 7:00 pm, on Monday, October 6 and Tuesday, October 7 from 9:30 am – 4:00 pm, and on Wednesday, October 8 from 9:30 am – 12:00 noon.

ACG Internet Café
Stay in touch with the home and office—visit the ACG 2008 Internet Café. E-mail family and colleagues back home and surf the web. The Internet Café is located in the Exhibit Hall, Booth #711.

ACG thanks UCB, Inc. for their support of the ACG Internet Café.

ONLINE Self-Assessment Test
Beginning Monday, October 6, the ONLINE Self-Assessment Test will be available for purchase. The online version of the popular print resource from ACG allows you to answer questions at your own pace. Start and stop the exam as often as you need. Your work is saved each time you access the online test. The test is organized by organ system and includes more than 300 multiple-choice questions. The test tracks your responses, indicates correct answers with detailed discussion and supporting references, and provides your overall/category scores. Complete the test and earn a maximum of 12 AMA PRA Category 1 Credits™. In addition, even after you’ve finished the test you can continue to go back and review, re-read, and check on linked references for further study.

CD-ROMs
Takeda Pharmaceuticals North America, Inc. is proud to sponsor the ACG 2008 Abstracts on CD-ROM. The Abstracts on CD-ROM contains all abstracts in the plenary and poster sessions. You may pick up your complimentary copy at the ACG Exhibit Booth, #611, from Sunday through Wednesday. Limited quantities available. First come, first serve. ACG thanks Takeda for their support of the Abstracts on CD-ROM.

For individuals interested in the Postgraduate Course on CD-ROM, you may place your order at the ACG Store. Cost for the CD-ROM will be $35 (includes shipping). The Postgraduate Course on CD-ROM will be available in early 2009.
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<table>
<thead>
<tr>
<th>Name</th>
<th>Years</th>
<th>City</th>
</tr>
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<tbody>
<tr>
<td>David A. Johnson, MD, FACG</td>
<td>2006-2007</td>
<td>Norfolk, VA</td>
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<tr>
<td>Jack A. Di Palma, MD, FACG</td>
<td>2005-2006</td>
<td>Mobile, AL</td>
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<tr>
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<td>Indianapolis, IN</td>
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<td>Frank L. Lanza, MD, FACG</td>
<td>2002-2003</td>
<td>Houston, TX</td>
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<td>Edgar Achkar, MD, FACG</td>
<td>2001-2002</td>
<td>Cleveland, OH</td>
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<td>Rowen K. Zetterman, MD, FACG</td>
<td>2000-2001</td>
<td>Omaha, NE</td>
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<td>Luis A. Baillat, MD, FACG</td>
<td>1999-2000</td>
<td>New Orleans, LA</td>
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<td>Christina M. Surawicz, MD, FACG</td>
<td>1998-1999</td>
<td>Seattle, WA</td>
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<td>Sarks J. Chobanian, MD, FACG</td>
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<td>Knoxville, TN</td>
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<td>Seymour Katz, MD, FACG</td>
<td>1995-1996</td>
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<td>Joel E. Richter, MD, FACG</td>
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<td>William D. Carey, MD, FACG</td>
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<td>Lawrence J. Brandt, MD, FACG</td>
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<td>Bronx, NY</td>
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<td>Arvey I. Rogers, MD, FACG</td>
<td>1991-1992</td>
<td>Miami, FL</td>
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<td>David Y. Graham, MD, FACG</td>
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<td>Houston, TX</td>
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<td>Franz Goldstein, MD, FACG</td>
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<td>Sidney J. Winawer, MD, FACG</td>
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<td>Washington, DC</td>
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<td>Richard B. Farmer, MD, FACG</td>
<td>1978-1979</td>
<td>New York, NY</td>
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<tr>
<td>*F. Warren Nugent, MD, FACG</td>
<td>1976-1977</td>
<td>Burlington, MA</td>
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<td>*J. Edward Berk, MD, FACG</td>
<td>1975-1976</td>
<td>Irvine, CA</td>
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<td>John T. Galambos, MD, FACG</td>
<td>1974-1975</td>
<td>Atlanta, GA</td>
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<td>*Angelo E. Dagradi, MD, FACG</td>
<td>1973-1974</td>
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<td>*Richard H. Marshak, MD, FACG</td>
<td>1972-1973</td>
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<td>*Mitchell A. Spellberg, MD, FACG</td>
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<td>*Joseph E. Walthers, MD, FACG</td>
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<td>*Henry Colcher, MD, FACG</td>
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<td>*David A. Dreiling, MD, FACG</td>
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<td>*John M. McMahon, MD, FACG</td>
<td>1966-1967</td>
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<td>*Maxwell R. Berry, MD, FACG</td>
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<td>*Millon J. Matzner, MD, FACG</td>
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<td>*Louis Ochs, Jr., MD, FACG</td>
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<td>*Joseph Shain, MD, FACG</td>
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<td>*Frank J. Borrelli, MD, FACG</td>
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<td>*C. William Wirtz, MD, FACG</td>
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<td>*Arthur A. Kirchner, MD, FACG</td>
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<td>*James T. Nix, MD, FACG</td>
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<td>*Lynn A. Ferguson, MD, FACG</td>
<td>1954-1955</td>
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<td>*Sigurd W. Johnsen, MD, FACG</td>
<td>1953-1954</td>
<td>San Francisco, CA</td>
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<td>*Felix Cunha, MD, FACG</td>
<td>1952-1953</td>
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<td>*William W. Lermann, MD, FACG</td>
<td>1951-1952</td>
<td>Montreal, Canada</td>
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<td>*C. J. Tidmarsh, MD, FACG</td>
<td>1950-1951</td>
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<td>*William R. Morrison, MD, FACG</td>
<td>1948-1949</td>
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<td>*Anthony Bassler, MD, FACG</td>
<td>1946-1948</td>
<td>New York, NY</td>
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<td>*G. Randolph Manning, MD, FACG</td>
<td>1932-1936</td>
<td>New York, NY</td>
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<tr>
<td>*Isidor L. Ritter, MD, FACG</td>
<td>1932</td>
<td>*Deceased</td>
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There are numerous opportunities at ACG 2008 to network with your peers. Here are a few of the events taking place this year at ACG 2008.

**ACG Presidential Address**

**ACG Presidential Address**
Monday, October 6
9:00 am – 9:25 am • Sun Ballroom

Amy Fox-Orenstein, DO, FACG, ACG President, will address attendees during the Presidential Address to mark the beginning of the Annual Meeting. The President uses this opportunity to welcome members, highlight ACG's accomplishments over the past year, and bid farewell as she passes leadership of the ACG on to the President-Elect.

**Receptions**

**Allied Health Professionals Symposium Dessert Reception**
Sunday, October 5
1:30 pm – 2:00 pm • Sanibel Room

All attendees who registered for the Allied Health Professionals Symposium are invited to attend.

**Women and Minorities in Gastroenterology Reception**
Sunday, October 5
6:00 pm – 7:00 pm • St. George 102 Room

All those interested in the issues facing women and minorities in the GI field are invited to attend.

**International Reception**
Monday, October 6
6:00 pm – 7:00 pm • Osceola Ballroom A

All International attendees are invited to attend and enjoy cocktails and hors d’oeuvres while meeting colleagues.

**President’s Reception**
Monday, October 6
7:00 pm – 9:00 pm • Osceola Ballroom C

The President’s Reception is a light-hearted, social gathering open to all meeting attendees. Join us for refreshments and a chance to network and mingle with your fellow professionals.

**Alumni Receptions**

Every year, several Alumni Receptions are planned for alumni of various medical schools. Invited attendees will receive an invitation by mail from their alumni group.

**Additional Events**

**Career Opportunities for Women in GI Luncheon**
Saturday, October 4
12:20 pm-1:35 pm • Miami 1 Room

The Women in Gastroenterology Committee is hosting a program geared towards medical students and residents who are facing difficult decisions in the future of their medical careers. Female gastroenterologists from a variety of medical backgrounds will address the issues of being a female subspecialist, balancing career and family, and opportunities for women in medicine and more specifically, gastroenterology. Advanced registration is required and space is limited. Please contact Maria Susano in the ACG office at 301-263-9000 for more information.

**ACG Annual Business Meeting**
Monday, October 6
5:30 pm-6:00 pm • Sun Ballroom A

All ACG Members and Fellows (FACG) are encouraged to attend the College’s Annual Business Meeting, where College business will be discussed and voted on. The meeting will be held on Monday, October 6 from 5:30 pm–6:00 pm, immediately following that day’s Annual Scientific Session.

**Women’s Networking, Negotiating and Leadership Skills Workshop**
Friday, October 3
4:00 pm-9:15 pm • Naples 3 Room

The Women in Gastroenterology Committee is hosting a program geared to Senior GI Fellows and Junior Faculty discussing networking, negotiation and leadership skills for women. Advanced registration is required and space is limited. Please contact Maria Susano in the ACG office at 301-263-9000 for more information.

**ACG Auxiliary**

Sunday – Tuesday, 8:00 am-12:00 noon
Wednesday, 8:00 am-11:00 am
Room: St. George 104

The ACG Auxiliary will provide a Hospitality Suite for spouses during the ACG Annual Meeting, offering a place to relax and unwind, review tour and visitor information, or just chat with friends. Registration for Auxiliary members will also be available in the suite.

All Auxiliary members are invited to attend the Auxiliary Board Meeting on Sunday, October 5 at 7:00 am in St. George 106. The Auxiliary will also offer a special tour for adults and children. Please visit the ACG Physician Registration Desk at the Gaylord Palms Resort & Convention Center for more information about the Auxiliary and the tour.
GI Jeopardy: Buzz In for Your Training Program
Saturday, October 4
5:15 pm–6:45 pm • Sun Ballroom C

ACG's favorite quiz show, GI Jeopardy, will be back again in 2008. To become a contestant, you must be a fellow-in-training, but all are welcome to attend the competitive final round, a spirited GI version of the television classic. The competition begins in July with a preliminary round open to all GI training programs. Groups of fellows will take a 45-question online test on a variety of GI organs and diseases. The top five scoring programs will then be invited to send two-person teams to compete in front of a live audience at the 2008 ACG Annual Postgraduate Course. Travel expenses for the teams will be covered by ACG. Last year's GI Jeopardy finalists were supported by more than 300 lively audience members giving the event a real game show atmosphere. Visit the Trainees' section of the ACG website for further details on how to participate. A reception will immediately follow the competition.

Trainees' Luncheon: Finding the Gastroenterology Practice That is Right for You
Sunday, October 5
12:20 pm–1:35 pm • Miami 1 Room

Before you enter your first year of practice, learn from the experiences of two physicians who completed their training in 2005. Dr. Blanche Fung-Liu with Nassau Gastroenterology Associates in New York and Dr. Amy Oxentenko with Mayo Clinic Rochester will discuss quality of life issues, prioritizing busy schedules, private practice vs. academics and how to work part-time.

A separate fee of $25 is required for this event and space is limited. Visit the ACG Registration Desk for registration information.

Trainees’ Forum: Scoping Out Your Future: Finding a Job and Transitioning into Practice
Sunday, October 5
5:15 pm–6:45 pm • Naples Room

If you’re looking for tools to find the right job environment after graduation, the annual Trainees’ Forum may be just what you need. The program will include presentations by experienced physicians from both private practice and academia, and recent graduates who will provide insights into the process of finding a job, obtaining advanced fellowship training beyond 3 year GI fellowships, negotiating a contract, and balancing work and life issues. Available to all trainees in gastroenterology and hepatology at no charge. Don’t miss out on this important information; it can help you take control of your career. Light hors d’oeuvres and beverages will be served.

Job Forum: Where Candidates and Employers Meet
Sunday – Tuesday, October 5–7, 8:00 am–5:00 pm and Wednesday, October 8, 8:00 am–11:15 am • Gainesville Room

Looking for a job? ACG's Job Forum offers valuable networking opportunities. With so many GI professionals convening in Orlando, the ACG Annual Scientific Meeting provides an ideal setting for applicants to share their credentials with employers and to review position openings across the country. The Job Forum includes a mechanism for the exchange of CVs and a message service to connect employers and job candidates.
David Sun Lecture
*The Future Direction of IBD Care*
Saturday, October 4
10:00 am – 10:30 am • Osceola Ballroom

This year’s David Sun Lecture has been awarded to William J. Sandborn, MD, FACG, who will present “The Future Direction of IBD Care.” Held during the Annual Postgraduate Course, The David Sun Lectureship in Postgraduate Education was established by Mrs. Sun in memory of her husband, Dr. David Sun, an outstanding gastroenterologist and investigator. The Lecturer, with a distinguished background in gastroenterology or an allied field, is chosen by the Course Directors of the Postgraduate Program subject to the approval of the Educational Affairs Committee and the Board of Trustees. All who are registered for the Postgraduate Course are invited to attend.

*The American Journal of Gastroenterology Lecture*
*Endoscopic Management of Obesity*
Christopher C. Thompson, MD, FACG
Reoperative Bariatric Surgery, When to and Not to
Michael Sarr, MD
Monday, October 6
2:40 pm – 3:20 pm • Sun Ballroom A

With obesity on the rise, gastroenterologists are faced with new challenges as more patients are seeking surgical treatment options for obesity and as the field of treatment options expands. While bariatric surgery is one option in treating obesity, it is not without complications. The *Journal* lecture will feature two highly regarded experts on the subject. Each will present the latest clinical findings and what is on the horizon. This event is sponsored by ACG and Wiley-Blackwell Publishing, co-publishers of *The American Journal of Gastroenterology*. You can view previous *AJG* lectures and learn more about the upcoming lecture by visiting www.amjgastro.com.

J. Edward Berk Distinguished Lecture
Tuesday, October 7
10:00 am – 10:30 am • Sun Ballroom A

This year’s J. Edward Berk Distinguished Lecture has been awarded to Douglas K. Rex, MD, FACG, who will present “Advances in Colonoscopy: New Platforms, New Techniques, New Imaging Technology: What Do They Mean?” Awarded to individuals prominent in gastroenterology or a related area, the J. Edward Berk Distinguished Lecturer is nominated by the President and the appointment is subject to approval by the Board of Trustees. The lectureship was established in recognition of the significant contributions made by J. Edward Berk, MD, MACG, to clinical gastroenterology during his long and distinguished clinical and academic career. A nationally and internationally renowned physician and teacher, Dr. Berk also served as ACG President from 1975-1976. All who are registered for the Annual Meeting are encouraged to attend.

Emily Couric Memorial Lecture
*Why Has Adenocarcinoma Moved from the Stomach to the Esophagus and Where Does Sex Come in to it All?*
Tuesday, October 7
2:00 pm – 2:45 pm • Sun Ballroom A

Kenneth E.L. McColl, MD has been designated to deliver the Emily Couric Memorial Lecture. The title of his presentation will be “Why Has Adenocarcinoma Moved from the Stomach to the Esophagus and Where Does Sex Come in to it All?” This lecture was developed by the ACG, the Virginia Gastroenterological Society and the Old Dominion Society of Gastroenterology Nurses and Associates to honor Virginia State Senator Emily Couric who died of pancreatic cancer in October of 2001. Senator Couric was a strong advocate for health care issues, particularly in her instrumental work to pass the nation’s first legislation mandating health insurance coverage for colorectal cancer screening. All who are registered for the Annual Meeting are encouraged to attend.

David Y. Graham Lecture
*Colon Ischemia: Respice, Adspice, Prospice*
Wednesday, October 8
10:15 am – 10:45 am • Sun Ballroom A

Lawrence J. Brandt, MD, MACG, is being honored this year as presenter of the David Y. Graham Lecture, “Colon Ischemia: Respice, Adspice, Prospice” The presenter is chosen by the President and is subject to approval by the Board of Trustees. This named lectureship was established in 2004 in recognition of the many contributions to clinical gastroenterology made by David Y. Graham, MD, MACG. The lectureship was made possible through a donation by Otsuka Pharmaceutical Co., Inc., and Meretek Diagnostics, Inc. All who are registered for the Annual Meeting are encouraged to attend.
1994 Thomas Starzl, MD: Gastrointestinal Organ Transplantation for the 1990s – An Outcome Analysis. Can We Afford the Technology in the Era of Cost Containment?
1993 Cyrus E. Rubin, MD, FACG: Small Bowel Pathology
1992 Peter Cotton, MD, FACG: Malignant Obstructive Jaundice: A Real Challenge
1991 Sum P. Lee, MD, FACG: Pathophysiology of Gallstone Formation: Romancing the Stone
1990 Marvin Siesenger, MD: GI Diseases in the Immunocompromised Host
1989 Laszlo Safrany, MD, FACG: Bile Ducts, Common Duct Stones, and Pancreatitis
1988 Scott J. Boley, MD: Colon Ischemia – The First 25 Years
1987 Margot Shiner, MD: Contribution of Electron Microscopy to Our Knowledge of Small Intestinal Disease
1986 D. S. Cooper, MD, FACG: Colon Cancer Screening: When to Start and Stop
1985 Mark S. B. Hanauer, MD, FACG: Use of NSAIDs in a COX-2 Restricted Environment
1984 Amnon Sonnenberg, MD, MSc, FACG: The “Incredibly Simple” Solution to Steroid-Refractory Severe Acute Ulcerative Colitis: Infliximab or Cyclosporine
1983 Arthur Boudreaux, MD, Douglas K. Rex, MD, FACG & Gregory Zuccaro, Jr., MD, FACG: The Use of Anesthesia in Endoscopy – A Critical Examination
1981 Joseph E. Walther, MD, MACG: Colon Transplant: The Role of the Gastroenterologist
1980 Dame Sheila Sherlock, MD: Primary Biliary Cirrhosis
1979 Walter L. Peterson, MD, FACG: Evidence Based Medicine: What does it Mean for Gastroenterology – Present and Future?
1978 Richard L. Wechsler, MD, FACG: Steroid-Resistant Severe Acute Ulcerative Colitis: Infliximab or Cyclosporine
1977 John P. Papp, MD, MACG: The Use of Anesthesia in Endoscopy – A Critical Examination
1976 Henry Colcher, MD, MACG: The Cohort Phenomenon of Peptic Ulcer
1975 James L. A. Roth, MD, FACG: Colon Cancer Screening: When to Start and Stop
1974 Robert R. Bartunek, MD, FACG: Malignant Obstructive Jaundice: A Real Challenge
1973 David D. Janowitz, MD, FACG: Colon Cancer Screening: When to Start and Stop
1972 Milton J. Matzner, MD, FACG: Gastrointestinal Organ Transplantation for the 1990s – An Outcome Analysis. Can We Afford the Technology in the Era of Cost Containment?
2008 ACG Auxiliary Award Recipient

Accuracy of EUS, EBUS, and Combined EUS/EBUS for Lung Cancer Evaluation in Patients with a Negative CT of the Mediastinum
Laith Jamji, MD, Noelia Cubero de Frutos, MD, Kanwar Gill, MD, Seth Gross, MD, Jorge Pascual, MD, Massimo Raimondo, MD, FACG, Timothy Woodward, MD, Julia Crook, PhD, John Odell, MD, Michael Wallace, MD, MPH, FACG, Mayo Clinic, Jacksonville, FL
Paper 10, page 122.

2008 ACG Governors Award Recipients for Excellence in Clinical Research

Complete Barrett's Eradication Endoscopic Mucosal Resection (CBE-EMR): An Effective Treatment Modality for High Grade Dysplasia (HGD) and Intramucosal Carcinoma (IMC) – An American Single Center Experience
J.S. Chennat, V.J. Konda, A.S. Ross, A. Herreros de Tejada, I. Waxman, CERT (Center for Endoscopic Research and Therapeutics), Department of Medicine, University of Chicago Medical Center, Chicago, IL; A. Noffsinger, J. Hart, Department of Surgical Pathology, University of Chicago Medical Center, Chicago, IL; M. Ferguson, M.C. Posner, Department of Surgery, University of Chicago Medical Center, Chicago, IL
Paper 1, page 119.

Family History of Chronic Pancreatitis is Associated with an Increased Risk for Developing Chronic Pancreatitis
Randall Brand, MD, FACG, Dhiraj Yadav, University of Pittsburgh Medical Center, Pittsburgh, PA; Robert Hawes, MD, FACG, Medical University of South Carolina, Charleston, SC; Michelle Anderson, MD, A. Alfred Taubman Health Care Center, Ann Arbor, MI; Peter A. Banks, MD, MACG, Brigham & Women's Hospital, Boston, MA; Michelle Bishop, MD, Mayo Clinic, Jacksonville, Jacksonville, FL; John Baillie, MB, CHB, FACG, Wake Forest University Baptist Medical Center, Winston-Salem, NC; Stuart Sherman, MD, FACG, Indiana University Hospital, Indianapolis, IN; Michael Goldberg, MD, FACG, Evanston Northwestern Health Care, Evanston, IL; James DiSano, MD, FACG, University of Utah, Salt Lake City, UT

Complications Associated with Double Balloon Enteroscopy
Lauren Gerson, MD, Stanford University, Stanford, CA; Michael Chiorean, MD, University of Indiana, Indianapolis, IN; Jeffrey Tokar, MD, Oleh Haluska, MD, Fox Chase Cancer Center, Philadelphia, PA; Anton Decker, MD, Jonathan Leighton, MD, FACG, Mayo Clinic, Scottsdale, AZ; David Cave, MD, FACG, University of Massachusetts, Boston, MA; Doumit Bou-Haidar, MD, Alvin Yass, MD, MACG, Medical College of Virginia, Richmond, VA; Daniel Mischkin, MD, Boston University Medical Center, Boston, MA
Paper 4, page 120.

Evaluation of the Efficacy of Amitriptyline in Children with Abdominal Pain of Non-Organic Origin
Miguel Saps, MD, Children’s Memorial Hospital, Chicago, IL; Nader Youssef, MD, FACG, Goryeb Children’s Hospital at Atlantic Health, Morristown, NJ; Adrian Miranda, MD, Medical College of Milwaukee, Milwaukee, WI; Samuel Nurko, MD, Children’s Hospital, Boston, MA; Jose Concini, MD, Children’s Mercy Hospital, Kansas City, MO; Carlo DiLorenzo, MD, Nationwide Children’s Hospital, Columbus, OH
Paper 37, page 129.

Is it Cost-Effective to Treat Minimal Hepatic Encephalopathy to Prevent Traffic Accidents? A Decision Analysis
Jasmohan Bajaj, MD, MBBS, MS, Kia Saeian, MD, MS, FACG, Nicholas Pajewski, MS, Steven Pinkerton, PhD, Medical College of Wisconsin, Milwaukee, WI

2008 ACG International Award Recipient

Herbal Extract Hpml-004 in Active Ulcerative Colitis: A Randomized Comparison with Sustained Release Mesalamine
Tom Tang, MD, MBA, Hutchison MediPharma, Shanghai, China; William Sandborn, MD, FACG, Mayo Clinic, Rochester, MN; Stephan Targan, MD, Cedars-Sinai Medical Institute, Los Angeles, CA; Zhaoshen Li, MD, Changhai Hospital, Second Military Medical University, Shanghai, China; Crystal Xu, MD, Xiaojian Yan, PhD, Hutchison MediPharma, Shanghai, China
Paper 16, page 123.

2008 Lawlor Resident Award Recipient

A Validated Gluten Free Diet Adherence Survey for Adults with Celiac Disease
Shalala Jamma, MD, Daniel Leffler, MD, MS, Melinda Dennis, RD, MS, Jessica Edwards-George, PhD, Suma Magge, MD, Dettif Schuupan, MD, PhD, Ciaran Kelly, MD, Beth Israel Deaconess Medical Center, Boston, MA; Earl Cook, PhD, Harvard School of Public Health, Boston, MA
Paper 65, page 137.

2008 ACG Obesity Award Recipient

Increased Soluble FAS and FAS Ligand Levels in Patients with Nonalcoholic Steatohepatitis
Tamali Bhattacharyya, MD, MS, Lisa Yerian, MD, Michael Berk, MD, Arthur McCullough, MD, FACG, Ariel Feldstein, MD, Cleveland Clinic, OH
Paper 51, page 133.

2008 ACG/AstraZeneca Clinical Vignette Award Recipients

*The Use of Percutaneous Endoscopic Gastrostomy for Nutrition Support in Pregnancy Associated with Hyperemesis Gravidarum
Matthew Tsushima, MD, Michael Walter, MD, Smriti Olafson, MD, Gastroenterology, Loyola University Medical Center, Loma Linda, CA
Poster 150, page 178.

*Hypocupremia: A Rare Cause of Gastrojejunal Bypass-Associated Myeloneuropathy and Anemia
Eric Choi, MD, William Strum, MD, Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA
Poster 600, page 290.

2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipients

Potential Savings for Federal Funding of a Colorectal Cancer Screening Program in Uninsured Patients
Nison Badalov, MD, Ian Wall, MD, Jack Braha, MD, Robin Baradarian, MD, Jai Mirchandani, MD, Kadravel Iswara, MD, FACG, Jianjun Li, MD, FACG, Maimonides Medical Center, Brooklyn, NY; Michael Kantrowitz, MD, New York College of Osteopathic Medicine, Old Westbury, NY; Scott Tenner, MD, MPH, FACG, State University of New York, Brooklyn, NY
Paper 7, page 121.

Effect of Midodrine on Natriuretic Response to Furosemide in Non-Azotemic Cirrhotics with Ascites: A Randomized, Double-Blind, Placebo-Controlled, Cross-Over Study
Vijay Laxmi Misra, MD, Raj Vuppalanchi, MD, David Jones, MD, Mitch Hammam, MD, Paul Kwo, MD, Naga Chalasani, MD, FACG, Indiana University School of Medicine, Indianapolis, IN
Paper 12, page 122.

Management of Acute Pancreatitis: A Survey of Internal Medicine and General Surgery Residents
Sameer Barkatullah, MD, Srinadh Komanduri, MD, MS, Rush University Medical Center, Chicago, IL
Paper 20, page 124.

Season Variation in the Diagnosis of Eosinophilic Esophagitis: A Case-Control Analysis
Evan Dellon, MD, Wood Gibbs, MD, Tara Rubinas, MD, Karen Fritchle, MD, John Wooley, MD, Nicholas Shaheen, MD, FACG, University of North Carolina, Chapel Hill, NC
Paper 24, page 125.

* Also a 2008 ACG Presidential Poster Award Recipient.
Prospective Double Blinded Comparison of Computed Virtual Chromoendoscopy and Confocal Microscopy for Diagnosing Colorectal Neoplasia
Anna Buchner, MD, PhD, Marwan Ghabril, MD, Murli Krishna, MD, Herbert Wolfsen, MD, FACG, Michael Wallace, MD, MPH, FACG, Mayo Clinic, Jacksonville, FL
Paper 32, page 128.

Molecular Markers of Rapidly Growing Tumors: Another Piece to the Puzzle
Mustafa Arain, MD, Shehla Sheikh, MD, Bharat Thayyagaran, MD, University of Minnesota, Minneapolis, MN; John Bond, MD, Aasm Shaukat, MD, VA Medical Center, Minneapolis, MN
Paper 34, page 128.

National Survey of Physicians’ Perception on the Cause, Complication, and the Management of Gastroparesis
Lauren Briley, MD, Steven Harrell, MD, MSPH, John Wo, MD, University of Louisville, Louisville, KY
Paper 46, page 132.

Searching for Celiac Disease in the Urban Jungle: Yield of Small Bowel Biopsies in Patients with Iron Deficiency Anemia in a Diverse Urban Population
Syed Mohammed Jafri, MD, Disha Awasthi, MBBS, Anand Madan, MD, FACG, Gastroenterology, University of Texas Health Science Center, Houston, TX
Poster 66, page 157.

Is High-Definition Manometry a Comprehensive Test of Anal Sphincter Function: Comparative Study with Manometry and Ultrasound
Kasaya Tantiphlachiva, MD, Jessica Paulson, BS, Ashok Attaluri, MD, Satish Rao, MD, PhD, FRCP, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA; Division of Colorectal Surgery, Chulalongkorn University, Bangkok, Thailand
Poster 688, page 313.

*Age at Menarche and Longitudinal Growth in Pediatric-Onset Inflammatory Bowel Disease
Nancy McGreal, MD, Dezheg Huo, MD, PhD, Rosenberg Harry, BS, Megan Totti, MPH, Matthew Tierney, MS, Barbara Kirschner, MD, Health Studies, Pediatric Gastroenterology, University of Chicago, Chicago, IL
Poster 735, page 326.

2008 ACG/Centocor IBD Abstract Award Recipients
The Evolution of Crohn’s Disease (CD) Behavior in a Population-Based Cohort
Kelvin Thia, MBBS, William Sandborn, MD, FACG, William Harmsen, MS, Alan Zinsmeister, PhD, Edward Loftus, MD, FACG, Mayo Clinic, Rochester, MN
Paper 27, page 126.

Evaluation of Ct Enterography (CTE), Biomarkers, and Clinical Symptoms for the Non-Invasive Prediction of Active Inflammation in Patients with Crohn’s Disease
David Bruining, MD, Joel Fletcher, MD, Hassan Siddiki, MBBS, James Huprich, MD, Jeff Fidler, MD, William Sandborn, MD, FACG, Jayawant Mandrekar, PhD, William Harmsen, MS, Edward Loftus, MD, FACG, Mayo Clinic, Rochester, MN

Utilization of Cervical Testing Among Women with Inflammatory Bowel Disease
Millie Long, MD, MPH, Carol Porter, BS, Robert Sandler, MD, MPH, Michael Kappelman, MD, MPH, Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC, Cecil G. Sheps Center for Health Services Research, Pediatric Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC
Poster 299, page 214.

The Effect of Delayed Diagnosis of Inflammatory Bowel Disease on Disease Management and Course
Ugonna Iroku, MD, MHS, Brian Bosworth, MD, Ellen Scherl, MD, FACP, College of Physicians and Surgeons, Columbia University, New York, NY; Weill Medical College of Cornell University, New York, NY
Poster 305, page 216.

Risk Factors Associated with Crohn’s Disease Recurrence in Neoterminal Ileum After Diverting Ileostomy
Naim Alkhoury, MD, Bo Shen, MD, Rocío Lopez, MS, Andrew King, BS, Pediatric Gastroenterology, Cleveland Clinic Foundation, Cleveland, OH; Gastroenterology and Hepatology, Cleveland Clinic, Cleveland, OH
Poster 661, page 306.

2008 ACG/Naomi Nakao Gender Based Research Award Recipient
Smoking and Colorectal Neoplasia: Women Require Less Tobacco Exposure for Similar Increased Risk as Compared to Men
Joseph Anderson, MD, University of Connecticut, Farmington, CT; Zvi Alipern, MD, Stony Brook University, Stony Brook, NY
Paper 6, page 120.

2008 ACG/Olympus Award Recipients
Quality of Colonoscopy in Routine Clinical Practice: A Population-Based Analysis
Cynthia Ko, MD, MS, Jason Dominitz, MD, MHS, William Kreuter, MPA, Laura-Mae Baldwin, MD, MPH, University of Washington, Seattle, WA

Over- and Under-use of Screening Colonoscopy in a Population-Based Cohort
Jessica Bazick, Medical Student, Case Western Reserve University, Cleveland, OH; Gregory Cooper, MD, FACG, University Hospitals, Cleveland, OH

*Colon Cancer Not Prevented by Colonoscopy
Rohit Gupta, MS, Brian Brownlow, BS, Robert Dommnick, BS, Gavin harewood, MD, Michael Steinbach, PhD, Vipin Kumar, PhD, Piet de Groen, MD, Internal Medicine & Gastroenterology, Mayo Clinic, Rochester, MN, Computer Science and Engineering, University of Minnesota, Minneapolis, MN, Information Technology, Mayo Clinic, Rochester, MN, Gastroenterology, Beaumont Hospital, Dublin, Ireland
Poster 364, page 232.

2008 ACG/Olympus Colorectal Cancer Prevention Award Recipient
Miss Rates of Findings on Colonoscopy after Computed Tomographic Colonography (Ctc): Correlation with Polyp Histology
Ruben Acosta, MD, Evan May, MD, Brooks Cash, MD, FACG, National Naval Medical Center, Bethesda, MD; Mark Riddle, MD, Naval Medical Research Center, Bethesda, MD; Ganesh Veerappan, MD, Walter Reed Army Medical Center, Washington, DC
Paper 5, page 120.

2008 ACG/Radhika Srinivasan Gender-Based Research Award
Gender-Related Variation in Lower Esophageal Sphincter Pressure and Esophageal Body Function
Kenneth Vega, MD, Tracy Langford-Legg, RN, M, Mazen Jamal, MD, Division of Gastroenterology, University of Florida / Jacksonville, Jacksonville, FL, Division of Gastroenterology, Long Beach VA Medical Center, Long Beach, CA
Poster 379, page 236.
2008 ACG Presidential Poster Award Recipients

Is Immunofluorescence Staining for Eosinophil Derived Neurotoxin Useful in the Diagnosis of Eosinophilic Esophagitis? Jeffrey Alexander, MD, Gail Kephart, MS, Karthik Ravi, MD, David Neumann, MD, Hirohito Kita, MD, Nicholas Tailey, MD, PhD, Gastroenterology, Mayo Clinic Rochester, Rochester, MN Poster 1, page 139.

The Expression of Epidermal Growth Factor Receptor in H. pylori Infected Intestinal Metaplasia and Gastric Cancer Noriko Nakajima, MD, PhD, Yoko Ito, MS, Soichiro Ota, MD, Shun Kobayashi, MD, Kiyoshi Yokoyama, MD, PhD, Akikate Uno, MD, PhD, Noriko Kinukawa, MD, PhD, Norinichi Nemoto, MD, PhD, Mitsuhiro Moriyama, MD, PhD, Department of Pathology, Department of Gastroenterology & Hepatology, Nihon University School of Medicine, Tokyo, Japan Poster 25, page 146.

Do U.S. Regions with the Highest Rates of Obesity Have the Highest Frequency of Hospital Discharges for Pancreatic Adenocarcinoma? An Analysis of U.S. Secular Trends Benjamin Young, MD, Alphonso Brown, MD, MSClinEpi, Beth Israel Deacosen Medical Center, Boston, MA Poster 44, page 151.

Interaction Between Psychiatric and Autoimmune Disorders in Celiac Disease Patients in the United States Sagar Garud, MD, MPH, Daniel Leffler, MD, MS, Melinda Dennis, RD, MS, Shalilaja Jamma, MD, Jessica Edwards-George, PhD, Diana Saryan, BS, Claran Kelly, MD, Gastroenterology, Beth Israel Deacosen Medical Center, Boston, MA Poster 63, page 156.

Comparison of Pathology and Location of Findings Between Capsule Endoscopy (CE) and Single Balloon Assisted Enteroscopy (SBAE) in Patients with Occult Gastrointestinal Bleeding Madhusudan Sanaka, MD, Anuja Choure, MD, Janice Santis, RN, Milan Dodig, MD, Rocio Lopez, MS, Bennie Upchurch, MD, John Vargo, MD, Gastroenterology, Internal Medicine, Cleveland Clinic, Cleveland, OH Poster 76, page 159.

Does Fatigue Play a Role in Hepatic Encephalopathy-Associated Driving Impairment? Jasmon Bajaj, MD, Muhammad Hafeezullah, MD, Yelena Zadvornova, MD, Eric Martin, MD, Kia Saeian, MD FACG, Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI Poster 78, page 159.

Efficacy and Safety of Long-Term Oral Administration of Pioglitazone for Treatment of Nonalcoholic Fatty Liver Disease Masahiro Matsushita, MD, Yurimi Takahashi, MD, Yoshimasa Kobayashi, MD, Gastroenterology, Haibara General Hospital, Makinohara, Japan, 2nd Division Department of Internal Medicine, Hamamatsu University School of Medicine, Hamamatsu, Japan Poster 95, page 164.

Digital Image Analysis of Endoscopic Images of Diminutive Polyps: Differentiating Adenomatous Polyps from Hyperplastic Polyps Ananya Das, MD, Feng Li, MD, Suryakanth Gurudu, MD, Mayo Clinic, Scottsdale, AZ Poster 113, page 168.

Screening Colonoscopy Performed by Gastroenterologists and a Nurse Practitioner: A Single Center Experience Michele Limoges-Gonzalez, RN, MSN, ANP, Aman Al-Juburi, MD, Nirmal Mann, MD, David Tseng, BS, Lorenzo Rossaro, MD, University of California, Davis, Folsom, CA Poster 254, page 201.

Predicting Postoperative Mortality from Comorbidity Indices in Administrative Databases Among Inflammatory Bowel Disease Patients Gilaad Kaplan, MD, MPH, James Hubbard, MSc, Remo Panaccione, MD, Abdel Aziz Shaheen, MD, MPH, Geoffrey Nguyen, MD, PhD, Shane Devlin, MD, Robert Myers, MD, Department of Medicine, Division of Gastroenterology, University of Calgary, Calgary, AB, Canada Poster 285, page 210.

Predictive Value of Capsule Endoscopy for the Diagnosis of Crohn’s Disease in a Symptomatic Population Melissa Tukey, MD, Douglas Pleskow, MD, Adam Cheifetz, MD, Alan Moss, MD, Gastroenterology, Internal Medicine, Beth Israel Deacosen Medical Center, Boston, MA Poster 287, page 210.

A Study on the Association Between Self-Reported Functional Gastrointestinal Symptoms and Travelers’ Diarrhea Among U.S. Troops Deployed to Southwest Asia and the Middle East Mark Riddle, MD, DrPH, Brooks Cash, MD, FACG, John Sanders, MD, MPH&TM, Shannon Putnam, PhD, Adam Armstrong, DO, MSPH, David Tribble, MD, DrPH, Enteric Diseases Department, Naval Medical Research Center, Silver Spring, MD, Uniformed Services University of the Health Sciences, Bethesda, MD, Naval Medical Research Center Detachment, Lima, Peru, US Naval Medical Research Unit No. 2, Jakarta, Indonesia, US Naval Medical Research Unit No. 3, Cairo, Egypt Poster 325, page 221.

Rome Criteria for Irritable Bowel Syndrome (IBS) Should Be a Quantitative Trait and Not a Qualitative Trait Yuri Saito-Lotfus, MD, MPH, Ann Almazar-Elder, BS, Joseph Larson, BS, Elizabeth Atkinson, MS, Nicholas Tailey, MD, PhD, Department of Internal Medicine, Department of Health Sciences Research, Division of Biostatistics, Enteric Neuroscience Program, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN Poster 327, page 222.

Novel Structural & Functional Imaging of the Colonic Mucosa Using Structured Light Illumination Sectioning Endomicroscopy (SLISE) Aaron Bartoo, PhD, Silvia Santos, MS, Jerome Mertz, PhD, Satish Singh, MD, Medicine-Gastroenterology, Boston University School of Medicine, Boston, MA, Biomedical Engineering, Boston University College of Engineering, Boston, MA Poster 333, page 224.

Clinical Outcomes of Children with IBD with Unfavorable Thiopurine Metabolism: Effect of Allopurinol Ninfa Candela, MD, Elizaveta Iofel, MD, Libia Moy, MD, Toba Weinstein, MD, Jeremiah Levine, MD, James Markowitz, MD, Pediatric Gastroenterology and Nutrition, Schneider Children’s Hospital, North Shore-LIJ Health System, New Hyde Park, NY Poster 359, page 230.

Overweight Children and Parental Perceptions Rona Levy, MSW, PhD, MPH, Nancy Sherwood, PhD, Shelby Langer, PhD, Robert Reid, MD, PhD, Sheri Ballard, BA, School of Social Work, University of Washington, Seattle, WA, Epidemiology, University of Minnesota, Minneapolis, MN, Preventive Care, Group Health, Seattle, WA Poster 360, page 230.

An Updated Look at Colorectal Carcinoma Incidence and Stage Disease in Virginia and the U.S. Raj Majithia, MD, David Johnson, MD, FACG, Dana Freeman, MD, Danilo Pilcarpio, DO, Gastroenterology, Eastern Virginia Medical School, Norfolk, VA Poster 372, page 234.
Evaluation of Symptom Association with GERD: Is There Consensus Among the Experts?
Neeraj Sharma, MD, Armit Agrawal, MD, Radu Tutuian, MD, Marcelo Vela, MD, MSCR, Donald Castell, MD, Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC, Gastroenterology, University Hospital of Zurich, Zurich, Switzerland
Poster 378, page 235.

Is Two-Channel Synchronized, Multipoint Gastric Electrical Pacing (MGP) Able to Control Upper GI Symptoms and Improve Gastric Emptying in Patients with Severe Diabetic Gastroparesis?
Irene Sarosiek, MD, Jameson Forster, MD, Kathy Roesser, BS, Richard McCallum, MD, Surgery, Internal Medicine, Kansas University Medical Center, Kansas City, KS
Poster 400, page 241.

Same-Day Combined EUS / ERCP to Investigate Biliary and Pancreatic Disorders: Better Together
Samer Charbel, MD, James Kimberly, MD, Jason Conway, MD, MPH, John Gilliam, MD, John Baillie, MB, ChB, Girish Mishra, MD, MS, Gastroenterology, Wake Forest University, Winston-Salem, NC
Poster 415, page 244.

A Retrospective Analysis of the Safety of Outpatient Percutaneous Liver Biopsy in Patients with Von Willibrand Disease
P. Patrick Basu, MD, Krishna Rayapudi, MD, Jose Esteves, MD, Robert Brown, MD, MPH, Department of Gastroenterology and Hepatology, New York Hospital-Queens, New York, NY, Department of Gastroenterology, North Shore University Hospital at Forest Hills, Forest Hills, NY, Division of Digestive and Liver Diseases, Columbia University Medical Center, New York, NY
Poster 453, page #255.

Efficacy of Rifaximin as Long-Term Maintenance Therapy for Refractory Crohn’s Disease
Warren Finkelstein, MD, The Gastroenterology Group of New Jersey, Glen Ridge, NJ
Poster 549, page 278.

Oral or Intravenous Proton Pump Inhibitor in Patients with Peptic Ulcer Bleeding After Successful Endoscopic Epinephrine Injection—A Prospective Randomized Comparative Trial
Yao-Chun Hsu, MD, Tzeng-Huey Yang, MD, Wei-Lun Hsu, MD, Hwai-Jeng Lin, MD, Division of Gastroenterology, Department of Internal Medicine, Lotung Poh-Ai Hospital, Yilan, Taiwan
Poster 630, page 298.

Improved Bone Mass After Ileal Pouch-Anal Anastomosis for Patients with Ulcerative Colitis
Hong Lu, MD, PhD, Rocio Lopez, MS, Bo Shen, MD, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH
Poster 655, page 304.

Factors Associated with Conversion of an Ulcerative Colitis Diagnosis to Crohn’s Disease
Ari Wiesen, MD, Seymour Katz, MD, MACG, Blanche Fung Liu, MD, David Oustecky, MD, Camille Sommers, MD, Natan Krohn, MD, Gastroenterology, Long Island Jewish Medical Center, Glen Oaks, NY
Poster 657, page 305.

No Evidence for Association of Tegaserod with Cardiovascular Adverse Ischemic Events (CVIE) in Routine Clinical Practice
John Seeger, PharmD, DrPh, Jeanne Loughlin, MS, Elena Rivero, MD, MPH, David Earnest, MD, Sherry Quinn, MA, Jaqing Huang, MD, PhD, Peter Rueegg, MD, Esile Dennis, MD, MBChB, FCP(SA), Jeffrey Kraeistein, MD, i3 Drug Safety, Waltham, MA, Novartis Farmaceutica SA, Barcelona, Spain, Novartis Pharmaceuticals Corporation, East Hanover, NJ, Novartis Pharma AG, Basel, Switzerland
Poster 692, page 314.

National and Regional Conformity to the 2007 ACG / AASLD Practice Guidelines for Prevention and Management of Gastroesophageal Varices and Variceal Hemorrhage in Cirrhosis
Emily Carey, DO, Jamile Wakim-Fleming, MD, Rocio Lopez, MS, MPH, William Carey, MD, Internal Medicine, MetroHealth Medical Center, Cleveland, OH, Hepatology, Cleveland Clinic Foundation, Cleveland, OH
Poster 830, page 350.

Reversal of Protein-Losing Enteropathy After Liver Transplantation in a Child with Idiopathic Familial Neonatal Hepatitis
Naim Alkhouri, MD, Christine Carter-Kent, MD, Vera Hupertz, MD, Bijan Eghtesad, MD, John Fung, MD, PHD, Kadakal Radhakrishnan, MD, Department of General Surgery, Liver Transplant Center, Pediatric Gastroenterology and Hepatology, Cleveland Clinic, Cleveland, OH
Poster 891, page 365.

Klatskin-like Biliary Sarcoidosis
John Petersen, DO, FACG, FACP, Borland-Groover Clinic, Jacksonville, FL
Poster 988, page 388.

Renal Effects of Long Term 5-ASA
Harshna Patel, MD, Aliya Brar, PhD, Khursheed Jeejeebhoy, MD, Department of Public Health, Department of Medicine, University of Toronto, Toronto, ON, Canada, Department of Medicine, Department of Gastroenterology, St. Michael's Hospital, University of Toronto, Toronto, ON, Canada
Poster 1029, page 398.

The Utility and Safety of Endoscopic Resection for Nodular Lesions Detected After Endoscopic Ablation of Esophageal Dysplasia and Carcinoma
Chakri Panjala, MD, Seth Gross, MD, Massimo Raimondo, MD, Michael Wallace, MD, Timothy Woodward, MD, Herbert Wolfsen, MD, Gastroenterology, Mayo Clinic Jacksonville, Jacksonville, FL
Poster 1077, page 411.
Special Tours & Auxiliary Events

The ACG Auxiliary will provide a Hospitality Suite in the St. George 104 room for spouses during the ACG Annual Meeting, offering a place to relax and unwind, review tour and visitor information, or just chat with friends. Registration for Auxiliary members will also be available in the suite. All Auxiliary members are invited to attend the Auxiliary Board Meeting on Sunday, October 5 from 7:00 am–8:00 am in the St. George 106 room. The Auxiliary will also offer a special tour for adults and children. Please visit the ACG Physician Registration Desk at the Gaylord Palms Resort & Convention Center for more information about the Auxiliary and the tour.

### Auxiliary Schedule at a Glance

<table>
<thead>
<tr>
<th>SUNDAY, October 5</th>
<th>TUESDAY, October 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Registration</td>
<td>Physician Registration</td>
</tr>
<tr>
<td>City Hall Lobby</td>
<td>City Hall Lobby</td>
</tr>
<tr>
<td>7:00 am - 6:30 pm</td>
<td>6:45 am - 6:00 pm</td>
</tr>
<tr>
<td>Auxiliary Board Meeting</td>
<td>Hospitality Suite</td>
</tr>
<tr>
<td>St. George 106 Room</td>
<td>St. George 104 Room</td>
</tr>
<tr>
<td>7:00 am - 8:00 am</td>
<td>8:00 am - 12:00 noon</td>
</tr>
<tr>
<td>Auxiliary Registration/ Hospitality Suite</td>
<td>*TOUR: Ageless Airboat</td>
</tr>
<tr>
<td>St. George 104 Room</td>
<td>see description at right</td>
</tr>
<tr>
<td>8:00 am - 12:00 noon</td>
<td>1:30 pm - 5:30 pm</td>
</tr>
<tr>
<td>MONDAY, October 6</td>
<td>WEDNESDAY, October 8</td>
</tr>
<tr>
<td>Physician Registration</td>
<td>Physician Registration</td>
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<tr>
<td>City Hall Lobby</td>
<td>City Hall Lobby</td>
</tr>
<tr>
<td>7:00 am - 5:15 pm</td>
<td>6:45 am - 12:30 pm</td>
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<tr>
<td>St. George 104 Room</td>
<td>St. George 104 Room</td>
</tr>
<tr>
<td>8:00 am - 12:00 noon</td>
<td>8:00 am - 11:00 am</td>
</tr>
<tr>
<td>Auxiliary Luncheon</td>
<td>Breakfast will be available from</td>
</tr>
<tr>
<td>St. George 106 Room</td>
<td>8:00 am to 11:00 am Sunday</td>
</tr>
<tr>
<td>12:00 noon - 1:30 pm</td>
<td>through Wednesday in the</td>
</tr>
<tr>
<td>Auxiliary Members only</td>
<td>Auxiliary Hospitality Suite.</td>
</tr>
<tr>
<td>President’s Reception</td>
<td>*Tour tickets will be distributed</td>
</tr>
<tr>
<td>Osceola Ballroom C</td>
<td>at Physician Registration.</td>
</tr>
<tr>
<td>7:00 pm - 9:00 pm</td>
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</tbody>
</table>

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**ACG Auxiliary Tour:**

**Ageless Airboat Tour**

*Tuesday, October 7, 1:30 pm – 5:30 pm*

$71 per person

The ACG Auxiliary is sponsoring a spouse tour during ACG 2008 in Orlando. This educational excursion takes you into the seldom-visited heart of natural Florida! Experience beautiful protected wetland hammocks, walk through ancient flatwoods, and travel by airboat into pristine sections of fresh water marshes and up river into the bald-cypress swamp, home of the Florida alligator, American bald eagle and a huge assortment of wildlife. You’ll fall in love with the original beauty of old Florida. Here in the “outback,” the day’s experiences start at the Tosohatchee “Florida Trail,” an Eco-system that boarders the marsh. Certified Eco-guides will take you on a short 30-45 minute hike into the heart of this pristine wilderness before we arrive at the 100 year old outpost, a turn of the century fish camp. After complimentary refreshments of alligator tail and soft drinks, we will board airboats to experience the American Heritage River and its abundant wildlife. Each airboat has its own guide and a Coast Guard licensed boat captain. This is a soft adventurous tour without the dirt or danger.

**Space is limited!**

On-site registrations will be accepted on a space-available basis. Visit the Tour Counter at the Gaylord.

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**ACG Auxiliary Officers 2007 – 2008**

President
Chrisy Johnson
7464 North Shore Road
Norfolk, VA 23505
757-440-7749

President Elect
Kathy Sarles
210 Boisenberry Drive
Garland, TX 75044
972-496-2669

1st VP/Convention Chair
Renee Remily
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Medfield, MA 02052
508-359-6038

2nd VP/Membership Chair
Kathy Sarles
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972-496-2669

3rd VP/Hospitality Chair
Ann Bay
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210-479-7075

Secretary
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Historian, Publicity
Leilani Katz
1403 Royal Oak Drive
Blue Bell, PA 19422
215-542-7762

New Member Liaison
Shoba Bass
P.O. Box 1934
Colleyville, TX 76034
469-955-6342
The field of clinical gastroenterology continues to experience an enormous ever increasing array of options and advancements affecting many elements of managing GI disorders. These advancements apply to both diagnostic and treatment options, including pharmaceutical agents and enhancements to technology options for diagnosis and interventions. The busy gastroenterologist must remain current and be knowledgeable about every diagnostic and treatment option that is available for managing each of their patients, as well as learn, understand and effectively utilize these technology advancements made available to them.

The pressure to include new and ever changing administrative requirements by payers, patients and payors continues to create unique challenges for the gastroenterologist clinician. Additionally, patients are increasingly more educated when they walk into their physician’s office—even if all of the information they have is not of the highest quality. The result for busy clinicians is a significant set of challenges that make this knowledge and understanding of the field’s advancements and options very important. While the traditional goals of thorough diagnostics and sound therapeutic options continue to remain in place, the place for outcomes measurement and turning these findings into evidence-based care continues to grow.

The reimbursement limitation and work force challenges that have been apparent in recent years have continued unabated. For GI clinicians and their practices, the imperative is to find more efficient ways to gain the latest therapeutic knowledge and insights without compromising the highest quality of patient care. Notwithstanding research indicating that different venues present significantly different safety profiles for patients, over the past several years, a host of large payors have attempted to step in and substitute judgment regarding the appropriate venue for delivery of care, especially in light of findings that these changes are not based largely on financial considerations and without the input of clinicians or their agencies. The risk of inconsistent outcomes as a result of these changes is an area of concern and the latest data regarding safety and technical development will continue to be evaluated. Post-surgical management and treatment options of the field all continue to be a known challenge. Attention is also placed on advanced and improved endoscopic techniques and practice management tools which can increase a GI clinician’s efficiency and effectiveness in their daily practice.

Obtaining the most timely diagnosis through screening for myriad gastrointestinal disease states and the monitoring of appropriate interventions, treats for disorders and management options can begin in the most timely fashion possible is imperative. This specifically includes encouraging screening and surveillance for colon cancer, liver diseases including liver cancer, the various forms of hepatitis and NAFLD, other GI cancers, GERD, eosinophilic esophagitis, Barrett’s esophagus, peptic ulcer disease, acute and chronic pancreatitis conditions and screening surveillance of the family of inflammatory bowel diseases.

Colon cancer is the third most commonly diagnosed cancer among both men and women. But colon cancer incidence rates have declined over the last two decades and survival rates have increased. This is very likely due to increased colorectal cancer screening and surveillance, which allows physicians to detect and remove potential or cancerous lesions without compromising the quality of patient care. Even though these trends are moving in a positive direction, the need to increase screening rates even higher and to provide gastroenterologists with the most effective and efficient means to conduct the screening and surveillance continue to be very important issues. Providing and quantifying hard data to define a quality colonoscopy, especially in light of findings on the prevalence of flat lesions, is a need that affects the gastroenterologist each time they perform a screening colonoscopy.

As the survival rate from the full range of gastrointestinal cancers across the board improves, the need to keep educating the physicians who will be following post-surgical patients increases. This important, evolving educational need must be met in a way that touches on the impact of various forms of cancer to the overall health of the patient’s GI tract.

One condition that has drastically increased in prevalence in the U.S. is obesity, increasing from less than 15% in the 1960s to over 30% in 2004. It has been predicted that if the rates continue at their current pace, by 2015, 75% of adults will be overweight or obese. Therefore, not only are treatment and management options for obese patients imperative for clinicians to be well educated, but patient education is a necessity to improve compliance and to achieve treatment goals. Post-surgical management and treatment options of obesity must be a topic of interest and one where the clinician faces challenges often due to the complexity of the condition.

Additionally, patients are increasingly more educated when they walk into their physician’s office—even if all of the information they have is not of the highest quality. The result for busy clinicians is a significant set of challenges that make this knowledge and understanding of the field’s advancements and options very important. The result has been that effective treatments have become available for a variety of manifestations of these disorders. Understanding the latest science in the area of motility is critical to opening the door to treatment for a large group of patients who have been among the most difficult to treat. Evaluating the role of enteric flora, bacteria, and inflammation in motility disorders will help determine the appropriate course of action and play a critical role in managing an often challenging condition. Exposure to the latest data will assist in the identification of the incidence of disorders such as celiac sprue and other nutritional disorders and identification of new treatments. This includes pharmacological agents, some which can be difficult to treat problems such as gastroparesis, cyclic vomiting and irritable bowel syndrome.

GI bleeding remains one of the most common and most challenging issues confronted by the clinical gastroenterologist. Be it the result of pain management techniques or cardiac care or patients with chronic liver disease or even occult bleeding of unknown origins, the clinician must be up to date on the latest information on treatments and strategies to identify, prevent and treat bleeding all through the GI tract. This will include providing accurate, practical information directly to patients and referring physicians.

Gastroesophageal reflux disease (GERD) affects at least 5-7% of the global population. The diagnosis, symptom recognition, treatment options, and surveillance are extremely important factors for the GI clinician to know, understand, and put into practice in order to provide these patients the best quality care and to prevent further complications. Other esophageal conditions such as Barrett’s esophagus, eosinophilic esophagitis, dyspepsia, peptic ulcer disease, and H. pylori are all areas where disease management—symptoms, diagnostic tools, treatment options, complications—all need to be well understood by the GI clinician and put into practice each time the situation presents. It is with these esophageal conditions and many other identified conditions where published practice guidelines should be explained and made available to the GI clinician for their explicit understanding and to enhance their ability to most effectively manage each of their patients and each GI condition those patients are faced with.

The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate. The constant technological advancements that are seen in endoscopic and other technologies employed in GI care continues to move forward at an ever increasing rate.

An area of GI that continues to see more significant developments in pharmacological therapy options is inflammatory bowel disease. The GI clinician must be fully aware of the latest developments in biologics therapy and administration and patient management options in this area as well as advances that are being made in genetics as it relates to testing and diagnosis. The post-surgical management process and treatment options for these IBD patients continue to be a topic of interest and one where the clinician faces challenges often due to the complexity of the condition.

The GI clinician is frequently faced with challenges related to liver disorders. Often the GI relies on the expertise of the hepatologist to assist in the management of these patients, but the gastroenterologist must be able to provide a team of care and treatment options to patients with liver disease, including hepatitis B and C, NAFLD, hepatic encephalopathy, cirrhosis, and other autoimmune liver diseases. With increased incidence of hepatitis C and data showing fewer patients are in treatment with hepatologists, physician education is extremely important in this area.

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2007-2008 ACG Board of Trustees Disclosure Declaration

ACG's 2008 Educational Programs

It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. The Accreditation Council for Continuing Medical Education requires CME providers to demonstrate that everyone who is in a position to control the content of an education activity has disclosed all relevant financial relationships with any commercial interest to the provider. Oversight of all educational programming content is conducted by the ACG Board of Trustees through a review and approval process. Board of Trustees members have noted the following relationships.

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Dr. Chumley has indicated no relevant financial relationships.

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Director, ACG Institute
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Dr. Achkar has indicated no relevant financial relationships.

Vice Chair, Board of Governor
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Speaker’s Bureau: Abbott, Centocor, Procter & Gamble, Prometheus, Takeda

Co-Editor, The American Journal of Gastroenterology
Joel E. Richter, MD, MACG, Philadelphia, PA
Honoraria: AstraZeneca, TAP

Co-Editor, The American Journal of Gastroenterology
Nicholas J. Talley, MD, PhD, FACC, Jacksonville, FL
Consultant: AccreditEd, Addex Pharmaceuticals, SA, Annenberg Center, Astellas Pharma, Inc. US, AstraZeneca
Financial Support: Novartis, Takeda, GlaxoSmithKline, Dynogen, Tioga

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Consultant: Abbott Labs, Elan/Biogen, Centocor, UCB, Shire, Prometheus, Procter & Gamble, AstraZeneca, McNeil, GlaxoSmithKline

Trustees:
Carol A. Burke, MD, FACC, Cleveland, OH
Research Support: Pfizer
Honoraria: Salix, Novartis, Takeda, Lilly (spouse)

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Dr. Cattau has indicated no relevant financial relationships.

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Research: UCB, Abbott, Shire, Procter & Gamble
Consultant/Advisory Board: UCB, Abbott, Procter & Gamble, Elan, Shire
Honoraria: Procter & Gamble, Prometheus, Abbott

W. Elwyn Lyles, MD, FACC, Alexandria, LA
Dr. Lyles has indicated no relevant financial relationships.

Irving M. Pike, MD, FACC, Virginia Beach, VA
Stock: Validare

Harry E. Sarles, Jr., MD, FACC, Garland, TX
Dr. Sarles has indicated no relevant financial relationships.

Lawrence R. Schiller, MD, FACC, Dallas, TX
Consultant: Novartis, Takeda

Mitchell L. Shiffman, MD, FACC, Richmond, VA
Stock Options: Exellence
Grants for Clinical Research: Roche, Schering-Plough, Vertex, Human Genome Sciences, Gilead, Bristol-Myers Squibb, Valeant, Wyeth

Roy K.H. Wong, MD, FACC, Washington, DC
Dr. Wong has indicated no relevant financial relationships.
ACG ALLIED HEALTH PROFESSIONALS SYMPOSIUM

Collaborating for Excellent Patient Care
Sunday, October 5, 2008 • 1:30 pm – 5:15 pm • Room: Sanibel
Course Co-Directors: Jean-Paul Achkar, MD, FACG and Lisa S. Sylvest, RN, BSN

AGENDA
1:30 pm Welcome Dessert Reception
2:00 pm Treatment of Hepatitis C: A Team Approach
   Mitchell L. Schiffman, MD, FACG
   Follow-up and Monitoring of Treatment – A PA’s Perspective
   Sarah Hubbard, PA
2:40 pm Surveillance Issues in Patients with Colon Polyps
   Carol A. Burke, MD, FACG
3:00 pm Celiac Disease
   Ciaran P. Kelly, MD
3:20 pm Q & A
3:30 pm Break
3:45 pm Immunomodulator Therapy for IBD: A Team Approach
   Timothy T. Nostrand, MD, FACG
   Follow-up and Monitoring of Treatment – A Nurse’s Perspective
   Lisa S. Sylvest, RN, BSN
4:25 pm The New IBS Guidelines – What the Practitioner Needs to Know
   William D. Chey, MD, FACG
4:45 pm Approach to the Patient with Dysphagia
   Sami R. Achem, MD, FACG
5:05 pm Q&A/Meeting Wrap-up
5:15 pm Adjourn

Program Objectives
At the conclusion of this program, participants will be able to:
• Describe the goals of hepatitis C treatment
• Determine the follow up care and monitoring needed for patients on hepatitis C treatment. Describe the benefit of frequent patient contact.
• Identify the classifications of colonic polyps and incorporate into patient care decision-making for appropriate follow up
• Name the common studies ordered as part of the evaluation of patients with suspected celiac disease. List treatment options for celiac disease
• Explain the benefits and risks of immunomodulators in the treatment of inflammatory bowel disease
• Summarize the follow up care and monitoring needed for patients on immunomodulators. Assess future strategies to improve patient care
• Review the new ACG guidelines for an evidence based approach to treatment of irritable bowel syndrome. Analyze common studies ordered as part of the IBS evaluation
• Identify common causes of dysphagia. Describe a systematic approach to evaluation of patients presenting with dysphagia

ACG will offer a three-hour symposium designed specifically with allied health professionals in mind. Leading experts will speak on hot topics in GI. Before the symposium (1:30-2:00), join colleagues for a special dessert reception. Afterwards, make your way to the Exhibit Hall to see the latest in technology and therapeutics, and visit the Poster Session for a lively dialogue with clinicians and researchers involved in new advances in the diagnosis and treatment of gastroenterological diseases. ACG members may attend the symposium for free. Non-Members who are also registered for any other ACG 2008 course may attend the symposium for free. Any Non-Member who has not registered for any other ACG 2008 course will pay $75.

Course Description
Allied health professionals caring for patients with digestive diseases will be able to increase their knowledge about the current status of diagnostic tests and evidenced based treatments for some of the most common and chronic GI disorders including Chronic Hepatitis C, Celiac Disease, Inflammatory Bowel Disease, Irritable Bowel Syndrome and the Patient with Dysphagia. In addition, they will understand the current surveillance recommendation for patients with various types of colon polyps. Using a fun and interesting case based approach, this symposium is designed for nurses, physician assistants, nurse practitioners and other allied health professionals interested in the latest information on diagnostic gastroenterology and state of the art treatment of gastroenterologic illnesses. Physicians are strongly encouraged to attend this symposium with their allied health personnel, as the optimal management of patients with digestive diseases often requires a dedicated and knowledgeable “team” of health care providers.

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 3 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This program has been reviewed and is approved for a maximum of three hours of AAPA Category I CME credit by the Physician Assistant Review Panel. Physician assistants should claim only those hours actually spent participating in the CME activity. This program was planned in accordance with AAPA’s CME Standards for Live Programs and for Commercial Support of Live Programs.

This continuing nursing education activity was approved by the Society of Gastroenterology Nurses and Associates, Inc., an accredited approver of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

This activity is approved for 3 contact hours.
ACG ALLIED HEALTH PROFESSIONALS SYMPOSIUM

Collaborating for Excellent Patient Care
Sunday, October 5, 2008 • 1:30 pm – 5:15 pm • Room: Sanibel
Course Co-Directors: Jean-Paul Achkar, MD, FACG and Lisa S. Sylvest, RN, BSN

Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Allied Health Professionals Symposium presentations.

Sami R. Achem, MD, FACG
Professor of Medicine, Mayo College of Medicine, Mayo Clinic, Jacksonville, FL
Dr. Achem has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Carol A. Burke, MD, FACG
Director, Center for Colon Polyps & Cancer, Cleveland Clinic Foundation, Cleveland, OH
Dr. Burke has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

William D. Chey, MD, FACG
Professor of Medicine, University of Michigan Medical Center, Ann Arbor, MI
Consultant: Novartis, Procter & Gamble, Salix, Prometheus, Takeda
Speaker’s Bureau: Procter & Gamble, Salix, Prometheus, Takeda

Sarah Hubbard, PA
Physician Assistant, Hepatology, VCU Medical Center, Richmond, VA
Speaker’s Bureau: Roche, Schering-Plough

Ciaran P. Kelly, MD
Associate Professor of Medicine, Beth Israel Deaconess Medical Center/GI Division, Boston, MA
Consultant and Scientific Advisor: Alvine
Research Grant Support: Alba

Timothy T. Nostrant, MD, FACG
Professor of Medicine, University of Michigan, Ann Arbor, MI
Speaker’s Bureau/Consultant: Centocor, Procter & Gamble, Salix, Elan, UCB, Abbott

Mitchell L. Shiffman, MD, FACG
Professor of Medicine, Virginia Commonwealth University Medical Center, Richmond, VA
Speaker/Grant: Roche, Schering-Plough
Consultant: Roche

Lisa S. Sylvest, RN, BSN
Clinical Care Coordinator, University of Michigan, Ann Arbor, MI
Ms. Sylvest has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Investigational Use Disclosure
ACG’s disclosure policy maintains that if any unapproved or off-label use of a product is to be referenced in a CME program, the faculty member is required to disclose that the product is either investigational or it is not labeled for the usage being discussed. The following faculty members have indicated they may reference an off-label use in their Allied Health Symposium presentation(s).

Ms. Hubbard - use of erythropoetin and filgrastim growth factor in hepatitis C therapy
Dr. Shiffman - peginterferon and ribaviron in the treatment of hepatitis C

Allied Health Symposium Planning Committee Disclosure
Jean-Paul Achkar, MD, FACG
Cleveland Clinic Foundation, Cleveland, OH
Dr. Achkar has indicated no relevant financial relationships.

Jeannie R. Flinko, RN
Allegheny Specialty Practice Network, Pittsburgh, PA
Ms. Flinko has indicated no relevant financial relationships.

Jacqueline A.F. Schexnyder, NP
Alexandria Gastroenterology Associates, Alexandria, LA
Ms. Schexnyder has indicated no relevant financial relationships.

Lisa S. Sylvest, RN, BSN
University of Michigan, Ann Arbor, MI
Ms. Sylvest has indicated no relevant financial relationships.

Jennifer G. Zone, PA-C
Crozer Gastroenterology Associates, Upland, PA
Ms. Zone has indicated no relevant financial relationships.
## Practice Management Course

**Friday, October 3, 2008 • 7:50 am – 4:45 pm • Room: Sun Ballroom A**

**Course Co-Directors:** Stephen E. Deal, MD, FACP, Chalmers M. Nunn, Jr., MD, MMM and Ece A. Mutlu, MD

**Members/Fellows:** $225  
**Resident/Trainee/Candidate Members:** $0*/$150  
**Allied Health Members:** $150  
**Non-Members:** $275  
**Practice Managers:** $150

### Course Description

Learn the latest in practice management to build efficiency and drive profitability in your practice by attending the 21st Annual Practice Management Course. Course Directors Stephen E. Deal, MD, FACP, Chalmers M. Nunn, Jr., MD, MMM, and Ece A. Mutlu, MD, have organized a course that focuses on efficient practices and updates in areas of interest to the clinical gastroenterologist.

The ACG Practice Management Course will feature several physicians who are running successful practices. Q & A sessions will give attendees the opportunity to ask questions of the faculty and round table discussions will give attendees the opportunity to discuss challenges faced in practice and a sharing of ideas amongst colleagues.

### Program Description

Delivery of high quality patient care can be enhanced through use of efficient practice management. Improving practice efficiency through the judicious use of sound, patient-friendly business practices is made more critical with the increasing financial pressures placed on medical practices in all settings. The Practice Management Course’s fundamental objective is to improve the efficiency and sound business practices upon which the clinical GI practitioner’s practice is based, in ways that will enhance the prospects for quality patient experience and most favorable outcomes. The course uses a proven model of didactic sessions and smaller break-out sessions to deliver this information to attendees, as well as an interactive lunch session with ACG’s practice management experts. Course topics will be of interest to both the clinical gastroenterologist and the practice manager. The general session will focus on the addition of new services to the GI practice such as AEC, CT colonography and pathology labs, as well as legal issues affecting the gastroenterologist from employment to managed care contracting. The afternoon will consist of breakout sessions selected by attendees to provide an opportunity to discuss specific issues and concepts in a smaller group setting so attendees can leave the course with practical suggestions to improve delivery of care. Topics will include incorporating clinical research into the GI practice, coding and reimbursement, and infusion services.

### Program Objectives

Upon completion of this program attendees will:

- Discuss how to develop a successful ambulatory endoscopy center (AEC) despite declining reimbursement  
- Determine whether the addition of CT colonography, office-based infusion or pathology lab services are of benefit to their practice and the patients they serve  
- Examine the tools available to the clinician for incorporating clinical research into their practice  
- Review the legal issues affecting today’s gastroenterology practice, including how to avoid unnecessary legal mistakes with professional and office staff, Stark and anti-kickback statutes, hospital relationships, practice integration and managed care contracting  
- Improve their coding skills through a better understanding of coding guidelines to achieve appropriate reimbursement and better patient care

### Faculty

Stephen E. Deal, MD, FACP, Course Co-Director  
Chalmers M. Nunn, Jr., MD, MMM, Course Co-Director  
Ece A. Mutlu, MD, Course Co-Director  
R. Bruce Cameron, MD, FACP  
Daniel C. DeMarco, MD, FACP  
Andrew D. Feld, MD, JD, FACP  
Jeffrey R. Medoff, MD, FACP  
Klaus Mergener, MD, PhD, FACP  
Colin Roskey, JD  
Harry E. Sarles, Jr., MD, FACP  
Barry Tanner, CPA

### Accreditation

The American College of Gastroenterology designates this educational activity for a maximum of 6.75 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

* ACG Resident/Trainee and Candidate Members ONLY. ACG will waive the usual $150 Resident/Trainee/Candidate Member Practice Management Course registration fee only if registration is received and processed by September 12, 2008. The $150 fee will apply to any registration received and/or processed after September 12.
ACG's 2008 Educational Programs

Practice Management Course
Friday, October 3, 2008 • 7:50 am – 4:45 pm • Room: Sun Ballroom A
Course Co-Directors: Stephen E. Deal, MD, FACG, Chalmers M. Nunn, Jr., MD, MMM and Ece A. Mutlu, MD

7:00 am Continental Breakfast (Room: Sun Ballroom B)

8:00 am Welcome Announcements
Stephen E. Deal, MD, FACG
Chalmers M. Nunn, Jr., MD, MMM
Ece A. Mutlu, MD

8:00 am Should You Consider Adding Services to Your Practice?
• Maintaining a Successful AEC with Declining CMS Reimbursement
  Barry Tanner, CPA, President and CEO, Physicians Endoscopy
• CT Colonography
  Klaus Mergener, MD, PhD, FACG
• Pathology Lab
  Harry E. Sarles, Jr., MD, FACG
• Panel Q & A

10:00 am Break

10:30 am Case Studies in Legal Issues Affecting the Gastroenterologist
Andrew D. Feld, MD, JD, FACC and Colin Roskey, JD
• Employment case studies as this relates to professional and office staff
• Stark and anti-kickback statutes and how these affect hospital relationships as well as ownership of CT, pathology and anesthesia
• Legal issues affecting practice integration and managed care contracting
• Protection of assets

12:30 pm Lunch – Round Table Discussion
(Room: Sun Ballroom B)
Greatest Challenges Faced by Your Practice

1:45 pm Breakout Sessions
A. Incorporating Research in Your Practice
  (Room: Sanibel)
  Jeffrey R. Medoff, MD, FACG
B. Coding and Reimbursement
  (Room: Miami)
  R. Bruce Cameron, MD, FACG and Daniel C. DeMarco, MD, FACG
C. Infusion Services
  (Room: Sun A)
  Ece A. Mutlu, MD

2:45 pm Break

3:00 pm Breakout Sessions Repeat

4:00 pm General Session: Q & A with all Course Faculty

4:45 pm Course Adjourns
ACG’s 2008 Educational Programs

Practice Management Course
Friday, October 3, 2008 • 7:50 am – 4:45 pm • Room: Sun Ballroom A
Course Co-Directors: Stephen E. Deal, MD, FACP, Chalmers M. Nunn, Jr., MD, MMM and Ece A. Mutlu, MD

Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Practice Management Course presentations.

R. Bruce Cameron, MD, FACP
Clinical Professor, Case Western Reserve University, Chagrin Falls, OH
Dr. Cameron has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Stephen E. Deal, MD, FACP
Carolina Digestive Health Associates, Charlotte, NC
Dr. Deal has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Daniel C. DeMarco, MD, FACP
Digestive Health Associates of Texas, Dallas, TX
Dr. DeMarco has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Andrew D. Feld, MD, JD, FACP
Clinical Professor, University of Washington, Spokane, WA
Dr. Feld has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Jeffrey R. Medoff, MD, FACP
Medoff Medical, Greensboro, NC
Dr. Medoff has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Klaus Mergener, MD, PhD, FACP
Digestive Health Specialists, Seattle, WA
Dr. Mergener has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Ece A. Mutlu, MD
Assistant Professor of Medicine, Rush University Medical Center, Chicago, IL
Consultant: Elan, Centocor, Abbott, Salix, UCB, Otsuka
Advisory Board: Elan

Chalmers M. Nunn, Jr., MD, MMM
Centra Health, Inc. Lynchburg General Hospital, Lynchburg, VA
Dr. Nunn has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Colin Roskey, JD
Counsel, Alston & Bird, Washington, DC
Mr. Roskey has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Harry E. Sarles, Jr., MD, FACP
Digestive Health Associates of Texas, Garland, TX
Dr. Sarles has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Barry Tanner, CPA
Physicians Endoscopy, Doylestown, PA
Mr. Tanner has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.
Monumental Changes in Endoscopic Practice and Technology: Tooling Up for Tomorrow
Friday, October 3, 2008 • 8:05 am – 5:40 pm • Room: Sun Ballroom C
Course Co-Directors: John A. Martin, MD, and Vanessa M. Shami, MD

Members/Fellows: $250
Resident/Trainee/Candidate Members: $150
Allied Health Members: $150
Non-Member Physician/Exhibitor/Guest: $350
Non-Member Resident/Trainee: $200
All Other Non-Members: $250

Course Description
In a time of exponential change in gastrointestinal endoscopy, continuing adaptation of clinical practice to technological advances is crucial. Knowledge of the endoscopic literature regarding new diagnostic procedures as well as cutting-edge endoscopic therapeutic techniques is essential to be able to offer the best possible care to patients and to adapt to challenges that face endoscopists. To assure that attendees are expertly equipped to continue to deliver optimal patient care, this course will explore and instill an understanding of the latest data and literature on the full spectrum of diagnostic endoscopy, and introduce new concepts and challenges that accompany novel interventional procedures.

Intended Audience
This course has been specifically designed for practitioners in gastro-intestinal endoscopy, especially gastroenterologists, gastrointestinal surgeons, gastrointestinal nurses, and fellows in training. This course is equally relevant to those in private practice and academic practice.

Program Objectives
At the conclusion of this course, participants should be able to:
- Discuss the latest trends in endoscopic practice
- Describe new imaging techniques and technologies
- Review outcomes in endoscopy and translate them into best clinical practice
- Apply new endoluminal therapies for Barrett’s esophagus and early cancer
- Identify cutting-edge endoscopic techniques and their impact on the community endoscopist

Accreditation
The American Society for Gastrointestinal Endoscopy (ASGE) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

ASGE designates this educational activity for a maximum of 9.25 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

For more information contact:
ASGE, 1520 Kensington Road, Oak Brook, IL 60523
Tel: 630-573-0600 Fax: 630-573-0691
E-mail: education@asge.org Web: www.asge.org

If you need any auxiliary aids or services identified in the American with Disabilities Act (e.g., assistive listening devices or Braille materials), please contact ASGE, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523, telephone: 630-573-0600.
ASGE-SPONSORED ENDOSCOPY COURSE

Monumental Changes in Endoscopic Practice and Technology: Tooling Up for Tomorrow
Friday, October 3, 2008 • 8:05 am – 5:40 pm • Room: Sun Ballroom C
Course Co-Directors: John A. Martin, MD, and Vanessa M. Shami, MD

AGENDA

What’s New in Diagnostic Endoscopy
8:05 am  Image-Enhanced Colonoscopy: What’s New in Lower GI Imaging for Polyps, Dysplasia, Cancer, and IBD  
Prateek Sharma, MD
8:25 am  Capsule: Available Pills to Swallow  
Speaker TBA
8:45 am  Enteroscopy: Is More Better?  
Patrick R. Pfau, MD

Predicting Trends in Endoscopic Practice
9:05 am  Sedation and Anesthesia in Endoscopy: What’s Available Now and in the Future  
John L. Petrini, MD, FASGE
9:25 am  Screening Colonoscopy: Is the T. Rex of Endoscopy Really on the Brink of Extinction?  
Patrick R. Pfau, MD
9:45 am  AECs: Is There a Future?  
John L. Petrini, MD, FASGE
10:05 am  Questions and Answers
10:25 am  Break

Outcomes, Nutrition, & New Imaging Technologies
10:40 am  Historical Perspective: What Outcomes Studies Have Done To Change What We Do in Endoscopy  
Neena S. Abraham, MD, MSCE, FASGE
11:00 am  Outcomes in Endoscopy: How Can Research Inform the Assessment of Quality in Endoscopy?  
Nicholas J. Shaheen, MD, MPH
11:20 am  Interventional Nutrition: TPN vs Enteral Feeding—Where are We in 2008?  
Michel Kahaleh, MD, FASGE
11:40 am  The Future in Endoscopic Imaging: What’s Coming Tomorrow  
Louis-Michel Wong Kee Song, MD
12:00 noon  Questions and Answers

Lunch Discussion
12:15 pm  Trouble: Getting Out, and Staying Out  
Vanessa M. Shami, MD  
John L. Petrini, MD, FASGE

What’s New in Endoluminal Therapeutics
1:30 pm  EMR + ESD: The State of Mucosal Resection in the United States  
Irving Waxman, MD, FASGE
1:50 pm  Breathing on My Turf: Who Owns Endobronchial Ultrasound and What’s the Future of the GI Endosonographer in the Chest?  
Vanessa M Shami, MD
2:10 pm  Endoluminal Stents: Even the Indications are Expanding  
Steven A. Edmundowicz, MD, FASGE
2:30 pm  Therapeutic EUS: Has it Lived Up to its Promise?  
Vanessa M Shami, MD

Barrett’s Esophagus
2:50 pm  Who to Treat: Is All Barrett’s Bad?  
Prateek Sharma, MD
3:10 pm  How to Treat: Resect, Ablate, or Operate?  
Irving Waxman, MD, FASGE

GI Bleeding
3:30 pm  Hemostasis: What’s New, Including Clips, Cautery, and Glue  
John A. Martin, MD
3:50 pm  Questions and Answers / Break

What’s New in ERCP
4:05 pm  New Techniques and Technologies in Direct Peroral Cholangiopancreatostomy: Mother-Baby Endoscopy All Grown Up  
John A. Martin, MD
4:25 pm  You Did What???: Scoping Your Way into Pseudocysts and Necromas  
Michel Kahaleh, MD, FASGE
4:45 pm  Stones Revisited: Do We Really Need the Lithotripter Anymore?  
Steven A. Edmundowicz, MD, FASGE

NOTES
5:05 pm  NOTES in the Human Body: Is it for Real? What Will be the Impact for the Community Endoscopist?  
Peter D. Stevens, MD
5:25 pm  Questions and Answers
5:40 pm  Adjourn
Recertification Preparation and Update Course
Friday, October 3, 2008 • 6:00 pm – 9:00 pm • Room: Miami Room
Course Director: Brooks D. Cash, MD, FACG

Registration fee: $100

Course Description
The challenges of quality patient care and optimal patient outcomes seem to increase exponentially from year to year through a combination of increased demand and burgeoning information/treatment options relating to disease guidelines, disease management recommendations, and introduction of new pharmacootherapeutic agents and devices. The clinical gastroenterologist needs to build on his/her educational foundation regarding GI anatomy and disease states that lead to their board certification and recertification while distilling the essence of new information and integrating it into their day-to-day practice. The requirement for recertification has posed an educational challenge for board certified gastroenterologists who are trying to manage their practice with their educational needs. This program is designed for physicians studying for their recertification exam who seek to increase their comfort level with the nature of the information they will be required to know as they take the exam.

Using ACG’s second module developed under the leadership of Philip O. Katz, MD, FACG, and approved for self-evaluation credit toward ABIM Maintenance of Certification, faculty comprised of gastroenterologists with expertise in selected areas will review some of the types of question topics and scientific rationale needed to achieve awareness of/command over and be prepared to answer to be successful in specific recertification component areas.

Program Objectives
Upon completion of this program attendees will:

• Learn the scope of the substantive areas in organ systems and disease management that they will need to be fully conversant in to successfully complete the exam
• Obtain a clear understanding of the most effective test taking approaches

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 3 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Attendee Requirements
Registrants are required to purchase the ACG’s Self-Assessment Program for Maintenance of Certification, 2nd edition (2008), ($60 for ACG members; $80 nonmembers).

Once registered, participants will be contacted regarding how to purchase the required module. Attendees enrolled in the ABIM’s MOC program who successfully complete the ACG module will be awarded 20 self-evaluation of medical knowledge points by ABIM.

Faculty
Course Director – Brooks D. Cash, MD, FACG
Martin L. Freeman, MD, FACG
Brian E. Lacy, MD, PhD, FACG
Lawrence R. Schiller, MD, FACG
Anne Travis, MD
Atif Zaman, MD, FACG

Self-Evaluation Module:
ACG’s Self-Assessment Program for Maintenance of Certification, 2nd edition (2008)
Required in Conjunction with the 2008 ACG Recertification Preparation Course

Earn 20 self-evaluation of medical knowledge points toward your ABIM Maintenance of Certification. ACG’s online Self-Assessment Program is a 60-question module developed by ACG. When you complete the program, you will earn a maximum of 4 Category 1 CME credits.

ACG member price: $60 Non-member price: $80

For more information on how to purchase the module, see General Information on page 9.
Recertification Preparation and Update Course  
Friday, October 3, 2008 • 6:00 pm – 9:00 pm • Room: Miami Room  
**Course Director:** Brooks D. Cash, MD, FACG

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**Faculty Listing and Disclosure Information**

It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Recertification Course presentations.

**Brooks D. Cash, MD, FACG**
Associate Professor of Medicine, National Naval Medical Center, Bethesda, MD

Dr. Cash has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

**Martin L. Freeman, MD, FACG**
Professor of Medicine, University of Minnesota, Minneapolis, MN

Consultant (unpaid): Hobbs Medical
Fellowship Support: Cook, BSCI
Research Support: Cook, BSCI

**Brian E. Lacy, MD, PhD, FACG**
Associate Professor of Medicine, Dartmouth-Hitchcock Medical Center, Lebanon, NH

Scientific Advisory Board/Grant (investigator initiated): Takeda
Scientific Advisory Board/Grant (investigator initiated): Novartis

**Lawrence R. Schiller, MD, FACG**
Digestive Health Associates of Texas, Dallas, TX
Consultant: Novartis, Takeda

**Anne C. Travis, MD**
Associate Director, Gastroenterology Fellowship Program, Brigham and Women’s Hospital, Boston, MA
Speakers Bureau: Given Imaging

**Atif Zaman, MD, FACG**
Associate Professor of Medicine, Oregon Health and Science University, Portland, OR

Dr. Zaman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.
THREE-DAY BOARD REVIEW
Designed as a board review for the young specialist preparing for the exam, the Three-Day Board Review includes the Pathology & Imaging in the Evaluation of Gastrointestinal Disease Course, the What’s New in GI Pharmacology Course, and the Annual Postgraduate Course. This collection of courses is designed to provide a comprehensive update in basic science and help prepare attendees for specific topics covered in the exam. Additionally, through the Postgraduate Course, you will learn better ways to integrate the newest tools in diagnosis with the latest therapeutic/treatment alternatives to achieve optimal outcomes, improve your awareness and ability to incorporate patient care decision-making issues relating to common and not-so-common GI patient conditions, and enhance your overall capacity to frame effective disease management strategies in your practice. When you sign up for the Three-Day Board Review, you will automatically be enrolled in the three designated courses. See the Registration Form on page 91 for complete pricing information.

Program Description
With the ever increasing demands to remain abreast of the many new and emerging advancements in the field of gastroenterology and the volume of patients continuing to increase as the population ages, the clinical gastroenterologist is more challenged than ever to deliver the best patient care in each situation they encounter. Research in a multitude of gastroenterology and hepatology areas continues to progress at a rapid pace. The outcome of advances in technology, diagnostic modalities, and therapeutic options has had a positive impact on the management of many GI diseases and this impact can be expected to grow as we move into the future. Scientific education, based on critical foundational knowledge and clinical skills, the communication of practical methods for treatment, and the ability to integrate the newest tools in diagnosis with the latest therapeutic/treatment options are key necessities for the GI clinician to deliver top quality patient care. The ACG Postgraduate Course will provide updates on a variety of important gastroenterology and hepatology subjects, including IBD, obesity, pancreaticobiliary topics, esophageal disorders, functional disorders, colorectal cancer, hepatitis B and C, NAFLD, acute and chronic liver disease, GI bleeding, and endoscopic techniques. Expert faculty will deliver scientific presentations in a variety of formats. Didactic lectures, followed by interactive question and answer sessions, learning luncheons in case-based and tutorial formats, and a choice of exciting breakout sessions on the latest topics in GI and liver clinical care will be offered.

The program is designed primarily for clinicians in GI/hepatology as well as physician assistants, nurse practitioners and other advanced practice healthcare professionals interested in an aggressive but scientifically sound approach to the management of GI and liver illnesses.

Accreditation – Postgraduate Course
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 13.5 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Program Objectives
Upon completion of this program, attendees will:
- Assimilate current evidence on pharmacologic and biologic treatments for IBD and determine where and when each should be used, keeping in mind their safety profiles. Recognize when surgical intervention is required, understand which surgical options are available, and determine appropriate post-surgical management options. Assess the future direction that the care of IBD patients will take and how this is likely to affect the overall management of these conditions.
- Identify how enteric nervous system activity affects GI symptoms. Explain the role of bacteria and inflammation in functional gastrointestinal disorders. Formulate a proper diagnostic and treatment plan for patients with dyspepsia, based on symptoms presented and on evidence from published studies.
- Apply colon cancer screening and surveillance guidelines into clinical practice. Address the risks and issues associated with HNPCC and FAP. Formulate a treatment plan for the patient presenting with chronic constipation or chronic diarrhea.
- Address challenges faced when managing eosinophilic esophagitis, Barrett’s esophagus, and GERD.
- Discuss treatment options and wide-ranging implications when treating inflammatory bowel disease in special populations — pediatrics, the pregnant patient, and the elderly patient.
- Analyze the advancements affecting GI cancer screening modalities, including technological and endoscopic advances, radiographic advances and laboratory advances.
- Assess the increasing prevalence of obesity and the challenge GI clinicians face in the treatment of these patients and the complications that accompany the condition. Focus on the post-operative complications and long term management of bariatric surgery patients.
- Compare current treatment strategies for hepatitis B and C with emerging therapies. Assimilate evidence-based data on NAFLD and determine what steps to take in managing the NAFLD patient. Describe the extrahepatic manifestations of acute and chronic liver disease. Explore the cause and effect relationships among metabolic syndrome, obesity and liver disease.
- Discuss the current understanding of the pathophysiology of pancreatitis. Formulate a management approach for pancreatic cystic lesions. Identify and manage post-cholecystectomy complications.
- Review the etiology and diagnostic approach to various forms of GI bleeding, therefore determining the appropriate course of action for their management.
- Learn techniques to maximize ERCP effectiveness and minimize risks when performing this often challenging procedure.
- Evaluate new and emerging endoscopic techniques, including endoscopic ablation, double balloon enteroscopy, and capsule endoscopy.
- Identify success factors for effective and efficient endoscopy suite management. Compare and contrast sedation alternatives and consider their medicolegal implications. Incorporate specific and measurable indicators that define a quality colonoscopy.
Pathology and Imaging in the Evaluation of GI Disease Course

Friday, October 3, 2008 • 7:00 am – 12:35 pm • Room: Osceola Ballroom A

Course Co-Directors: David A. Greenwald, MD, FACP and John F. Reinus, MD, FACP

Members/Fellows: $150
Resident/Trainees/Candidate Members: $110
Allied Health Members: $125
All Non-Members: $175

Course Description
ACG’s Pathology and Imaging in the Evaluation of Gastrointestinal Disease Course includes four mini-sessions, each devoted to new developments and old problems of special interest to the clinical gastroenterologist in pathology and imaging in a specific portion of the GI tract. A popular biennial offering of the College, this year’s course expands the mini-session concept to include a combination lecture by a pathologist and a radiologist with the addition of endoscopic correlate images. The course faculty are recognized experts in their fields and pioneers in the development of new technologies and clinical paradigms.

Program Objectives
At the conclusion of this course, participants should be able to:

• Describe current concepts relevant to radiology and pathology in the evaluation and treatment of patients with gastrointestinal disease

• Evaluate findings of radiologic exams related to gastrointestinal disorders of the esophagus, stomach, small bowel, large intestine, liver, gallbladder and pancreas

• Identify both basic and advanced pathology findings in patients with gastrointestinal illnesses through close examination of representative photomicrographs

• Correlate typical radiology and pathology findings with endoscopic images reflective of both the normal and abnormal physiology and pathophysiology

Agenda

7:00 am  Pathology and Imaging of the Small Bowel and Pancreas
Pathologist: David Lewin, MD
Radiologist: Alec Megibow, MD

8:05 am  Q&A

8:20 am  Pathology and Imaging of the Liver
Pathologist: Romil Saxena, MD
Radiologist: Alvin C. Silva, MD

9:25 am  Q&A

9:40 am  Break

10:00 am  Pathology and Imaging of the Esophagus and Stomach
Pathologist: Robert E. Petras, MD
Radiologist: Perry J. Pickhardt, MD

11:05 am  Q&A

11:20 am  Pathology and Imaging of the Colon
Pathologist: Leslie H. Sobin, MD
Radiologist: Angela D. Levy, COL, MC, USA

12:25 pm  Q&A

12:35 pm  Adjourn

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 5 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
Pathology and Imaging in the Evaluation of GI Disease Course
Friday, October 3, 2008 • 7:00 am – 12:35 pm • Room: Osceola Ballroom A

Course Co-Directors: David A. Greenwald, MD, FACP and John F. Reinus, MD, FACP

Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Pathology and Imaging Course presentations.

Angela D. Levy, COL, MC, USA
Associate Professor of Radiology, Uniformed Services University, Bethesda, MD
Dr. Levy has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

David Lewin, MD
Professor of Pathology, Director of GI Pathology, Medical University of South Carolina, Charleston, SC
Dr. Lewin has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Alec Megibow, MD
Professor of Radiology, NYU Medical Center School of Medicine, New York, NY
Dr. Megibow has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Robert E. Petras, MD
Director of Gastrointestinal Pathology, AmeriPath, Inc., Oakwood Village, OH
Dr. Petras has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Perry J. Pickhardt, MD
Associate Professor of Radiology, University of Wisconsin Medical School, Madison, WI
Dr. Pickhardt has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Romil Saxena, MD, FRCPath
Associate Professor, Indiana University School of Medicine, Indianapolis, IN
Dr. Saxena has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Alvin C. Silva, MD
Assistant Professor of Radiology, Mayo Clinic Scottsdale, Scottsdale, AZ
Dr. Silva has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Leslie H. Sobin, MD
Chief, Gastrointestinal Pathology, Armed Forces Institute of Pathology, Washington, DC
Dr. Sobin has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.
What's New in GI Pharmacology Course
Friday, October 3, 2008 • 1:45 pm – 4:45 pm • Room: Osceola Ballroom A
Course Director: Philip O. Katz, MD, FACG

Members/Fellows: $150
Resident/Trainees/Candidate Members: $110
Allied Health Members: $125
All Non-Members: $175

Course Description
There is an ever-increasing demand on a physician's time to keep up with the expanding list of pharmacologic treatments of GI and liver disorders. ACG's What's New in Pharmacology Course provides an intensive review of key GI pharmacology, including comparisons and contrasts between conventional and emerging pharmacological treatment options. A comprehensive review of hot topic areas such as eosinophilic esophagitis, IBD, hepatic encephalopathy, NSAIDs, functional bowel disorders, and GI medications in pregnancy will be conducted in didactic presentations from expert faculty. The program is designed primarily for clinicians in GI/hepatology as well as physician assistants, nurse practitioners and other advanced practice healthcare professionals interested in the latest information on state of the art treatment of these illnesses. This course is an essential component of the three-day Board Review.

Program Objectives
At the conclusion of this course, participants should be able to:

- Describe current and emerging therapeutic strategies for patients diagnosed with eosinophilic esophagitis
- Select management strategies to minimize the gastroenterological risks associated with NSAID use
- Review the evidence regarding the efficacy and safety profile of current pharmacologic and biologic therapies in the management of IBD
- Identify the most effective pharmacological treatment options for the management of predominant symptoms of functional bowel disorders
- Evaluate pharmacological therapies for the management of hepatic encephalopathy
- Determine available pharmacological therapies that are safe and effective, and those to be avoided, for treatment of GI disorders in the pregnant patient

Agenda
1:45 pm Eosinophilic Esophagitis: Current Therapies and Future Directions
   Joel E. Richter, MD, MACG
2:15 pm NSAIDs: The Good, the Bad, the Ugly
   James M. Scheiman, MD, FACG
2:45 pm What's New for IBD
   Sunanda V. Kane, MD, MSPH, FACG
3:15 pm Pharmacological Management of Symptoms in the Functional Bowel Disorders
   Lawrence R. Schiller, MD, FACG
3:45 pm Management of Hepatic Encephalopathy: Starvation Diet No Longer Required
   Mitchell L. Shiffman, MD, FACG
4:15 pm GI Medications in Pregnancy
   Philip O. Katz, MD, FACG
4:45 pm Adjourn

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 3 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
What's New in GI Pharmacology Course
Friday, October 3, 2008 • 1:45 pm – 4:45 pm • Room: Osceola Ballroom A
Course Director: Philip O. Katz, MD, FACG

Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their GI Pharmacology Course presentations.

Sunanda V. Kane, MD, MSPH, FACG
Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Consultant: Abbott, Centocor, Elan, UCB
Research Support: Elan, UCB

Philip O. Katz, MD, FACG
Chairman, Division of Gastroenterology, Albert Einstein Medical Center, Philadelphia, PA
Honoraria for Lectures: AstraZeneca, Santarus, TAP
Consultant: AstraZeneca, Horizon Therapeutics, Prometheus, TAP

Joel E. Richter, MD, MACG
Chairman, Department of Medicine, Temple University School of Medicine, Philadelphia, PA
Speaker’s Bureau: AstraZeneca, TAP

James M. Scheiman, MD, FACG
Professor of Medicine, University of Michigan, Ann Arbor, MI
Consultant: AstraZeneca, Novartis, Pfizer, Bayer, Horizon Therapeutics, TAP
Speaker’s Honoraria: AstraZeneca

Lawrence R. Schiller, MD, FACG
Clinical Professor, University of Texas Southwestern, Dallas, TX
Consultant: Takeda/Sucampo, Procter & Gamble, Prometheus Labs, Novartis
Speaker’s Bureau: Takeda/Sucampo, Procter & Gamble, Prometheus Labs, Novartis
Advisory Board: Prometheus Labs, Takeda/Sucampo, McNeil Labs

Mitchell L. Shiffman, MD, FACG
Professor of Medicine, Virginia Commonwealth University Medical Center, Richmond, VA
Speaker: Salix

Investigational Use Disclosure
ACG’s disclosure policy maintains that if any unapproved or off-label use of a product is to be referenced in a CME program, the faculty member is required to disclose that the product is either investigational or it is not labeled for the usage being discussed. The following faculty members have indicated they may reference an off-label use in their Pharmacology Course presentation.

Dr. Katz - medication use in pregnancy
Dr. Richter - treatment of eosinophilic esophagitis
Dr. Scheiman - use of PPI’s to lower risk of GI bleeding
Dr. Schiller - antidepressants, probiotics, antibiotics for functional syndromes
Dr. Shiffman - use of rifaximin
SATURDAY, October 4, 2008
7:50 am – 5:00 pm

Session 1A: Inflammatory Bowel Disease
(Osceola Ballroom)
Moderator: Maria T. Abreu, MD

7:50 am Introduction
Neena S. Abraham, MD, FACG
Brooks D. Cash, MD, FACG
Stephen C. Hauser, MD, FACG

8:00 am Our Current Understanding of IBD
Stephan R. Targan, MD

8:20 am Non-biologic Therapies: Where Do They Stand?
Asher Kornbluth, MD

8:40 am Identifying the Time and Place for Biologics
Maria T. Abreu, MD

9:00 am Surgery and the IBD Patient: Appropriate Case Selection and Surgical Options
Sunanda V. Kane, MD, MSPH, FACG

9:20 am Panel Q & A

9:40 am BREAK

10:00 am David Sun Lecture – The Future Direction of IBD Care
William J. Sandborn, MD, FACG
See page 4 for more information.

Session 1B: Functional GI Disorders: Diagnosis and Management
(Osceola Ballroom)
Moderator: William D. Chey, MD, FACG

10:30 am Reconciling Enteric Neuromuscular Activity with GI Symptoms
Pankaj J. Pasricha, MD

10:50 am Role of Bacteria and Inflammation in Functional GI Disorders
Eamonn M.M. Quigley, MD, FACG

11:10 am Dyssynergic Defecation and Brain Gut Interactions
Satish S.C. Rao, MD, PhD, FACG

11:30 am Dyspepsia and Vomiting
William D. Chey, MD, FACG

11:50 am Panel Q & A

12:10 pm BREAK FOR LEARNING LUNCHEONS
(See listing on this page.)

Saturday Learning Luncheons – “Case-Based Advice from the Experts”
12:20 pm – 1:35 pm

Cost is $50 per person/per luncheon. Separate registration is required. If you have not registered, visit the ACG Registration Desk.

1. Use of Stents in the GI Tract
   Anthony N. Kalloo, MD, FACG

2. Advanced Polypectomy Techniques
   Jerome D. Waye, MD, MACG

3. Evaluation of Abnormal Liver Enzymes
   Mitchell L. Shiffman, MD, FACG

4. Management of Ascites
   Rowen K. Zetterman, MD, MACG

5. Chronic Care of Patients with IBD
   David T. Rubin, MD, FACG

6. Management of Barrett’s Esophagus: Screening, Surveillance and Ablation
   Prateek Sharma, MD, FACG and Nicholas J. Shaheen, MD, MPH, FACG

7. Chemoprevention of Colon Cancer: The Role of the Gastroenterologist
   Robert Carroll, MD

8. Management of Chronic Pancreatitis
   Peter A. Banks, MD, MACG

9. Evaluation and Treatment of Gastroparesis
   Henry P. Parkman, MD, FACG

10. Liver Disease and Pregnancy
    Stephen C. Hauser, MD, FACG

11. Optimizing ERCP Efficiency and Effectiveness
    Grace H. Elta, MD, FACG

    Mark Pimentel, MD and Eamonn M.M. Quigley, MD, FACG

300+ NEW QUESTIONS!

The 2008 Self-Assessment Test Online

Enhance your learning by purchasing the 2008 ONLINE Self-Assessment Test. The online version to the popular print resource tracks user responses, indicates the correct answer and provides overall/category scores. It also provides detailed explanations and bibliography, with links to PubMed and resources like ACG’s practice guidelines. General sale of this online test begins October 6 (ACG members: $75; non-members: $100). Visit www.acg.gi.org/satest to register.
### Session 1C: Colon (Osceola Ballroom)

**Moderator:** Carol A. Burke, MD, FACG

<table>
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<tr>
<th>Time</th>
<th>Topic and Speaker</th>
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| 1:45 pm | Screening and Surveillance for Colorectal Cancer  
  Douglas K. Rex, MD, FACG |
| 2:05 pm | HNPPC/FAP  
  Carol A. Burke, MD, FACG |
| 2:25 pm | Outpatient Evaluation of Chronic Diarrhea  
  Lawrence R. Schiller, MD, FACG |
| 2:45 pm | Outpatient Evaluation of Chronic Constipation  
  Brian E. Lacy, MD, PhD, FACG |
| 3:05 pm | Panel Q & A |
| 3:25 pm | BREAK |

**3:45 pm–5:00 pm** Simultaneous Symposia

#### Symposium A – Burning Esophageal Issues (Osceola Ballroom A)

**Moderator:** Roy K.H. Wong, MD, FACG

<table>
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<tr>
<th>Time</th>
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| 3:45 pm | Eosinophilic Esophagitis  
  Joel E. Richter, MD, MACG |
| 4:10 pm | Conundrums in Barrett’s Esophagus  
  Roy K.H. Wong, MD, FACG |
| 4:35 pm | Diagnosis and Management of ENRD/NERD  
  Stuart J. Spechler, MD, FACG |

#### Symposium B – IBD in Special Populations (Sun Ballroom A)

**Moderator:** Sunanda V. Kane, MD, MSPH, FACG

<table>
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<th>Time</th>
<th>Topic and Speaker</th>
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| 3:45 pm | Pediatric IBD  
  Marla C. Dubinsky, MD |
| 4:10 pm | IBD and Pregnancy  
  Sunanda V. Kane, MD, MSPH, FACG |
| 4:35 pm | IBD in the Elderly  
  Maria T. Abreu, MD |

#### Symposium C – Advances in Colorectal Cancer Screening (Osceola Ballroom C)

**Moderator:** Brooks D. Cash, MD, FACG

<table>
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<th>Time</th>
<th>Topic and Speaker</th>
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| 3:45 pm | Endoscopic Advances  
  Douglas K. Rex, MD, FACG |
| 4:10 pm | Radiographic Advances  
  David A. Johnson, MD, FACG |
| 4:35 pm | Laboratory Advances  
  Brooks D. Cash, MD, FACG |
| 5:00 pm | Adjourn |

**SUNDAY October 5, 2008**

#### Session 2A: Obesity (Osceola Ballroom)

**Moderator:** Amy E. Foxx-Orenstein, DO, FACG

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic and Speaker</th>
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| 7:50 am | Introduction  
  Neena S. Abraham, MD, FACG  
  Brooks D. Cash, MD, FACG  
  Stephen C. Hauser, MD, FACG |
| 8:00 am | The Expanding Science of Obesity  
  Amy E. Foxx-Orenstein, DO, FACG |
| 8:20 am | GI Complications of Obesity  
  Hashem B. El-Serag, MD, MPH |
| 8:40 am | Medical Management of Obesity  
  Mark T. DeMeo, MD, FACG |
| 9:00 am | Surgical Management of Obesity and Post-operative Complications  
  Peter T. Hallowell, MD |
| 9:20 am | Panel Q & A |
| 9:40 am | BREAK |

#### Session 2B: Liver (Osceola Ballroom)

**Moderator:** Stephen C. Hauser, MD, FACG

<table>
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<tr>
<th>Time</th>
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| 10:00 am | Hepatitis B: Where Are We in 2008 and Where Are We Going?  
  Mitchell L. Shiffman, MD, FACG |
| 10:20 am | Hepatitis C: Therapy and Outcomes  
  Norah Terrault, MD, MPH |
| 10:40 am | Chronic Diseases of the Biliary Tract  
  Naga P. Chalasani, MD, FACG |
| 11:00 am | Extrahepatic Manifestations of Acute and Chronic Liver Disease  
  Rowen K. Zetterman, MD, MACG |
| 11:20 am | Panel Q & A |
| 11:40 am | State of the Art Lecture: NAFLD – State of the Art and State of the Nation  
  Michael R. Charlton, MD |
| 12:00 noon | BREAK FOR LEARNING LUNCHEONS (See listing on next page.) |

**NEW THIS YEAR**

**VISIT THE EXHIBIT HALL TO HEAR Sunday Afternoon FAQ Sessions**

**ACG has added 2 additional FAQ Sessions this year, both of which will take place in the Exhibit Hall on Sunday.**

**Functional Bowel Disorders** (5:15 pm to 5:45 pm)  
Nicholas J. Talley, MD, PhD, FACG

**Colon** (6:00 pm to 6:30 pm)  
Douglas K. Rex, MD, FACG
Sunday Learning Luncheons – “In-depth Tutorials”
12:20 pm – 1:35 pm
Cost is $50 per person/per luncheon. Separate registration is required. If you have not registered, visit the ACG Registration Desk.

13. Colorectal Cancer Screening and Surveillance
Philip S. Schoenfeld, MD, MSEd, MScEpi, FACP

14. H. pylori: Is It Still Important?
Nicholas J. Talley, MD, PhD, FACP

15. Celiac Sprue
Ciaran P. Kelly, MD

16. Intestinal Ischemia: Cases and Discussion
Lawrence J. Brandt, MD, MACG

17. Neuroendocrine Tumors: Evaluation and Treatment
M. Michael Wolfe, MD, FACP

18. GISTs
Douglas O. Faigel, MD, FACP

19. Acute Pancreatitis
Scott M. Tenner, MD, MPH, FACP

20. Mechanisms and Treatment of Chronic Functional Abdominal Pain
Lin Chang, MD

21. Chronic Diarrhea
Lawrence R. Schiller, MD, FACP

22. Evaluation of Liver Masses
Lewis R. Roberts, MB, ChB, PhD, FACP

23. Complementary and Alternative Medicine in IBD
Kenneth R. McQuaid, MD, FACP

24. Evaluation and Management of Dysphagia
Philip O. Katz, MD, FACP

3:45 pm – 5:00 pm SIMULTANEOUS SESSIONS

Symposium D: Management of Gastrointestinal Bleeding (Sun Ballroom A)
Moderator: Neena S. Abraham, MD, FACP

3:45 pm Peptic Ulcer Disease
Loren A. Laine, MD, FACP

4:10 pm AVMs, Diverticulae and Hemorrhoids
James M. Scheiman, MD, FACP

4:35 pm Obscure Gastrointestinal Bleeding: Diagnosis and Management
Neena S. Abraham, MD, FACP

Symposium E: ERCP Tricks of the Trade
(Sun Ballroom B)
Moderator: John Baillie, MB, ChB, FACP

3:45 pm Dealing with the Difficult Cannulation
John Baillie, MB, ChB, FACP

4:10 pm Pancreatic and Biliary Stenting: Indications and Advances
Todd H. Baron, MD

4:35 pm Pancreatic and Biliary Duct Endoscopy
J. David Horwhat, MD, FACP

Symposium F: Evolving Endoscopic Techniques
(Orscola Ballroom C)
Moderator: Prateek Sharma, MD, FACP

3:45 pm Endoscopic Ablation: Thermal, Light or Cut?
A Review of the Evidence
Prateek Sharma, MD, FACP

4:10 pm Double Balloon Enteroscopy: Indications and Efficacy
Lauren B. Gerson, MD

4:35 pm Capsule Endoscopy: What’s the Future Hold and Should I Buy the Equipment?
Felice Schnoll-Sussman, MD

Symposium G: Maximizing Endoscopic Practice
(Orscola Ballroom A)
Moderator: John L. Petrini, MD, FACP

3:45 pm Keys to Success for an Efficient Endoscopy Suite
John L. Petrini, MD, FACP

4:10 pm Sedation Alternatives and Monitoring During Endoscopy: Medicolegal Implications
Andrew D. Feld, MD, JD, FACP

4:35 pm Measuring and Documenting Endoscopic Quality Indicators
Irving M. Pike, MD, FACP
Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Postgraduate Course presentations.

**Neena S. Abraham, MD, FACG**
Assistant Professor of Medicine, Baylor College of Medicine, Houston, TX
*Dr. Abraham has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.*

**Maria T. Abreu, MD**
Chief, Division of Gastroenterology, University of Miami, Miami, FL
*Consultant/Speaker: Salix, Procter & Gamble, Abbott, Prometheus, UCB*

**John Baillie, MB, ChB, FACG**
Professor of Internal Medicine, Wake Forest University, Health Sciences, Winston-Salem, NC
*Consultant: ConMed*

**Peter A. Banks, MD, MACG**
Professor of Medicine, Harvard Medical School, Boston, MA
*Dr. Banks has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Todd H. Baron, MD**
Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
*Speaker: Cook, ConMed, Olympus*

**Lawrence J. Brandt, MD, MACG**
Professor of Medicine, Albert Einstein College of Medicine, Bronx, NY
*Dr. Brandt has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**William R. Brugge, MD, FACG**
Director, GI Endoscopy Unit, Massachusetts General Hospital, Boston, MA
*Dr. Brugge has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Carol A. Burke, MD, FACG**
Director, Center for Colon Polyps & Cancer, Cleveland Clinic Foundation, Cleveland, OH
*Research/Steering Committee: Pfizer*

**Robert E. Carroll, MD**
Associate Professor of Medicine, University of Illinois at Chicago, Chicago, IL
*Dr. Carroll has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Brooks D. Cash, MD, FACG**
Associate Professor of Medicine, National Naval Medical Center, Bethesda, MD
*Dr. Cash has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Naga P. Chalasani, MD, FACG**
Associate Professor of Medicine, Indiana University, Indianapolis, IN
*Dr. Chalasani has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Lin Chang, MD**
Associate Professor of Medicine, UCLA Division of Digestive Diseases, Los Angeles, CA
*Research Grant: GSK, Prometheus*
*Consultant: GSK, Prometheus, Takeda, Salix*

**Michael R. Charlton, MD**
Professor of Medicine, Mayo Clinic, Rochester, MN
*Dr. Charlton has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**William D. Chey, MD, FACG**
Professor of Medicine, University of Michigan Medical Center, Ann Arbor, MI
*Consultant/Speaker’s Bureau: Axcan, Novartis, Procter & Gamble, Santarus, TAP, Takeda*

**Darwin L. Conwell, MD**
Associate Professor of Medicine, Brigham and Women’s Hospital, Boston, MA
*Dr. Conwell has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Mark T. DeMeo, MD, FACG**
Associate Professor of Medicine, Rush University Medical Center, Chicago, IL
*Dr. DeMeo has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Maria C. Dubinsky, MD**
Assistant Professor of Pediatrics, David Geffen School of Medicine at UCLA, Cedars-Sinai Medical Center, Los Angeles, CA
*Grant Support: Centocor*
*Consultant: Prometheus*

**Hashem B. El-Serag, MD, MPH**
Associate Professor of Medicine, Houston VA Medical Center, Houston, TX
*Dr. El-Serag has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.*

**Grace H. Elta, MD, FACG**
Professor of Medicine, University of Michigan, Ann Arbor, MI
*Dr. Elta has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.*

**Douglas O. Faigel, MD, FACG**
Associate Professor of Medicine, Oregon Health Sciences University, Portland, OR
*Consultant: Olympus*

**Andrew D. Feld, MD, JD, FACG**
Clinical Associate Professor, University of Washington, Group Health Cooperative, Seattle, WA
*Advisory Board: Ethicon Endosurgery*
Amy E. Foxx-Orenstein, DO, FACG
Associate Professor of Medicine, Mayo Clinic, Rochester, MN
Dr. Foxx-Orenstein has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Lauren B. Gerson, MD
Associate Professor, Stanford University, Stanford, CA
Grant Support: Fujinon
Speaker’s Bureau: Fujinon, Given Imaging

Peter T. Hallowell, MD
Assistant Professor, University Hospitals of Cleveland, Cleveland, OH
Dr. Hallowell has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Stephen C. Hauser, MD, FACG
Associate Professor of Medicine, Mayo Clinic, Rochester, MN
Dr. Hauser has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

John D. Horwhat, MD, FACG
Director of Clinical Services, Walter Reed Army Medical Center, Rockville, MD
Dr. Horwhat has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Anthony N. Kalloo, MD, FACG
Director, Gastroenterology & Hepatology, Johns Hopkins Hospital, Baltimore, MD
Dr. Kalloo has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Sunanda V. Kane, MD, MSPH, FACG
Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Consultant: Abbott, Centocor, Elan, UCB
Research Support: Elan, UCB

Philip O. Katz, MD, FACG
Chair, Division of Gastroenterology, Albert Einstein Medical Center, Philadelphia, PA
Honoria for Lectures: AstraZeneca, Santarus, TAP
Consultant: AstraZeneca, Horizon Therapeutics, Prometheus, TAP

Ciaran P. Kelly, MD, FACG
Associate Professor of Medicine, Beth Israel Deaconess Medical Center/ GI Division, Boston, MA
Consultant and Scientific Advisor: Alvine
Research Grant Support: Alba

Asher Kornbluth, MD
Associate Clinical Professor of Medicine, Mount Sinai School of Medicine, New York, NY
Grant or Research Support: Procter & Gamble, Salix, Centocor, Abbott, UCB, BMS, Osiris
Consultant/Scientific Advisor: Procter & Gamble, Salix, Shire, Centocor, Given Imaging, Prometheus, UCB, Elan Pharmaceuticals
Speaker’s Bureau/Honoraria: Procter & Gamble, Salix, Prometheus, Abbott, UCB, Shire, Elan Pharmaceuticals

Brian E. Lacy, MD, PhD, FACG
Associate Professor of Medicine, Dartmouth-Hitchcock Medical Center, Lebanon, NH
Educational Grant (investigator initiated)/Speaker’s Bureau: Takeda

Loren A. Laine, MD, FACG
Professor of Medicine, USC School of Medicine, Los Angeles, CA
Research Support: TAP
Consultant: AstraZeneca, Novartis, Horizon, Santarus, Pozen
Data Safety Monitoring Board: Pfizer

Glen A. Lehman, MD, FACG
Professor of Medicine and Radiology, Indiana University Medical Center, Indianapolis, IN
Dr. Lehman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Kenneth R. McQuaid, MD, FACG
Professor of Clinical Medicine, University of California at San Francisco, San Francisco, CA
Dr. McQuaid has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Henry P. Parkman, MD, FACG
Associate Professor of Medicine, Temple University, Philadelphia, PA
Advisory Board: SmartPill, Tranzyme

Pankaj J. Pasricha, MD
Chief, Division of Gastroenterology & Hepatology, Stanford University, Stanford, CA
Dr. Pasricha has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

John L. Petrini, MD, FACG
Clinical Associate Professor of Medicine, University of Southern California, Los Angeles, CA
Dr. Petrini has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Irving M. Pike, MD, FACG
Gastrointestinal & Liver Specialists of Tidewater, PLLC, Virginia Beach, VA
Dr. Pike has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Mark Pimentel, MD
Assistant Professor of Medicine, UCLA Geffen School of Medicine, Los Angeles, CA
Grant: Novartis
Grant/Research: Lilly
Consultant: Salix (Cedars has licensing arrangement with Salix)

Eamonn M.M. Quigley, MD, FACG
Professor of Medicine, National University of Ireland at Cork, Cork, Ireland
Dr. Quigley has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Satish S.C. Rao, MD, PhD, FACG
Professor of Medicine, University of Iowa Hospitals & Clinics, Iowa City, IA
Research Grant: SmartPill
Consultant/Advisory Board: SmartPill, Novartis, Takeda Pharmaceuticals, Forest Laboratories, Procter & Gamble
Speaker’s Bureau: AstraZeneca, Novartis, Takeda Pharmaceuticals North America, Sucampo Pharmaceuticals

Douglas K. Rex, MD, FACG
Professor of Medicine, Indiana University Hospital, Indianapolis, IN
Speaker’s Bureau: TAP, CB Fleet, Salix, Olympus
Research Support: Olympus, CB Fleet, Salix, MGI Pharma, Given Imaging
Scientific Advisory Boards: Given Imaging, Avantis Medical Systems, CB Fleet, Salix, GI View, American BioOptics

Joel E. Richter, MD, MACG
Chairman, Department of Medicine, Temple University School of Medicine, Philadelphia, PA
Speaker’s Bureau: AstraZeneca, TAP
Lewis R. Roberts, MB, ChB, PhD, FACG
Associate Professor of Medicine, Mayo Clinic, Rochester, MN
Dr. Roberts has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

David T. Rubin, MD, FACP
Associate Professor of Medicine, University of Chicago School of Medicine, Chicago, IL
Grant Support: Given Imaging, Procter & Gamble, Prometheus, Salix
Consultant: Abbott Immunology, Axcan Pharma, Given Imaging, Procter & Gamble, Prometheus, Salix, Shire, UCB, Inc.

William J. Sandborn, MD, FACP
Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Consultant: Procter & Gamble, Shire, Salix, Centocor, Abbott, UCB, Inc., Elan
Research Support: Procter & Gamble, Shire, Centocor, Abbott, UCB, Inc., Elan

James M. Scheiman, MD, FACP
Professor of Medicine, University of Michigan, Ann Arbor, MI
Consultant: AstraZeneca, Novartis, Pfifer, Bayer, Horizon Therapeutics, TAP
Speaker’s Bureau: AstraZeneca

Lawrence R. Schiller, MD, FACP
Digestive Health Associates of Texas, Dallas, TX
Dr. Schiller has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Philip S. Schoenfeld, MD, MSEd, MScEpi, FACP
Associate Professor, University of Michigan, Ann Arbor, MI
Dr. Schoenfeld has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Felice Schnoll-Sussman, MD
Assistant Professor of Medicine, Weill Medical College of Cornell University, New York, NY
Speaker’s Bureau: Given Imaging

Nicholas J. Shaheen, MD, MPH, FACP
Associate Professor of Medicine and Epidemiology, University of North Carolina, Chapel Hill, NC
Consultant: AstraZeneca, CSA Medical, TAP
Speaker’s Bureau: AstraZeneca
Grant Support: Barx Medical, CSA Medical, Procter & Gamble, TAP

Prateek Sharma, MD, FACP
Professor of Medicine, University of Kansas School of Medicine, Kansas City, MO
Grant: Olympus, Barx

Mitchell L. Shiffman, MD, FACP
Professor of Medicine, Virginia Commonwealth University Medical Center, Richmond, VA
Consultant: Gilead, Roche
Speaker: Bristol-Myers, Gilead, Roche
Grant: Gilead, Roche

Stuart J. Spechler, MD, FACP
Chief, Division of Gastroenterology, Dallas VA Medical Center, Dallas, TX
Grant: AstraZeneca, Takeda, Barx Medical

Nicholas J. Talley, MD, PhD, FACP
Professor of Medicine, Mayo Clinic Jacksonville, Jacksonville, FL
Financial Support: Novartis, Takeda, GlaxoSmithKline, Dynogen, Tioga

Stephan R. Targan, MD
Director, Inflammatory Bowel Disease Center & Division of Gastroenterology, Cedars-Sinai Medical Center, Los Angeles, CA
Board of Directors: Prometheus
Consultant: Elan, Procter & Gamble, Prometheus

Scott M. Tenner, MD, MPH, FACP
Associate Professor of Medicine, State University of New York, Health Sciences Center, Brooklyn, NY
Dr. Tenner has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Norah A. Terrault, MD
Associate Professor, UCSF-Division of Gastroenterology, San Francisco, CA
Grant Support: Roche Pharmaceuticals, Human Genome Sciences, Vertex Pharmaceuticals, Schering-Plough, Pharmasset, Conatus, Novartis, Gilead, Siemens Diagnostics
Consultant: Siemens Diagnostics

Jerome D. Waye, MD, MACG
Clinical Professor, Mt. Sinai School of Medicine, New York, NY
Dr. Waye has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

M. Michael Wolfe, MD, FACP
Chief, Section of Gastroenterology, Boston University School of Medicine, Boston Medical Center Section of Gastroenterology, Boston, MA
Dr. Wolfe has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Roy K.H. Wong, MD, FACP
Chief of Gastroenterology, Walter Reed Army Medical Center, Washington, DC
Speaker’s Bureau: TAP

Rowen K. Zetterman, MD, MACG
Professor of Medicine, University of Nebraska Medical Center, Omaha, NE
Dr. Zetterman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Investigational Use Disclosures
ACG’s disclosure policy maintains that if any unapproved or off-label use of a product is to be referenced in a CME program, the faculty member is required to disclose that the product is either investigational or it is not labeled for the usage being discussed. The following faculty members have indicated they may reference an off-label use in their PG Course presentation(s).

Dr. Brandt – Use of aminosalicylates for diverticulitis prevention
Dr. Chang – Use of tricyclic antidepressants, SSRI, SSNRI for chronic abdominal pain, IBS
Dr. Dubinsky – Use of 6–MP, methotrexate in IBD
Dr. Hallowell – Endoscopic stent for leaks
Dr. Kane – Use of prednisone, azathioprine in IBD
Dr. Kelly – Oral budesonide in celiac disease
Dr. Laine – PPIs for GI bleeding
Dr. Parkman – Use of domperidone in the treatment of gastroparesis
Dr. Richter – Treatment of eosinophilic esophagitis
Dr. Rubin – Chemoprevention of cancer in IBD with aminosalicylates
Dr. Schnoll-Sussman – Colon capsule

Support
The American college of Gastroenterology acknowledges an educational grant in support of the Postgraduate Course from Procter & Gamble.
Program Description
The field of gastroenterology and hepatology continues to see advancements in multiple areas relating to diagnostic measures, therapeutic options and technology. In order to provide appropriate and top-quality patient care, the clinician is challenged to stay abreast of the changes and advancements affecting the management of many gastrointestinal and liver disease states. Throughout this three day annual meeting you will be exposed to updates in a variety of topics including IBD, hepatitis B and C, colorectal cancer screening, endoscopic techniques and GI bleeding, diverticular disease, Barrett’s esophagus, GERD, IBS and motility disorders, obesity and bariatric surgery, and pancreatic conditions.

Twelve scientific plenary symposia will allow attendees to hear lecture presentations from experts and to participate in interactive question and answer sessions with the faculty. In addition, 13 optional scientific breakfast sessions will be offered, including 2 sessions that are in an “Ask the Experts” format structured to review complex IBD cases and to review the updated Barrett’s esophagus guidelines.

The program is designed primarily for physicians in gastroenterology and hepatology as well as physician assistants, nurse practitioners and other advanced practice healthcare professionals interested in the latest information on state of the art treatment of these illnesses.

Program Objectives
Upon completion of this program attendees will:

• Assimilate evidence supporting the role of biologics in the treatment of Crohn’s disease and assess the safety issues to the patient. Consult with IBD experts on the management of complicated IBD cases and gain the panel’s perspective on different therapeutic options and at what time to intervene with these options. Recognize when surgical intervention is required in patients with severe Crohn’s disease and ulcerative colitis and understand the post-surgical management of these patients. Identify the course of action with dysplasia in IBD, incorporating endoscopic techniques, surveillance guidelines, and management options.

• Evaluate current and emerging therapeutic options for hepatitis B and C and autoimmune liver diseases. Incorporate current practice guidelines, including diagnostic approaches, treatment options, and surveillance recommendations for these prevalent liver diseases. Provide effective inpatient and outpatient consults for the common problems encountered by chronic liver disease patients.

• Review the colorectal cancer screening guidelines and criteria, updates, controversies, and the importance of these guidelines. Incorporate into practice the indicators that define a quality colonoscopy. Define serrated polyps and identify the risk for malignancy in such polyps. Develop an algorithm for evaluating patients with multiple polyps. Identify the role of CT colonography, the essential aspects of performing CT colonography and the critical elements of reading and follow-up of findings.

• Evaluate the role of capsule endoscopy in occult GI bleeding. Develop a practical strategy to diagnosing and treating different causes of GI bleeding. Integrate new and existing technologies into clinical practice, including single and double balloon enteroscopy, and evaluate which procedure is best suited for each case. Identify and formulate strategies to reduce the bleeding risk while performing endoscopic procedures and strategies to recognize and appropriately manage gastrointestinal endoscopic emergencies.

• Evaluate medical and endoscopic intervention for diverticular disease and identify indications for surgery and surgical options for diverticular disease.

• Differentiate the 2002 practice guidelines for the diagnosis, surveillance and treatment of Barrett’s esophagus from the updated 2008 published guidelines and ask questions to the authors of the guidelines. Incorporate updated information regarding the risk of cancer in patients with Barrett’s esophagus and discuss the appropriate screening and surveillance methods. Deliberate the benefits and risks of EMR in patients with mucosal abnormalities.

• Evaluate current evidence to determine the value of diagnostic tests including impedance in GERD. Develop a strategy for managing the refractory GERD patient. Determine the relationship between and the impact of GERD and sleep disturbances and formulate a plan to manage the affected patient.

• Review the new ACG guidelines for an evidence-based approach to irritable bowel syndrome, incorporating into clinical practice the diagnostic tests and therapeutic options available. Evaluate the role enteric flora play in motility disorders and based on these findings, determine the utility of antibiotics and probiotics for these conditions.

• Assess the complications and therapeutic challenges of obesity. Recognize the long term nutritional deficiencies in the bariatric surgery patient. Incorporate new techniques to evaluate symptoms and modify the approach to the management of GI symptoms in the bariatric surgery patient using an understanding of anatomic and physiologic changes.

• Identify manifestations of autoimmune pancreatitis, develop a rationale for management of pancreatic cystic lesions, and expand knowledge and use of available techniques for risk reduction in ERCP. Assemble ACG guidelines for acute pancreatitis, incorporate diagnostic criteria and appropriate therapeutic options into clinical practice, understand the complications of pancreatitis and determine the best suitable course of action. Incorporate appropriate diagnostic and therapeutic options into practice for chronic pancreatitis and review controversies in the diagnosis and treatment of chronic pancreatitis.

• From an international perspective, evaluate the GERD Asian Pacific Guidelines and their worldwide impact, analyze ways to reduce the impact of hepatocellular carcinoma on morbidity and mortality, and explore the relation between H. pylori and gastric cancer including the international prevalence and possibilities of reducing its worldwide impact.

Accreditation
The American College of Gastroenterology is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The American College of Gastroenterology designates this educational activity for a maximum of 16.25 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
MONDAY, October 6, 2008
8:00 am – 5:15 pm

7:00 am-5:15 pm  Registration (City Hall Lobby)

8:00 am  Opening Remarks (Sun Ballroom)
Amy E. Foxx-Orenstein, DO, FACG
ACG President

8:00 am-9:00 am  PLENARY SESSION

President's Plenary Session (Sun Ballroom)
Moderators: Amy E. Foxx-Orenstein, DO, FACG
Jean-Paul Achkar, MD, FACG

1. Complete Barrett's Eradication Endoscopic Mucosal Resection (CBE-EMR): An Effective Treatment Modality for High Grade Dysplasia (HGD) and Intramucosal Carcinoma (IMC) – An American Single Center Experience
★ 2008 ACG Governors Award Recipient for Excellence in Clinical Research
J.S. Chennai, V.J. Konda, A.S. Ross, A. Herreros de Tejada, I. Waxman, CERT (Center for Endoscopic Research and Therapeutics), Department of Medicine, University of Chicago Medical Center, Chicago, IL; A. Noffsinger, J. Hart, Department of Surgical Pathology, University of Chicago Medical Center, Chicago, IL; M. Ferguson, M.C. Posner, Department of Surgery, University of Chicago Medical Center, Chicago, IL

2. Open-Label Use of Domperidone in Patients with Gastroparesis and Small Bowel Dysfunction
John Wo, MD, Allison Woosley, MD, Jennifer Eversmann, MD, Cindi Rountree, MD, Steven Harrell, MD, Division of Gastroenterology/Hepatology, University of Louisville, Louisville, KY

3. Family History of Chronic Pancreatitis is Associated with an Increased Risk for Developing Chronic Pancreatitis
★ 2008 ACG Governors Award Recipient for Excellence in Clinical Research
Randall Brand, MD, FACG, Dhiraj Yadav, University of Pittsburgh Medical Center, Pittsburgh, PA; Robert Hawes, MD, FACG, Medical University of South Carolina, Charleston, SC; Michelle Anderson, MD, A. Alfred Taubman Health Care Center, Ann Arbor, MI; Peter A. Banks, MD, MACG, Brigham & Women's Hospital, Boston, MA; Michelle Bishop, MD, Mayo Clinic Jacksonville, Jacksonville, FL; John Baillie, MB, ChB, FACG, Wake Forest University Baptist Medical Center, Winston-Salem, NC; Stuart Sherman, MD, FACG, Indiana University Hospital, Indianapolis, IN; Michael Goldberg, MD, FACG, Evanston Northwestern Health Care, Evanston, IL; James DiSario, MD, FACG, University of Utah, Salt Lake City, UT

4. Complications Associated with Double Balloon Enteroscopy
★ 2008 ACG Governors Award Recipient for Excellence in Clinical Research
Lauren Gerson, MD, Stanford University, Stanford, CA; Michael Chiorean, MD, University of Indiana, Indianapolis, IN; Jeffrey Tokar, MD, Oleh Haluszka, MD, Fox Chase Cancer Center, Philadelphia, PA; Anton Decker, MD, Jonathan Leighton, MD, FACG, Mayo Clinic, Scottsdale, AZ; David Cave, MD, FACG, University of Massachusetts, Boston, MA; Doumit Bou-Haidar, MD, Alvin Zfass, MD, MACG, Medical College of Virginia, Richmond, VA; Daniel Mishkin, MD, Boston University Medical Center, Boston, MA

5. Miss Rates of Findings on Colonoscopy after Computed Tomographic Colonography (CTC): Correlation with Polyp Histology
★ 2008 ACG/Olympus Colorectal Cancer Prevention Award Recipient
Ruben Acosta, MD, Evan May, MD, Brooks Cash, MD, FACG, National Naval Medical Center, Bethesda, MD; Mark Riddle, MD, Naval Medical Research Center, Bethesda, MD; Ganesh Veerapan, MD, Walter Reed Army Medical Center, Washington, DC

★ 2008 ACG/Naomi Nakao Gender Based Research Award Recipient
Joseph Anderson, MD, University of Connecticut, Farmington, CT; Zvi Alpern, MD, Stony Brook University, Stony Brook, NY

9:00 am-9:25 am  Presidential Address (Sun Ballroom)
Amy E. Foxx-Orenstein, DO, FACG
Introduced by:
Eamonn M.M. Quigley, MD, FACG
ACG President-Elect

9:25 am-9:30 am  Awards Program (Sun Ballroom)

9:30 am-10:30 am  PLENARY SESSION

President's Plenary Session (Sun Ballroom)
Moderators: Eamonn M.M. Quigley, MD, FACG
Jean-Paul Achkar, MD, FACG

7. Potential Savings for Federal Funding of a Colorectal Cancer Screening Program in Uninsured Patients
★ 2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient
Nison Badalov, MD, Ian Wall, MD, Jack Braha, MD, Robin Baradarian, Jai Mirchandani, MD, Kadirawel Iswara, MD, FACG, Jianjun Li, MD, FACG, Maimonides Medical Center, Brooklyn, NY; Michael Kantowitz, MD, New York College of Osteopathic Medicine, Old Westbury, NY; Scott Tenner, MD, MPH, FACG, State University of New York, Brooklyn, NY

8. Infliximab for Prevention of Crohn's Disease (CD) Recurrence After Ileal Resection
Miguel Reguiero, MD, Wolfgang Schraut, MD, PhD, Leonard Baidoo, MD, University of Pittsburgh Medical Center, Pittsburgh, PA; Kevin Kip, PhD, University of South Florida College of Nursing, Tampa, FL; Antonia Sepulveda, MD, PhD, University of Pennsylvania School of Medicine, Philadelphia, PA; Scott Plevy, MD, University of North Carolina School of Medicine, Chapel Hill, NC

9. Yield of Diagnostic Testing in Patients with Suspected Irritable Bowel Syndrome (IBS): A Prospective, U.S. Multicenter Trial
Brooks Cash, MD, FACG, Dong Lee, MD, Mylena Truesdale, MD, Cathy Dykes, MD, National Naval Medical Center, Bethesda, MD; Mark Riddle, MD, Naval Medical Research Center, Bethesda, MD; Richard Saad, MD, Borko Nojkov, MD, William Chey, MD, FACG, University of Michigan, Ann Arbor, MI
10. Accuracy of EUS, EBUS, and Combined EUS/EBUS for Lung Cancer Evaluation in Patients with a Negative CT of the Mediastinum

*2008 ACG Auxiliary Award Recipient*
Laith Jamil, MD, Noelia Cubero de Frutos, MD, Kanwar Gill, MD, Seth Gross, MD, Jorge Pascual, MD, Massimo Raimondo, MD, FACG, Timothy Woodward, MD, Julia Crook, PhD, John Oeddle, MD, Michael Wallace, MD, MPH, FACG, Mayo Clinic, Jacksonville, FL

11. Efficacy of the Probiotic VSL#3 in Children with Irritable Bowel Syndrome. An International, Randomized, Placebo-Controlled, Cross-Over Trial
Stefano Guandalini, MD, University of Chicago, Chicago, IL; Andrea Chiari, MD, Claudio Romano, MD, University of Messina, Messina, Italy; Valeria Labalestra, MD, University of Rome “La Sapienza,” Rome, Italy; Sarath Gopalan, MD, CRNSS, New Delhi, India; Roberto Berni Canani, MD, University Federico II, Naples, Italy

12. Effect of Midodrine on Natriuretic Response to Furosemide in Non-Azotemic Cirrhotics with Ascites: A Randomized, Double-Blind, Placebo-Controlled, Cross-Over Study
*2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient*
Vijay Laxmi Misra, MD, Raj Vuppalanchi, MD, David Jones, MD, Mitch Hamman, MD, Paul Kwo, MD, Naga Chalasani, MD, FACG, Indiana University School of Medicine, Indianapolis, IN

10:30 am-11:00 am Coffee Break – Visit Exhibits (Exhibit Hall)
11:00 am-12:15 pm SIMULTANEOUS SYMPOSIA SESSION 1

**Symposium 1A: Treatment of Hepatitis C: What’s New?** (Sun Ballroom C)

**Moderator:** K. Rajender Reddy, MD, FACG

1. **Response Guided Therapy for Hepatitis C:** The Evolving Paradigm
   *Mitchell L. Schiffman, MD, FACG*

2. **Ribavirin: It’s Not Going Away**
   *K. Rajender Reddy, MD, FACG*

3. **Who Will Benefit from the Newer Agents?**
   *Ira M. Jacobson, MD, FACG*

**Symposium 1B: ACG Guidelines: An Evidence Based Approach to IBS** (Sun Ballroom A)

**Moderator:** Philip S. Schoenfeld, MD, MSED, MScEpi, FACG

1. **Utility of Diagnostic Tests**
   *William D. Chey, MD, FACG*

2. **Treatment of IBS – Diarrhea**
   *Philip S. Schoenfeld, MD, MSED, MScEpi, FACG*

3. **Treatment of IBS – Constipation**
   *Nicholas J. Talley, MD, PhD, FACG*

12:15 pm-2:00 pm Lunch Break
12:15 pm-2:00 pm Poster Session (Exhibit Hall)
12:30 pm-1:00 pm **FAQ Session: Endoscopy** (Exhibit Hall)
   *Chris E. Forsmark, MD, FACG*

1:15 pm-1:45 pm **FAQ Session: Liver** (Exhibit Hall)
   *Eugene R. Schiff, MD, MACG*

12:30 pm-1:00 pm **FAQ Session: Endoscopy** (Exhibit Hall)
   *Chris E. Forsmark, MD, FACG*

**Symposium 1A: Treatment of Hepatitis C: What’s New?** (Sun Ballroom C)

**Moderators:** Stephen B. Hanauer, MD, FACG
Francis A. Farraye, MD, MSc, FACG

13. **Endoscopic Mucosal Improvement in Patients with Active Crohn’s Disease Treated with Certolizumab Pegol: First Results of the Music Clinical Trial**
Jean-Frederic Colombel, MD, CHU Lille, Lille, France; Xavier Hebuterne, MD, CHU Nice, Nice, France

14. **Safety of Infliximab and Other Crohn’s Disease Therapies: Treat™ Registry Data with 24,575 Patient-Years of Follow-Up**
Gary Lichtenstein, MD, FACG, University of Pennsylvania, Philadelphia, PA; R. Cohen, MD, University of Chicago, Chicago, IL; B. Feagan, MD, the London Clinical Trials Research Group, London, Ontario, Canada; W. Sandborn, MD, FACG, Mayo Clinic, Rochester, MN; B. Salzberg, MD, Atlanta Gastroenterology Associates, Atlanta, GA; D. Chen, PhD, M. Turner, PhD, D. Mink, PhD, ICON Clinical Research, San Francisco, CA; D. Broussard, MD, R. Diamond, MD, Centocor, Inc., Horsham, PA

15. **Immunomodulators are Associated with Avoidance of First Surgery Among Patients with Non-Penetrating Non-Stricturing Crohn’s Disease**
Michael Picco, MD, PhD, Ignacio Zubiaurre, MD, Mohamed Adluni, RPh, John Cangemi, MD, Donna Shelton, ARNP, Mayo Clinic, Jacksonville, FL

16. **Herbal Extract HPML-004 in Active Ulcerative Colitis: A Randomized Comparison with Sustained Release Mesalamine**
*2008 ACG International Award Recipient*
Tom Tang, MD, MBA, Hutchison MediPharma, Shanghai, China; William Sandborn, MD, FACG, Mayo Clinic, Rochester, MN; Stephan Targan, MD, Cedars-Sinai Medical Institute, Los Angeles, CA; Zhaoshen Li, MD, Chanhai Hospital, Second Military Medical University, Shanghai, China; Crystal Xu, MD, Mayo Clinic, Jacksonville, FL

**Symposium 1B: ACG Guidelines: An Evidence Based Approach to IBS** (Sun Ballroom A)

**Moderator:** Philip S. Schoenfeld, MD, MSED, MScEpi, FACG

1. **Utility of Diagnostic Tests**
   *William D. Chey, MD, FACG*

2. **Treatment of IBS – Diarrhea**
   *Philip S. Schoenfeld, MD, MSED, MScEpi, FACG*

3. **Treatment of IBS – Constipation**
   *Nicholas J. Talley, MD, PhD, FACG*

12:15 pm-2:00 pm Lunch Break
12:15 pm-2:00 pm Poster Session (Exhibit Hall)
12:30 pm-1:00 pm **FAQ Session: Endoscopy** (Exhibit Hall)
   *Chris E. Forsmark, MD, FACG*

1:15 pm-1:45 pm **FAQ Session: Liver** (Exhibit Hall)
   *Eugene R. Schiff, MD, MACG*

**Symposium 1A: Treatment of Hepatitis C: What’s New?** (Sun Ballroom C)

**Moderators:** Peter A. Banks, MD, MACG
Martin L. Freeman, MD, FACG

17. **The Effect of Chronic Pancreatitis on Employment: Results of a Multicenter Study**
Timothy Gardner, MD, Abigail Kennedy, BS, Brian Lacy, MD, PhD, FACG, Dartmouth-Hitchcock Medical Center, Lebanon, NH; Andres Gelrud, MD, Mayar A.L. Mohajer, MD, Mary Krotchen, MD, University of Cincinnati, Cincinnati, OH; Peter Banks, MD, MACG, Brigham and Women’s Hospital, Boston, MA; Santhi Vege, FACG, Mayo Clinic, Rochester, MN; Brian Lacy, MD, PhD, FACG, Dartmouth-Hitchcock Medical Center, Lebanon, NH

18. **Autoimmune Pancreatitis in the Midwest U.S. Population: Should We Rely on Elevated Serum IgG4 for Establishing the Diagnosis?**
Seth Moore, MD, Oscar Cummings, MD, Kumar Sandrasegaran, MD, Mohammad Al-Haddad, MD, John DeWitt, MD, Stuart Sherman, MD, FACG, Nick Zyromski, MD, Thomas Howard, MD, Lee McHenry, MD, Indiana University, Indianapolis, IN
19. The Role of EUS-Assisted Biliary Drainage After Failed ERCP
YeonSuk Kim, MD, Gacheon Medical School, Incheon, South Korea; Kapil Gupta, MD, MPH, Shawn Mallery, MD, Rebecca Li, MD, Timothy Kinney, MD, Anhtung Chau, MD, Kamran Safdar, MD, Martin Freeman, MD, FACC, University of Minnesota Hennepin County Medical Center, Minneapolis, MN

＊2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient
Sameer Barkatullah, MD, Srinadh Komanduri, MD, MS, Rush University Medical Center, Chicago, IL

2:40 pm-3:20 pm The American Journal of Gastroenterology Lecture (Sun Ballroom A)
"Endoscopic Management of Obesity"
Christopher C. Thompson, MD, FACC
"Reoperative Bariatric Surgery, When to and Not to"
Michael Sarr, MD
See page 17 for more information.

3:20 pm-3:50 pm Break/Visit Exhibits (Exhibit Hall)

3:50 pm-5:15 pm SIMULTANEOUS SYMPOSIA SESSION 2
Symposium 2A: Colon Cancer Screening: Getting to Zero Mortality (Sun Ballroom A)
Moderator: Douglas K. Rex, MD, FACC
1. New CRC Screening Criteria: Current Controversies
   Douglas K. Rex, MD, FACC
2. How Good are You?: Quality Indicators
   David A. Lieberman, MD, FACC
3. When Colonoscopy Gets Tough: How I Do It
   Jerome D. Waye, MD, MACG

Symposium 2B: Update in Biologic Therapies for IBD (Sun Ballroom C)
Moderator: Stephen B. Hanauer, MD, FACC
1. Which Anti-TNF Agent Should I Use?
   Stephen B. Hanauer, MD, FACC
2. Where Does Natalizumab Fit in?
   William J. Sandborn, MD, FACC
3. Are Biologics Safe?
   Corey A. Siegel, MD

5:30 pm-6:00 pm Annual Business Meeting (Sun Ballroom A)
College Members and Fellows invited

6:00 pm-7:00 pm International Reception (Osceola Ballroom A)
All International attendees are invited

7:00 pm-9:00 pm President’s Reception (Osceola Ballroom C)
All attendees are invited

TUESDAY, October 7, 2008
6:45 am – 6:00 pm

BREAKFAST SESSIONS
6:45 am-8:30 am
Cost is $40 per person/per session. If you have not registered, visit the ACG Registration Desk.

Breakfast Session A: The Spectrum of Diverticular Disease
Moderator: Lawrence R. Schiller, MD, FACC
1. Colitis and Diverticulosis: Innocent Relationship or Etiologic Association?
   Lawrence J. Brandt, MD, MACG
2. Diverticular Disease: The Gastroenterologist’s Perspective
   Lawrence R. Schiller, MD, FACC
3. Diverticular Disease: The Surgeon’s Perspective
   Dana R. Sands, MD

Breakfast Session B: My Aching Gut—Long Term Management After Bariatric Surgery
Moderator: Michael G. Sarr, MD
1. Nutritional Deficiencies
   Andrew Ukleja, MD
2. Evaluation of Common GI Symptoms
   Michael G. Sarr, MD
3. Evaluating and Managing the Excluded Stomach
   Todd H. Baron, MD

Breakfast Session C: Toys and Tools: Playing it Safe
Moderator: David A. Greenwald, MD, FACC
1. Enteroscopy: Single or Double?
   Simon K. Lo, MD, FACC
2. Anticoagulants, Antiplatelet Agents in Endoscopy
   David A. Greenwald, MD, FACC
3. Halo, Cryo or EMR?
   Virender K. Sharma, MD, FACC

Breakfast Session D: The New Barrett’s Guidelines: Ask the Experts What They Mean
Moderator: Richard E. Sampliner, MD, MACG
Panelists: Richard E. Sampliner, MD, MACG, Nicholas J. Shaheen, MD, MPH, FACC, and Kenneth K. Wang, MD, FACC

Breakfast Session E: IBD Talk: Stump the Experts – Case Presentations
Moderator: Jean-Paul Achkar, MD, FACC
Panelists: Stephen B. Hanauer, MD, FACC, Asher Kornbluth, MD, Gary R. Lichtenstein, MD, FACC, and Edward V. Loftus, Jr., MD, FACC
Breakfast Session F: Hepatitis B
Moderator: Paul Y. Kwo, MD

1. Are the Virological and Biochemical Thresholds for Treatment Failing?
   Paul Y. Kwo, MD

2. The Treatment Approach that Minimizes Resistance
   Eugene R. Schiff, MD, MACG

3. Making Sense of the New Data: Who Is at Risk for Hepatocellular Cancer?
   Morris Sherman, MB, BCh, PhD, FACC

6:45 am-6:00 pm Registration (City Hall Lobby)

8:30 am-10:00 am PLENARY SESSION

Esophagus/IBD (Sun Ballroom)
Modерators: Philip O. Katz, MD, FACC
Sunanda V. Kane, MD, MSPH, FACG

21. Long Term Outcomes and Factors Predictive of Recurrence Following Endoscopic Therapy of Mucosal Esophageal Adenocarcinoma
Ganapathy Prasad, MD, MS, Rami Radreddine, MD, Navtej Buttar, MD, Louis Wongkeesong, MD, Lori Lutzke, LPN, Lynn Borkenhagen, RN, FNP, Kelly Dunagan, LPN, Kenneth Wang, MD, FACC, Mayo Clinic, Rochester, MN

22. Survival Analysis of Multi-Center Clinical Trial Using Endoscopy (END) and Endoscopic Ultrasound (EUS) Guided Fine Needle Injection (FNI) of Anti-Tumor Agent (Tnerade™ Biologic) in Patients with Locally Advanced Esophageal Cancer
Kenneth Chang, MD, FACC, UCI Medical Center, Orange, CA; Neil Senzer, MD, Mary Crowley Medical Research Center, Dallas, TX; Roy Soetikno, MD, VA Palo Alto and Stanford University, Palo Alto, CA; Stephen Swisher, MD, MD Anderson Cancer Center, Houston, TX; Tony Reid, MD, University of California, San Diego, CA; Ann Mauer, MD, Everett Vokes, MD, University of Chicago, Chicago, IL; Harlan Pinto, MD, Stanford University; Amitabh Chak, MD, FACC, University Hospitals of Cleveland, Cleveland, OH; Arlene Forastiere, MD, Johns Hopkins University, Baltimore, MD

23. Gastroesophageal Reflux During Sleep – Sleepless Nights Are Common
Larissa Allen, MD, Ronnie Fass, MD, FACC, Neuroenteric Clinical Research Group, Southern Arizona VA Health Care System, Tucson, AZ; Ibraheem Mizyed, MD, University of Arizona Health Sciences Center, Tucson, AZ; Jeannette Powers, BS, Anita Gasiorowska, MD, Isaac Malagon, MD, Bridget Moty, Student, Marcy Willis, RN, Neuroenteric Clinical Research Group, Southern Arizona VA Health Care System, Tucson, AZ

24. Season Variation in the Diagnosis of Eosinophilic Esophagitis: A Case-Control Analysis
★ 2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient
Evan Dellon, MD, Wood Gibbs, MD, Tara Rubinas, MD, Karen Fritchle, MD, John Woosley, MD, Nicholas Shaheen, MD, FACC, University of North Carolina, Chapel Hill, NC

25. A New Therapy for Eosinophilic Esophagitis in Adults: Efficacy of Budesonide – Rincinol Gel for 6 Weeks in Patients with Dysphagia
David Neumann, MD, Glenn Alexander, MD, Gianrico Farrugia, MD, Kartikh Ravi, MD, Roger Warndahl, PharmD, Jeffrey Alexander, MD, Mayo Clinic, Rochester, MN; Nicholas Talley, MD, PhD, FACC, Mayo Clinic, Jacksonville, FL

26. Once-Daily 1.5-g Granulated Mesalamine Effectively Maintains Remission in Patients with Ulcerative Colitis who Switch from Different 5-ASA Formulations
Gary Lichtenstein, MD, FACC, University of Pennsylvania School of Medicine, Philadelphia, PA; Kunal Merchant, PhD, Audrey Shaw, PhD, James Yuan, PhD, Enoch Bortey, PhD, William Forbes, PharmD, Salix Pharmaceuticals, Morrisville, NC

27. The Evolution of Crohn’s Disease (CD) Behavior in a Population-Based Cohort
★ 2008 ACG/Centocor IBD Abstract Award Recipient
Kelvin Thia, MBBS, William Sandborn, MD, FACC, William Harmsen, MS, Alan Zinsmeister, PhD, Edward Loftus, MD, FACC, Mayo Clinic, Rochester, MN

28. Evaluation of CT Enterography (CTE), Biomarkers, and Clinical Symptoms for the Non-Invasive Prediction of Active Inflammation in Patients with Crohn’s Disease
★ 2008 ACG/Centocor IBD Abstract Award Recipient
David Bruining, MD, Joel Fletcher, MD, Hassan Siddiki, MBBS, James Huprich, MD, Jeff Fidler, MD, William Sandborn, MD, FACC, Jayawant Mandrekar, PhD, William Harmsen, MS, Edward Loftus, MD, FACC, Mayo Clinic, Rochester, MN

Late-Breaking Abstract — see page 423 for full abstract

29. SONIC: A Randomized, Double-Blind, Controlled Trial Comparing Infliximab and Infliximab plus Azathioprine to Azathioprine in Patients with Crohn’s Disease Naive to Immunomodulators and Biologic Therapy
W.J. Sandborn, MD, P. Rutgeerts, MD, W. Reinisch, MD, G.J. Mantzaris, MD, A. Kornbluth, MD, D. Rachmilewitz, MD, S. Lichtiger, MD, G. D’Haens, MD, C.J. van der Woude, MD, R.H. Diamond, MD, D. Brousard, MD, R. Hegedu, MD, J.F. Colombel, MD, Mayo Clinic, Rochester, MN, U. Hospital, Gasthuisberg, Leuven, Belgium, U. Hospital Vienna, Vienna, Austria, Evangelismos Hospital, Athens, Greece, Mt. Sinai Medical Center, New York, NY, Shaare Zedek Medical Center, Jerusalem, Israel, Imelda Ziekenhuis, Bonheiden, Belgium, Erasmus MC, Rotterdam, Netherlands, Centocor, Inc., Horsham, PA, Centre Hospitalier Universitaire de Lille, France

10:00 am-10:30 am J. Edward Berk Distinguished Lecture
(Sun Ballroom)
Douglas E. Rex, MD, FACC
Introduced by:
Amy E. Foxx-Orenstein, DO, FACC
AGC President
See page 17 for more information.

10:30 am-11:00 am Coffee Break/Visit Exhibits (Exhibit Hall)
11:00 am-12:15 pm SIMULTANEOUS SYMPOSIA SESSION 3

Symposium 3A: CT Colonography: Current Controversies
(Sun Ballroom C)
Moderator: Roy K.H. Wong, MD, FACC

1. Can We Train the Gastroenterologist to Do CT Colonography?
   Brooks D. Cash, MD, FACC

2. Reading the CT Colonography: What Do You Report and What Do You Recommend for Follow Up? (Debate)
   Roy K.H. Wong, MD, FACC and David A. Johnson, MD, FACC

3. Panel Discussion
**Symposium 3B: The Hepatology Consult** (Sun Ballroom A)  
**Moderator:** Mark W. Russo, MD, MPH

1. If You Have Liver Disease, Consult Your Doctor Before Using This Medication: What Do You Say to the Patient?  
Mark W. Russo, MD, MPH

2. Management Options for Patients with Minimal Hepatic Encephalopathy  
Jasmohan S. Bajaj, MBBS, MD

3. Perioperative Risk Assessment of the Patient with Cirrhosis: When They Have to Go to the Operating Room  
Vijay H. Shah, MD, FACG

**Symposium 3C: The Problematic Pancreas** (Osceola Ballroom C)  
**Moderator:** Brenda J. Hoffman, MD, FACG

1. Autoimmune Pancreatitis  
Suresh T. Chari, MD

2. What Do You Do Once You Find a Pancreatic Cyst?  
Brenda J. Hoffman, MD, FACG

3. Pancreatic Stents in Practice  
Martin L. Freeman, MD, FACG

**Plenary Session 1: Colon/Functional Bowel Disorders/Pediatrics** (Sun Ballroom A)  
**Moderators:** Nicholas J. Talley, MD, PhD, FACG  
Carol A. Burke, MD, FACG

30. Effect of Combination Lubiprostone and Senna on Gastrointestinal Transit and Bowel Function in Humans  
Amy Foxx-Orenstein, DO, FACG, Davinder Sandhu, MBBSCh, Kim Jensen, Michael Camilleri, MD, FACG, Kari Baxter, MD, Duane Burton, MD, Alan Zinsmeister, PhD, Mayo Clinic, Rochester, MN

31. Demographic and Pathologic Evaluation of 2,139 Patients with Sessile Serrated Adenomas in a One-Year Period  
Richard Lash, MD, Christopher Schuler, MD, Robert Genta, MD, FACG, Caris Diagnostics, Irving, TX

32. Prospective Double Blinded Comparison of Computed Virtual Chromoendoscopy and Confocal Microscopy for Diagnosing Colorectal Neoplasia  
**2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient**  
Anna Buchner, MD, PhD, Marwan Ghabril, MD, Murli Krishna, MD, Herbert Wolfsen, MD, FACG, Michael Wallace, MD, MPH, FACG, Mayo Clinic, Jacksonville, FL

33. Endoscopic Resection of Large Colorectal Lesions in the United States in a Referral Center Is a Dominant Strategy — Long-Term Efficacy and Cost Analysis Results  
Tonya Kaltenbach, MD, MS, Kenneth Bimmoeller, MD, Venkat Kalindindi, MD, Roy Soetikno, MD, MS, California Pacific Medical Center—Interventional Endoscopy Services, San Francisco, CA

34. Molecular Markers of Rapidly Growing Tumors: Another Piece to the Puzzle  
**2008 ACG/AstraZeneca Senior Fellow Abstract Award Recipient**  
Mustafa Arain, MD, Shehla Sheikh, MD, Bharat Thayagarajan, MD, University of Minnesota, Minneapolis, MN; John Bond, MD, Aasma Shaukat, MD, VA Medical Center, Minneapolis, MN

35. Linacotide Significantly Improved Abdominal Pain, Constipation and Global Assessments in Adults with Irritable Bowel Syndrome with Constipation: Results from a Large Twelve-Week, Randomized, Double-Blind, Placebo-Controlled Study  
Jeffrey Johnston, MD, James MacDougall, PhD, Bernard Lavins, MD, Donald Fitch, MPH, Mollie Baird, MPH, Caroline Kurtz, PhD, Mark Currie, PhD, Ironwood Pharmaceuticals, Cambridge, MA; Anthony Lembo, MD, Beth Israel Deaconess Medical Center, Boston, MA

36. Development of a Diagnostic Test for Irritable Bowel Syndrome  
Augusto Lois, PhD, Derrick Wang, PhD, Derren Barken, PhD, Leonard Eggleston, BS, Jim Tolley, BA, Susan Carroll, PhD, Bruce Neri, PhD, Prometheus Pharmaceuticals, San Diego, CA

37. Evaluation of the Efficacy of Amitriptyline in Children with Abdominal Pain of Non-Organic Origin  
**2008 ACG Governors Award Recipient for Excellence in Clinical Research**  
Miguel Saps, MD, Children’s Memorial Hospital, Chicago, IL; Nader Youssef, MD, FACG, Goryeb Children’s Hospital at Atlantic Health, Morristown, NJ; Adrian Miranda, MD, Medical College of Milwaukee, Milwaukee, WI; Samuel Nurko, MD, Children’s Hospital, Boston, MA; Jose Cocjin, MD, Children’s Mercy Hospital, Kansas City, MO; Carlo Di Lorenzo, MD, Nationwide Children’s Hospital, Columbus, OH

38. A Prospective School Study on the Epidemiology of Functional Gastrointestinal Disorders in Children  
Miguel Saps, MD, Children’s Memorial Hospital, Chicago, IL; Roopa Sheshadri, PhD, Northwestern University’s Feinberg School of Medicine, Chicago, IL; Marcelo Szteinberg, PhD, Northeastern Illinois University, Chicago, IL; Gilda Schaffer, PsyD, Northern Illinois Psychological Services, Northbrook, IL; Beth Marshall, BA, Children’s Memorial Hospital, Chicago, IL; Carlo Di Lorenzo, MD, Nationwide Children’s Hospital, Columbus, OH
Plenary Session 2: Endoscopy/Stomach  (Sun Ballroom C)

Moderators:  Anthony N. Kalloo, MD, FACG
             David A. Johnson, MD, FACG

39. The Effects of High Definition (HD), Electronic Magnification (EM), White Light (WL) and Narrow Band Imaging (NBI) on the Detection of Adenomatous, Hyperplastic and Non-Neoplastic Polyps at Screening Colonoscopy
Francisco Ramirez, MD, FACG, Carl T. Hayden VA Medical Center, Phoenix, AZ

40. The Third Eye Retroscope Improves Detection of Polyps During Colonoscopy — A Prospective Efficacy Evaluation
Douglas Rex, MD, FACG, William Kessler, MD, Indiana University Medical Center, Indianapolis, IN; Russell Heigh, MD, David Fleischer, MD, Mayo Clinic, Scottsdale, AZ; Leslie Aldrich, MD, University of Michigan, Ann Arbor, MI; Jiayi Li, MD, Sanjay Ramrakhiani, MD, Camino Medical Group and El Camino Hospital, Mountain View, CA; Dayna Early, MD, Washington University, St. Louis, MO; Robert Bresaller, MD, MD Anderson Cancer Center, Houston, TX; Jerome Waye, MD, MACG, Mount Sinai Medical Center, New York, NY

41. Less Respiratory Depression with Patient Versus Anesthesiologist Controlled Sedation: A Prospective, Randomized, Controlled Trial in Patients Undergoing Elective Colonoscopy Using Propofol-Remifentanil
Jeff Mandel, MD, MS, Gary Lichtenstein, MD, FACG, David Metz, MD, Gregory Ginsberg, MD, University of Pennsylvania School of Medicine, Philadelphia, PA

42. Capnography Prevents Hypoxemia During Elective ERCP and EUS: Results of Randomized Controlled Trial
Mohammed Qadeer, MD, MPH, John Vargo, MD, MPH, FACG, John Dumot, DO, Tyler Stevens, MD, Mansour Parsi, MD, Madhusudan Sanaka, MD, Sung Jang, MD, Rocío Lopez, MS, MPH, Gregory Zuccaro, MD, FACG, Cleveland Clinic, Cleveland, OH

43. Safe and Rapid Intubation of the Distal Small Bowel Using the Discovery SB™ Overtube Device During Small Bowel Enteroscopy: Results of the Spiral Enteroscopy Training Initiative
Jonathan Buscaglia, MD, Kerry Dunbar, MD, Patrick Okolo, MD, MPH, Johns Hopkins University School of Medicine, Baltimore, MD; Joel Judah, MD, University of Florida School of Medicine, Gainesville, FL; Jesus Pantgat, MD, Clinica De Diagnostico Pantgat, Tampico, Tamaulipas, Mexico; Peter Draganov, MD, FACG, University of Florida School of Medicine, Gainesville, FL

44. Management of Post-ERCP Perforation: Experience from Over 4,100 ERCPs
Devi Mukkai Krishnamurthy, MBBS, Sumit Kapoor, MBBS, MPH, Patrick Okolo, MBBS, MPH, Fredric Eckhauser, MD, Anthony Kalloo, MD, FACG, Sanjay Jagannath, MD, Johns Hopkins University School of Medicine, Baltimore, MD

45. Omeprazole Can Prevent the Gastroduodenal Mucosal Injury Associated with Combined Use of Clopidogrel and Aspirin
Byron Cayer, MD, FACG, Southwestern Medical School, Dallas, TX; Pablo Lapuerta, MD, John Jermamo, RN, MPH, Cogentus Pharmaceuticals, Menlo Park, CA; Frank Lanza, MD, FACG, Baylor College of Medicine, Houston, TX; Philip Miner, MD, FACG, Oklahoma Foundation for Digestive Research, Oklahoma City, OK; Howard Schwartz, MD, Miami Research Associates, Miami, FL; Daniel Azarnoff, MD, D.L. Azarnoff Associates LLC, Burlingame, CA; Mark Goldsmith, MD, Cogentus Pharmaceuticals, Menlo Park, CA

46. National Survey of Physicians’ Perception on the Cause, Complication, and the Management of Gastroparesis
★ 2008 ACG/AstaZaneca Senior Fellow Abstract Award Recipient
Lauren Briley, MD, Steven Harrell, MD, MSPH, John Wo, MD, University of Louisville, Louisville, KY

47. Fundic Gland Polyps Occur in H. pylori-free Stomachs and Are Not Associated with Increased Prevalence of Colonic Adenoma or Carcinoma
Richard Lash, MD, Cristian Robiou, MD, Robert Genta, MD, FACG, Caris Diagnostics, Irving, TX

4:15 pm-4:45 pm  Break

4:45 pm-6:00 pm  SIMULTANEOUS SYMPOSIA SESSION 4

Symposium 4A: Current Issues in GI Bleeding  (Sun Ballroom A)
Moderator: John R. Saltzman, MD, FACG

1. Inject, Burn or Clip?  
   John R. Saltzman, MD, FACG

2. Pitfalls to Capsule Endoscopy in Occult GI Bleeding 
   Douglas O. Faigel, MD, FACG

3. Lower GI Bleeding Revisited
   Lisa L. Strate, MD, FACG

Symposium 4B: Dysplasia Dilemmas in IBD  (Sun Ballroom C)
Moderator: Francis A. Farraye, MD, MSc, FACG

1. Natural History and Management of Flat and Polypoid Dysplasia 
   Francis A. Farraye, MD, MSc, FACG

2. New Endoscopic Techniques 
   Bret A. Lashner, MD, FACG

3. Dysplasia: Clinician’s Dilemma, Pathologist’s Nightmare 
   Robert D. Odze, MD

Symposium 4C: Obesity: What’s the Big Deal?  (Osceola Ballroom C)
Moderator: Amy E. Foxx-Orenstein, DO, FACG

1. Appetite Regulation: Curb Your Enthusiasm 
   Amy E. Foxx-Orenstein, DO, FACG

2. Foie Gras (NAFLD): Too Much of a Good Thing? 
   Naga P. Chalasani, MD, FACG

3. Choosing the Right Cut: The Role of Endoscopy and Surgery in Treatment 
   Anthony N. Kalloo, MD, FACG
WEDNESDAY, October 8, 2008
6:45 am – 12:30 pm

BREAKFAST SESSIONS
6:45 am-8:30 am
Cost is $40 per person/per session. If you have not registered, visit the ACG Registration Desk.

Breakfast Session G: Polyp Paradigms
Moderator: Sapna Syngal, MD, FACG
1. Serrated Polyps and Their Clinical Implications
   Michael J. O’Brien, MD, FACG
2. Clinical and Molecular Workup of a Patient with Multiple Polyps
   Sapna Syngal, MD, FACG
3. Advanced Adenomas: Fact or Fiction
   Robert E. Petras, MD, FACG

Breakfast Session H: Evolving Approaches to Pancreaticobiliary Disease
Moderator: Scott M. Tenner, MD, MPH, FACG
1. Medical Management of Acute Pancreatitis
   Scott M. Tenner, MD, MPH, FACG
2. Diagnosis and Management of Chronic Pancreatitis
   Joe Romagnuolo, MD
3. Difficult Biliary Access
   Kapil Gupta, MD and Timothy Kinney, MD

Breakfast Session I: New Frontiers in GERD
Moderator: Philip O. Katz, MD, FACG
1. Role of Multichannel Intraluminal Impedance and pH (MII-pH) Monitoring in the Evaluation of GERD
   Marcelo F. Vela, MD, MSCR, FACG
2. Endoscopic Treatment: Driven Science or Science Driven
   Julia J. Liu, MD, FACG
3. GERD and Sleep: Strangers in the Night
   Ronnie Fass, MD, FACG
4. Refractory GERD: Land Beyond PPI
   Philip O. Katz, MD, FACG

Breakfast Session J: Endoscopic Emergencies – Snooze or Cruise
Moderator: Waqar A. Qureshi, MD, FACG
1. Choangitis
   Waqar A. Qureshi, MD, FACG
2. Upper GI Foreign Bodies
   Milton T. Smith, MD, FACG
3. Colonic Obstruction/Pseudo Obstruction
   Michael D. Saunders, MD

Breakfast Session K: Autoimmune Liver Diseases
Moderator: Kris V. Kowdley, MD, FACG
1. Autoantibodies in Liver Disease: Making Sense of the Overlap Syndromes
   Norman Gitlin, MD, FACG
2. Autoimmune Hepatitis: Is it Treatment for Life or Can You Stop Treatment?
   Steven L. Flamm, MD
3. Cholestatic Liver Disease – PBC/PSC: When to Biopsy, When to Image, and How to Manage
   Kris V. Kowdley, MD, FACG

Breakfast Session L: Positioning Therapeutic Options for IBD
Moderator: Brian G. Feagan, MD
1. Severe UC: Salvage Medical Therapy vs. Straight to the OR
   Edward V. Loftus, Jr., MD, FACG
2. Crohn’s: Does Mucosal Healing Matter?
   Brian G. Feagan, MD
3. Perianal Disease: Challenges and Therapies
   Joshua A. Katz, MD

Breakfast Session M: International Session — The Impact of Diseases Worldwide
Moderator: Manoop S. Bhutani, MD, FACG
1. GERD: Asian Pacific Guidelines and Its Impact Worldwide
   Eamonn M.M. Quigley, MD, FACG
2. Hepatocellular Carcinoma Worldwide: How Can We Reduce Its Impact on Morbidity and Mortality?
   Lewis R. Roberts, MB ChB, PhD, FACG
3. H. pylori and Stomach Cancer: International Prevalence and How We Can Reduce Its Impact Worldwide
   Nicholas J. Talley, MD, PhD, FACG

6:45 am-12:30 pm Registration
8:30 am-10:15 am SIMULTANEOUS PLENARY SESSIONS

Plenary Session 1: Liver (Sun Ballroom A)
Moderators: William D. Carey, MD, MACG
            Mitchell L. Shiffman, MD, FACG

48. Is it Cost-Effective to Treat Minimal Hepatic Encephalopathy to Prevent Traffic Accidents? A Decision Analysis
   Jasmohan Bajaj, MD, MBBS, MS, Kia Saeian, MD, MS, FACG,
   Nicholas Pagewski, MS, Steven Pinkerton, PhD, Medical College of Wisconsin, Milwaukee, WI

49. Characteristics of Patients with Idiosyncratic Drug Induced Liver Injury (DILI) Who Receive Systemic Corticosteroids: Initial Results from the U.S. DILI Network Prospective Study
   Naga Chalasani, MD, FACG, Indiana University School of Medicine, Indianapolis, IN; Robert Fontana, MD, University of Michigan, Ann Arbor, MI; Timothy Davern, MD, University of California, San Francisco, CA; Herbert Bonkovsky, MD, FACG, Carolina Medical Center, Charlotte, NC; James Rochon, MD, Duke Clinical Research Institute, Raleigh, NC; Jose Serrano, MD, NIDDK, Bethesda, MD; Paul Watkins, MD, University of North Carolina, Chapel Hill, NC
50. A Prospective Study of the Utility of Lectin-Reactive Alpha-Fetoprotein (AFP-L3%) in Developing Hepatocellular Carcinoma (HCC)
Richard Sterling, MD, MSc, FACP, Richard Stravitiz, MD, Velimir Luketic, MD, FACP, Michael Fuchs, MD, Arun Sanyal, MD, Mitchell Shiffman, MD, FACP, Virginia Commonwealth University, Richmond, VA

51. Increased Soluble FAS and FAS Ligand Levels in Patients with Nonalcoholic Steatohepatitis
★ 2008 ACG Obesity Award Recipient
Tamali Bhattacharya, MD, MS, Lisa Yerian, MD, Michael Berk, MD, Arthur McCullough, MD, FACP, Ariel Feldstein, MD, Cleveland Clinic, OH

52. Outcome of Transjugular Intrahepatic Portosystemic (TIPS) in Older Patients: A Comparable Analysis with Younger Age Group
Adnan Muhammad, MD, Kiran Rao, MD, Arun Samanta, MD, FACP, Sohail Contractor, MD, Malika Ahmad, MD, Baburao Koneru, MD, Dorian Wilson, MD, Adrian Fisher, MD, University of Medicine and Dentistry, Newark, NJ

53. Risk Factors (RFs), Novel Genotypes, and Treatment Outcomes in Southeast Asians (SEAS) with Chronic Hepatitis C
Nghia Nguyen, BA, Philip Vutien, BA, Long Nguyen, BA, Nghiem Ha, BS, Pacific Health Foundation, San Jose, CA; Huy Trinh, MD, Ruel Garcia, MD, Huy Nguyen, MD, Khang Nguyen, Brian Levitt, MD, San Jose Gastroenterology, San Jose, CA; Mindie Nguyen, MD, MAS, Stanford University Medical Center, Palo Alto, CA

54. Hepatic Progenitor Cells: Their Possible Role in Recurrent HCV and Allograft Loss
Seth Clair, Medical Student, M. Isabel Fiel, MD, Hai-Shan Wu, PhD, John Doucette, PhD, Costica Aloman, MD, Thomas Schiano, MD, Mount Sinai School of Medicine, New York, NY

55. What is the Prevalence of Celiac Disease Among U.S. Patients with Primary Sclerosing Cholangitis?
Alastair Smith, MB, ChB, Judith Gentile, RN, ANP, Duke University Medical Center, Durham, NC

56. A Randomized Controlled Comparison of Warm Water Infusion in Lieu of Air Insufflation vs. Air Insufflation for Aiding Colonoscopy Insertion in Sedated Patients Undergoing Colorectal Cancer (CRC) Screening and Surveillance
J. Leung, MD, FACP, S. Mann, MD, FACP, R. Siao-Salera, RN, K. Ransibrahmanakul, MD, B. Lim, MD, H. Cabrera, RN, P. Barredo, LVN, R. Gutierrez, RN, F. Leung, MD, FACP, Section of Gastroenterology, Sacramento VA Medical Center, VA Northern California Health Care System, Mather and Sepulveda ACC, VAGLA Health Care System, LA, California

57. Efficacy of a Probiotic Fermented Drink of Lactobacillus Acidophilus and Lactobacillus Casei in the Reduction of Antibiotic-Associated Diarrhea
Joe Dylewski, MD, St. Mary's Hospital, Montreal, Quebec, Canada; Yves Pesant, MD, Recherche Mediceale, St. Jerome, Quebec, Canada; Magdy Elkashab, MD, North York General Hospital, Toronto, Ontario, Canada; Pascal Rochette, MD, Hospital Laval, Quebec, Quebec, Canada; Andre Poirier, Centre Hospitalier Regional, Trois Rivieres, Quebec, Canada; Doria Grimard, MD, Hopital Hotel Dieu de Chicoutimi, Chicoutimi, Quebec, Canada; Andrew Worster, MD, Hamilton General Hospital, Hamilton, Ontario, Canada; John Sampalis, PhD, JSS Medical Research, Montreal, Quebec, Canada

58. Weekend Versus Weekday Admission and Mortality From Gastrointestinal Hemorrhage due to Pepsic Ulcer Disease
Robert Myers, MD, Abdel Aziz Shaheen, MD, MPH, Gilaad Kaplan, MD, MPH, University of Calgary, Calgary, Alberta, Canada

59. Pregnancy Outcomes in Women Exposed to Adalimumab: The Otis Autoimmune Diseases in Pregnancy Project
Diana Johnson, MS, Kenneth Lyons Jones, MD, Christina Chambers, PhD, MPH, University of California San Diego, La Jolla, CA

60. Outcome in Two Hundred and Twenty-Two Patients Undergoing Colonoscopy/Polypectomy on Uninterrupted Clopidogrel Therapy
Mandeep Singh, MD, Nilesh Mehta, MD, Uma Murthy, MD, FACP, Vivek Kaul, MD, FACP, Asma Arif, MD, VA Medical Center, Syracuse, NY; Nancy Newman, MS, SUNY Upstate Medical University, Syracuse, NY

61. Colorectal Cancer (CRC) Screening with Optical Colonoscopy (OC) vs. CT Colonography (CTC): A Cost Effectiveness Analysis
Mohammed Qadeer, MD, MPH, Carol Burke, MD, FACP, Cleveland Clinic, Cleveland, OH; Jessica Jensen, MPH, Aggrey Mukose, MBChB, MS, Mendel Singer, PhD, Case Western Reserve University, Cleveland, OH

62. Quality of Colonoscopy in Routine Clinical Practice: A Population-Based Analysis
★ 2008 ACG/Olympus Colorectal Cancer Prevention Award Recipient
Cynthia Ko, MD, MS, Jason Dominitz, MD, MHS, William Kreuter, MPA, Laura-Mae Baldwin, MD, MPH, University of Washington, Seattle, WA

63. Over- and Under-use of Screening Colonoscopy in a Population-Based Cohort
★ 2008 ACG/Olympus Colorectal Cancer Prevention Award Recipient
Jessica Bazick, Medical Student, Case Western Reserve University, Cleveland, OH; Gregory Cooper, MD, FACP, University Hospitals, Cleveland, OH
64. Treatment Out to 1 Year with a GLP-2 Analog, Teduglutide, Safely Reduces Parenteral Nutrition (PN) Needs in PN-Dependent Short Bowel Syndrome (SBS) Patients
Richard Gilroy, MD, University of Kansas Medical Center, Kansas City, KS; Johane Allard, MD, Toronto General Hospital, Toronto, Ontario, Canada; Palle Bekker Jeppesen, MD, Rigshospitalet, Copenhagen, Denmark; Douglas Seidner, MD, Vanderbilt University Medical Center, Nashville, TN; Marek Pertkiewicz, MD, Medical University of Warsaw, Warsaw, Poland; Lyn Howard, MD, Albany Medical Center, Albany, NY; Stephen O’Keefe, MD, University of Pittsburgh Medical Center, Pittsburgh, PA; Nancy McGraw, NPS Pharmaceuticals, Bedminster, NJ; Bernard Messing, Hopital Beaujon, Clichy, France; Khursheed Jejeebhoy, MD, St. Michael’s Hospital, Toronto, Ontario, Canada

65. A Validated Gluten Free Diet Adherence Survey for Adults with Celiac Disease
★ 2008 Lawlor Resident Award Recipient
Shailaja Jamma, MD, Daniel Leffler, MD, MS, Melinda Dennis, RD, MS, Jessica Edwards-George, PhD, Suma Magge, MD, Detlef Schuppan, MD, PhD, Ciaran Kelly, MD, Beth Israel Deaconess Medical Center, Boston, MA; Earl Cook, PhD, Harvard School of Public Health, Boston, MA

10:15 am-10:45 am  David Y. Graham Lecture (Sun Ballroom A)  “Colon Ischemia: Respice, Adspice, Prospice”  Lawrence J. Brandt, MD, MACG
Introduced by:  Amy E. Foxx-Orenstein, DO, FACG
See page 17 for more information.

10:45 am-11:15 am  Coffee Break/Visit Exhibits  (Exhibit Hall)

11:15 am-12:30 pm  SIMULTANEOUS SYMPOSIA SESSION 5
Symposium 5A: What’s New and Old in Barrett’s Esophagus  (Sun Ballroom A)
Moderator: Nicholas J. Shaheen, MD, MPH, FACG

1. New Definition: Is Intestinal Metaplasia Dead?  
   Robert D. Odze, MD

2. Screening and Surveillance: Is There Anything New?  
   Nicholas J. Shaheen, MD, MPH, FACG

3. How to Remove Those Unsightly Bumps, EMR  
   Kenneth K. Wang, MD, FACG

Symposium 5B: The Gut Microbiota: Friend and Foe  (Sun Ballroom C)
Moderator: Eamonn M.M. Quigley, MD, FACG

1. Diagnostic Evaluation of the Enteric Flora  
   Eamonn M.M. Quigley, MD, FACG

2. An Evidence Based Approach to the Use of Probiotics  
   John K. DiBaise, MD, FACG

3. An Evidence Based Approach to the Use of Antibiotics  
   Mark Pimentel, MD

12:30 pm  ANNUAL SCIENTIFIC MEETING ADJOURNS
Faculty Listing and Disclosure Information
It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

Faculty have noted the following relationships related to their Annual Meeting presentations.

Jean-Paul Achkar, MD, FACP
Staff Physician, Department of Gastroenterology, Cleveland Clinic, Cleveland, OH
Speaker’s Bureau: Prometheus

Jasmohan S. Bajaj, MBBS, MD
Assistant Professor, Medical College of Virginia, Richmond, VA
Dr. Bajaj has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Peter A. Banks, MD, MACG
Professor of Medicine, Hanard Medical School, Boston, MA
Dr. Banks has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Todd H. Baron, MD
Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Research Grant: Fujinon

Manoop S. Bhutani, MD, FACP
Professor of Medicine, University of Texas MD Anderson Cancer Center, Houston, TX
Dr. Bhutani has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Lawrence J. Brandt, MD, MACG
Professor of Medicine, Albert Einstein College of Medicine, Bronx, NY
Dr. Brandt has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Carol A. Burke, MD, FACP
Director, Center for Colon Polyps & Cancer, Cleveland Clinic Foundation, Cleveland, OH
Dr. Burke has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

William D. Carey, MD, MACG
Professor of Medicine, Cleveland Clinic, Cleveland, OH
Dr. Carey has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Brooks D. Cash, MD, FACP
Associate Professor of Medicine, Uniformed Services University of the Health Sciences, Bethesda, MD
Dr. Cash has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Naga P. Chalasani, MD, FACP
Associate Professor of Medicine, Indiana University, Indianapolis, IN
Consultant: Takeo, Pfizer
Research Support: Sanofi

Suresh T. Chari, MD
Professor of Medicine, College of Medicine, Mayo Clinic, Rochester, MN
Dr. Chari has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

William D. Chey, MD, FACP
Professor of Medicine, Director GI Physiology Lab, University of Michigan Medical Center, Ann Arbor, MI
Dr. Chey has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

John K. DiBiasi, MD, FACP
Professor of Medicine, Mayo Clinic Scottsdale, Scottsdale, AZ
Dr. DiBiasi has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Douglas D. Faigel, MD, FACP
Associate Professor of Medicine, Oregon Health Sciences University, Portland, OR
Consultant: Olympus

Francis A. Farraye, MD, MSc, FACP
Clinical Director, Section of Gastroenterology, Boston Medical Center, Boston, MA
Speaker’s Bureau/Advisory Board: Procter & Gamble, Salix, Shire

Ronnie Fass, MD, FACP
Professor of Medicine, University of Arizona, Tucson, AZ
Research/Speaker/Consultant: AstraZeneca
Consultant/Research: Eisai

Brian G. Feagan, MD
Director, London Clinical Trials Research Group, Robarts Research Institute, London, Ontario, Canada
Grant/Research Support: Schering-Plough, Otsuka Millennium, Tillotts, Abbott, Protein Design Labs, Boehringer Engelheim, Novartis, Centocor, Benlrx, Synta, Schering Canada, Eli/Abiogen, UCB Pharma, BMS, Procter & Gamble, Napo Pharma
Consultant: Synta, Millennium, Schering Canada, Celtech, Centocor, Elaro/Abiogen, Janssen-Cordis, Protein Design Labs, ISIS, Teva Pharmaceuticals, Santarus, Schering-Plough, Bristol-Myers Squibb, Celgene, Combinatorx, UCB Pharma, Napo Pharma, Abbott, Procter & Gamble, Otsuka, Benlrx, AstraZeneca, GenelLogic, Cerimon Pharm, Tiaga Pharm, Serono, Genentech, Tillotts
Speaker’s Bureau: AstraZeneca
Scientific Advisory Board: Protein Design Labs, AstraZeneca, Eli/Abiogen, Celtech, Synta, Schering Canada, Celgene

Steven L. Flamm, MD
Associate Professor, Northwestern University Feinberg School of Medicine, Chicago, IL
Dr. Flamm has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Chris E. Forsmark, MD, FACP
Professor of Medicine Division of Gastroenterology, Hepatology, and Nutrition, University of Florida, Gainesville, FL
Dr. Forsmark has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Amy E. Fox-Reneenstein, DO, FACP
Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Dr. Fox-Reneenstein has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Martin L. Freeman, MD, FACP
Professor of Medicine, University of Minnesota, Minneapolis, MN
Fellowship Support: Cook Endoscopy, Boston Scientific, Hobbs Medical

Norman Gillin, MD, FACP
Atlanta Gastroenterology Associates, Atlanta, GA
Dr. Gillin has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

David A. Greenwald, MD, FACP
Associate Division Director, Montefiore Medical Center, Bronx, NY
Dr. Greenwald has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Kapil Gupta, MD
Assistant Professor of Medicine, University of Minnesota, Minneapolis, MN
Dr. Gupta has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Stephen B. Hanauer, MD, FACP
Professor of Medicine, University of Chicago, Chicago, IL
Consultant: Abbott Labs, AstraZeneca, Bristol Myers Squibb, Centocor, ChemoCentryx, Elan, Ferring, Genentech, GSK, McNeil, Millennium, Novartis, Otsuka, Procter & Gamble, Prometheus, Salix, Shire, UCB Pharma (Celtech)
Clinical Research: Abbott Labs, Bristol Myers Squibb, Centocor, ChemoCentryx, Elan, Ferring, Genentech, Otsuka, Procter & Gamble, Prometheus, Salix, Shire, UCB Pharma (Celtech)
Speaker: Centocor, Ferring, Procter & Gamble, Prometheus, Salix, UCB Pharma (Celtech)
Brenda J. Hoffman, MD, FACG
Professor of Medicine, MUSC Health Gastroenterology and Hepatology, Charleston, SC
Research Support: Wilson Cook, Olympus America

Ira M. Jacobson, MD, FACG
Vincent Astor Professor of Clinical Medicine, Weill Medical College of Cornell University, New York, NY
Grant/Research Support: Intermune, Schering, Valeant, Coley, Gilead, Vertex, Globimmune, Idexx, Human Genome Sciences, Novartis
Consultant/Advisor: Idexx, Bristol Myers Squibb, Novartis, Gilead, Coley, Valeant, Schering, Intermune, Pfizer, Glaxo, Vertex, Globimmune, Human Genome Sciences, Merck, Nucleonics, Dynavax, Boehringer Ingelheim, XTL Pharmaceutical
Speaker’s Bureau: Schering, Gilead, Bristol Myers Squibb, Idexx

David A. Johnson, MD, FACG
Professor of Medicine & Chief of Gastroenterology, Eastern Virginia School of Medicine, Norfolk, VA
Dr. Johnson has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Anthony N. Kallio, MD, FACG
Director, Gastroenterology & Hepatology, Johns Hopkins Hospital, Baltimore, MD
Equity Holder: Apollo Endoscopy

Sunanda V. Kane, MD, MSPH, FACG
Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Dr. Kane has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Joshua A. Katz, MD
Director, Montgomery Colonoscopy Surgery, LLC, Rockville, MD
Dr. Katz has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Philip O. Katz, MD, FACG
Chairman, Division of Gastroenterology, Albert Einstein Medical Center, Philadelphia, PA
Grant/Research Support: AstraZeneca, Santarus, TAP
Consultant: AstraZeneca, Horizon Therapeutics, Prometheus, TAP

Timothy P. Kinney, MD
Assistant Professor of Medicine, University of Minnesota Medical School, Minneapolis, MN
Dr. Kinney has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Asher Kornbluth, MD
Associate Clinical Professor of Medicine, Mt. Sinai School of Medicine, New York, NY
Grant/Research Support: Procter & Gamble, Salix, Centocor, Abbott, UCB, IMS, Osiris
Consultant/Scientific Advisor: Procter & Gamble, Salix, Shire, Centocor, Given Imaging, Prometheus, UCB, Elan Pharmaceuticals
Speaker’s Bureau/Honoraria: Procter & Gamble, Salix, Prometheus, Abbott, UCB, Shire, Elan Pharmaceuticals

Kris V. Kowolley, MD, FACG
Professor of Medicine, University of Washington, Seattle, WA
Grant Support/Speaker’s Bureau: Alexan

Paul Y. Kwo, MD
Associate Professor of Clinical Medicine, Indiana University Department of Medicine, Indianapolis, IN
Consultant: Novartis
Speaker’s Bureau: Novartis, Gilead
Research Support: BMS

Bret A. Lashner, MD, FACG
Director, Center for Inflammatory Bowel Disease, Cleveland Clinic Foundation, Cleveland, OH
Dr. Lashner has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Gary R. Lichtenstein, MD, FACG
Professor of Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA
Research: Abbott Corporation, Bristol Myers Squibb, Inc., Centocor, Inc., Millennium Pharmaceuticals, Procter & Gamble, Protein Design Labs, Salix Pharmaceuticals, UCB, Wyeth
Speaker’s Bureau: Abbott Corporation, Centocor, Inc., Procter & Gamble, Salix Pharmaceuticals, Schering-Plough

David A. Lieberman, MD, FACG
Professor of Medicine, Division of Gastroenterology, Portland VA Medical Center, Portland, OR
Dr. Lieberman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Julia J. Liu, MD, FACG
Assistant Professor, University of Alberta Hospital, Edmonton, Alberta, Canada
Dr. Liu has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.

Simon K. Lo, MD, FACG
Director, GI Endoscopy, Cedars Sinai Medical Center, Los Angeles, CA
Consultant: Olympus America

Edward V. Loftus, Jr., MD, FACG
Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Research Support: Abbott, UCB, Schering Plough, Procter & Gamble, PDL Biopharma
Consultant: Abbott, UCB, Procter & Gamble, PDL Biopharma

Kenneth E.L. McColl, MD
Professor of Gastroenterology, University of Glasgow, Glasgow, Scotland
Dr. McColl has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Michael J. O’Brien, MD, FACG
Professor of Medicine, Boston University Medical Campus, Boston, MA
Dr. O’Brien has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Robert D. Odze, MD
Chief, Gastrointestinal Pathology, Brigham & Women’s Hospital, Boston, MA
Dr. Odze has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Robert E. Petras, MD, FACG
Director of Gastrointestinal Pathology, AmeriPath, Inc., Oakwood Village, OH
Dr. Petras has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Mark Pimentel, MD
Assistant Professor of Medicine, UCLA Geffen School of Medicine, Los Angeles, CA
Grant: Novartis
Grant/Research: Lilly
Consultant: Salix
(Cedars has licensing arrangement with Salix)

Eamonn M.M. Quigley, MD, FACG
Professor of Medicine and Human Physiology, National University of Ireland at Cork, Cork, Ireland
Dr. Quigley has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Waqar A. Qureshi, MD, FACG
Professor of Medicine, Baylor College of Medicine, Houston, TX
Dr. Qureshi has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

K. Rajender Reddy, MD, FACG
Medical Director, Liver Transplantation, Hospital of the University of Pennsylvania, Philadelphia, PA
Advisor (Ad-Hoc)/Speaker/Investigator: Roche

Douglas K. Rex, MD, FACG
Professor of Medicine, Indiana University Hospital, Indianapolis, IN
Speaker’s Bureau: TAP, CB Fleet, Salix, Olympus
Research Support: Olympus, CB Fleet, Salix, MGI Pharma, Given Imaging
Scientific Advisory Boards: Given Imaging, Avantis Medical Systems, CB Fleet, Salix, GI View, American BioOptics

Lewis R. Roberts, MB, ChB, PhD, FACG
Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN
Dr. Roberts has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Joseph Romagnuolo, MD
Associate Professor, Medical University of South Carolina, Charleston, SC
Consultant/Research Support: Olympus

Mark W. Russo, MD, MPH
Associate Professor of Medicine, Carolinas Medical Center, Charlotte, NC
Dr. Russo has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

John R. Saltzman, MD, FACG
Director of Endoscopy, Brigham and Women’s Hospital, Boston, MA
Dr. Saltzman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.

Richard E. Sampiner, MD, MACG
Professor of Medicine, University of AZ Health Sciences Center, Tucson, AZ
Research Support: Barix
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Financial Relationships</th>
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<tbody>
<tr>
<td>William J. Sandborn, MD, FACC</td>
<td>Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN Consultant/Research Support: Elian, Centocor, Abbott Laboratories, UCB Consultant: Millenium, Genentech</td>
<td>Dr. Sandborn has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
</tr>
<tr>
<td>Dana R. Sands, MD</td>
<td>Director of the Colorectal Physiology Center, Cleveland Clinic Florida, Weston, FL Dr. Sands has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Michael G. Sarr, MD</td>
<td>Professor of Surgery, Mayo Clinic College of Medicine, Rochester, MN Dr. Sarr has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Dana R. Sands, MD</td>
<td>Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN Dr. Sarr has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Eugene R. Schiff, MD, MACG</td>
<td>Director of the Center for Liver Diseases, University of Miami, Miami, FL Consultant: Dynavax Technologies Corp. Scientific Advisory Board: Abbott, Aventis Pharmaceuticals, Bayer, Bristol Myers Squibb, Conatus, Gilead, GlobelImmune, Merck, Novartis/Idenix, Pfizer, Roche Molecular, Schering-Plough, Vertex Pharmaceuticals Data Monitoring Board: Johnson and Johnson, Pfizer, Salix, Sanofi Aventis, Wyeth Grant/Research Support: Abbott, BeringerIngelheim, Bristol Myers Squibb, Conatus, Debio Pharm, Gilead, GlobelImmune, Idenix, LABCORE, Merck, Novartis/Idenix, Pfizer, Roche Diagnostics, Roche Molecular, Roche Pharmaceuticals, Salix, Schering-Plough, Vertex Pharmaceuticals, Wyeth</td>
<td>Dr. Schiff has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<td>Nicholas J. Shaheen, MD, MPH, FACC</td>
<td>Associate Professor of Medicine and Epidemiology, University of North Carolina, Chapel Hill, NC Consultant/Reviewer’s Bureau: AstraZeneca, TAP Grant Support: Barx Medical, CSA Medical, Procter &amp; Gamble</td>
<td>Dr. Shaheen has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>William J. Sandborn, MD, FACC</td>
<td>Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN</td>
<td>Dr. Sandborn has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Michael D. Saunders, MD</td>
<td>Clinical Associate Professor, University of Washington Medical Center, Seattle, WA Dr. Saunders has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Eugene R. Schiff, MD, MACG</td>
<td>Director of the Center for Liver Diseases, University of Miami, Miami, FL Consultant: Dynavax Technologies Corp. Scientific Advisory Board: Abbott, Aventis Pharmaceuticals, Bayer, Bristol Myers Squibb, Conatus, Gilead, GlobelImmune, Merck, Novartis/Idenix, Pfizer, Roche Molecular, Schering-Plough, Vertex Pharmaceuticals Data Monitoring Board: Johnson and Johnson, Pfizer, Salix, Sanofi Aventis, Wyeth Grant/Research Support: Abbott, BeringerIngelheim, Bristol Myers Squibb, Conatus, Debio Pharm, Gilead, GlobelImmune, Idenix, LABCORE, Merck, Novartis/Idenix, Pfizer, Roche Diagnostics, Roche Molecular, Roche Pharmaceuticals, Salix, Schering-Plough, Vertex Pharmaceuticals, Wyeth</td>
<td>Dr. Schiller has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<td>Philip S. Schoenfeld, MD, MSED, MSEC, FACG</td>
<td>Associate Professor of Medicine, University of Michigan, Ann Arbor, MI Consultant/Advisory Committee: Salix Partner: MD-Evidence</td>
<td>Dr. Schiller has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Vijay H. Shah, MD, FACC</td>
<td>Associate Professor of Medicine, Mayo Clinic, GI Research Unit, Rochester, MN Dr. Shah has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Nicholas J. Shaheen, MD, MPH, FACC</td>
<td>Associate Professor of Medicine and Epidemiology, University of North Carolina, Chapel Hill, NC Consultant/Reviewer’s Bureau: AstraZeneca, TAP Grant Support: Barx Medical, CSA Medical, Procter &amp; Gamble</td>
<td>Dr. Shaheen has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Morris Sherman, MD, PhD, FACC</td>
<td>Associate Professor of Medicine, Toronto General Hospital, Toronto, ON, Canada Dr. Sherman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Mitchell L. Shiffman, MD, FACC</td>
<td>Professor of Medicine, Virginia Commonwealth University Medical Center, Richmond, VA Consultant/Research/Grant: Schering-Plough</td>
<td>Dr. Shiffman has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Corey A. Siegel, MD</td>
<td>Assistant Professor of Medicine, Dartmouth-Hitchcock Medical Center, Lebanon, NH Consultant: UCB, Abbott, Elian Speaker for CME activities: UCB, Abbott</td>
<td>Dr. Siegel has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Milton T. Smith, MD, FACC</td>
<td>Staff Gastroenterologist, Walter Reed Army Medical Center, Washington, DC Dr. Smith has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Lisa L. Strate, MD, FACC</td>
<td>Assistant Professor, Harborview Medical Center, Seattle, WA Dr. Strate has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Sapna Syngal, MD, MPH, FACC</td>
<td>Associate Professor of Medicine, Harvard Medical School, Dana Farber Cancer Institute, Boston, MA Dr. Syngal has indicated that she has no relationship which, in the context of her presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Nicholas J. Talley, MD, PhD, FACC</td>
<td>Professor of Medicine, Mayo Clinic, Jacksonville, FL Consultant: Accretion, Acrex Pharmaceuticals, SA, Annanberg Center, Astellas Pharma, Inc, US, AstraZeneca R&amp;D Lund, Avanoc Pharma, Callisto Pharmaceuticals, Conexus, Dynogen, F-Netw, Ferring Pharmaceuticals, Inc., Interactive Forum, Inc., Lexicon Genetics, Inc., McNeil Consumer, Medscape from WebMD, Metabolic Pharma, MGI Pharma, Microfix, Inc., Novartis, Oakstone Publishing, Optum HC, Procter &amp; Gamble, Salix Financial Support: Novartis, Takeda, GlaxoSmithKline, Dynogen, Tiga</td>
<td>Dr. Talley has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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<tr>
<td>Scott M. Tenner, MD, MPH, FACC</td>
<td>Director, Medical Education and Research, Maimonides Medical Center, SUNY, Brooklyn, NY Dr. Tenner has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Christopher C. Thompson, MD, FACC</td>
<td>Director of Developmental Endoscopy, Brigham and Women's Hospital; Instructor in Medicine, Harvard Medical School, Boston, MA Dr. Thompson has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Andew Ukleja, MD</td>
<td>Assistant Professor of Medicine, Cleveland Clinic Florida, Weston, FL Dr. Ukleja has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
</tr>
<tr>
<td>Marcelo F. Veia, MD, MSCR, FACG</td>
<td>Assistant Professor, Medical University of South Carolina, Charleston, SC Dr. Veia has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Kenneth K. Wang, MD, FACC</td>
<td>Associate Professor of Medicine, Mayo Clinic College of Medicine, Rochester, MN Research Support: Barx, Fujion, Olympus</td>
<td>Dr. Wang has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
</tr>
<tr>
<td>Jerome D. Waye, MD, MACG</td>
<td>Clinical Professor, Mt. Sinai School of Medicine, New York, NY Dr. Waye has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
<td></td>
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<tr>
<td>Roy K.H. Wong, MD, FACC</td>
<td>Chief of Gastroenterology, Walter Reed Army Medical Center, Washington, DC Dr. Wong has indicated that he has no relationship which, in the context of his presentation, could be perceived as a potential conflict of interest.</td>
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- Dr. Bajaj - use of lactulose, probiotics in the management of hepatic encephalopathy
- Dr. Brandt - use of aminosalicylates for diverticulitis prevention
- Dr. Chalasani - thiazolidine, CB antagonist in NASH
- Dr. Darayee - use of SASSA's, folic acid and aspirin as chemopreventive agents
- Dr. P. Katz - PPI dosing in GERD
- Dr. Knowlsey - use of ursodeoxycholic acid in NASH
- Dr. Kwo - fenofibrate in NASH
- Dr. Sandborn - use of neostigmine in acute pseudo-obstruction
- Dr. Schoenfeld - probiotics, loperamide, nortriptyline & rifaximin for treatment of diarrhea-predominant IBS
- Dr. Shiffman - peginterferon and ribavirin in hepatitis C therapy
- Dr. Siegel - azathioprine, 6MP for Crohn's and ulcerative colitis
- Dr. Smith - friction fit adapter (variceal ligator kit) for meat extractions
Disclosure of Potential Conflicts of Interest

It is the policy of the American College of Gastroenterology to ensure objectivity, balance, independence, transparency, and scientific rigor in all its sponsored educational activities. All faculty participating in the planning or implementation of a sponsored activity are required to disclose to ACG any relevant financial relationship or other relationship held within the past 12 months that may pose a potential commercial bias and to assist in resolving any conflict of interest that may arise from the relationship. The intent of this disclosure is not to prevent a speaker with a relevant financial or other relationship from making a presentation, but rather to provide listeners with information on which they can make their own judgments. It remains for the audience to determine whether the speaker’s interests or relationships may influence the presentation with regard to exposition or conclusion.

The 2007-2008 Annual Meeting Planning Committee Members have noted the following relationships.
## Sunday, October 5, 2008
3:30 pm — 7:00 pm
Authors will be present from 3:30 pm – 4:30 pm

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<td>Colorectal Cancer Prevention</td>
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## Monday, October 6, 2008
10:30 am — 4:00 pm
Authors will be present from 12:15 pm – 2:00 pm

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<td>Colorectal Cancer Prevention</td>
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## Tuesday, October 7, 2008
10:30 am — 4:00 pm
Authors will be present from 12:15 pm – 2:00 pm

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</table>
P1. Is Immunofluorescence Staining for Eosinophil Derived Neurotoxin Useful in the Diagnosis of Eosinophilic Esophagitis?

Jeffrey Alexander, MD, Gail Kephart, MS, Karthik Ravi, MD, David Neumann, MD, Hirohito Kita, MD, Nicholas Talley, MD, Gastroenterology, Mayo Clinic Rochester, Rochester, MN

P2. Manometric Placement of Bravo Capsule and Its Impact on Day to Day Discrepancy in Measurement of Esophageal Acid Exposure

Shahin Ayazi, MD, Farzaneh Banki, MD, Jessica Leers, MD, Arzu Ozcelik, MD, Emmanuelle Abate, MD, Daniel Liebertz, BS, BA, Steven DeMeester, MD, John Lipham, MD, Jeffrey Hagen, MD, Tom DeMeester, MD, Surgery, University of Southern California, Los Angeles, CA

P3. Bravo® Catheter-Free pH Monitoring: Normal Values, Concordance, Optimal Diagnostic Thresholds and Accuracy

Shahin Ayazi, MD, John Lipham, MD, Giuseppe Portale, MD, Jessica Leers, MD, Arzu Ozcelik, MD, Emmanuelle Abate, MD, Farzaneh Banki, MD, Steven DeMeester, MD, Jeffrey Hagen, MD, Tom DeMeester, MD, Surgery, University of Southern California, Los Angeles, CA

P4. Intraepithelial Eosinophil Infiltration in Patients with GERD: Correlation with Dysphagia

Shahin Ayazi, MD, Jeffrey Hagen, MD, Parviz Gholami, MD, Andrew Tang, MD, Steven DeMeester, MD, John Lipham, MD, Farzaneh Banki, MD, Parakrama Chandrasoma, MD, Tom DeMeester, MD, Michael Kline, MD, Pathology, Medicine, Surgery, University of Southern California, Los Angeles, CA

P5. Long Term Outcomes and Predictors of Progression in Barrett’s Esophagus and Indefinite Dysplasia

Shalini Achra, MBBS, Ganapathy Prasad, MD, MS, Yuvish Bhardwaj, MBBS, Rami Baddreddine, MD, Navtej Buttar, MD, Kelly Dunagan, LPN, Lori Lutzke, LPN, Lynn Borkenhagen, RN, FNP, Kenneth Wang, MD, Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P6. A Novel Endoesophageal Magnetic Device to Prevent Gastroesophageal Reflux

Mauro Bortolotti, MD, Annamaria Grandis, VD, Giosuè Mazzero, MD, Department of Veterinary Morphophysiology and Animal Productions, Internal Medicine and Gastroenterology, University of Bologna, Bologna, Italy

P7. The Prevalence of Gastroesophageal Reflux in Patients with Paradoxical Vocal Fold Motion

John Boger, MD, Joyce Gurevich-Uvena, MA CCC-SLP, Eric Frizzell, MD, William Norris, MD, Corinne Maydonovich, BS, Joseph Perry, MD, Jeffrey Laczek, MD, Roy Wong, MD, Walter Reed Army Medical Center, Washington, DC


Paula Dionisio, MD, W. Griffin, MD, Heidi Garcia, PA-C, John DiBaise, MD, George Burdick, MD, Virender Sharma, MD, Michael Crowell, PhD, Rheumatology, Gastroenterology, Mayo Clinic Scottsdale, Scottsdale, AZ


Roshini Rajapaksa, MD, Quinyi Cheng, PHD, Mengling Liu, PHD, Maria-Elena Fernandez-Beros, PHD, Joan Reibman, MD, Medicine, NYU School of Medicine, New York, NY

P10. Are Troublesome GERD-Related Symptoms Reflecting Characteristics of the Disease or the Patient?

Enrique Rey, MD, Javier Zappendel, MD, Mercedes Munoz, MD, Eduardo Sobrevielva, PhD, Gastroenterology Unit, H.C.U Clinico San Carlos, Madrid, Spain, Medical Department, AstraZeneca Spain, Madrid, Spain, Biometric Unit, Quintiles Ibexa, Madrid, Spain

P11. When Esophageal Rings are Present but Eosinophils are Sparses: Is Degranulation a Factor?

William Cobell, MD, Ann Georgelas, MS, Gerald Gleich, MD, Kristin Leiferman, MD, Frederic Clayton, MD, Kristen Thomas, BS, John Fang, MD, Kathryn Peterson, MD, MSc, Pathology, Dermatology, Gastroenterology, University of Utah, Salt Lake City, UT

P12. Relationships Between Inhibition of Gastric and Esophageal Acidity in GERD Patients Being Treated with a Proton Pump Inhibitor

Jerry Gardner, MD, Sheldon Sloan, MD, Malcolm Robinson, MD, Philip Miner, MD, Science for Organizations, Mill Valley, CA, Janssen Pharmaceuticalaceutica, Titusville, NJ, Oklahoma Foundation for Digestive Research, Oklahoma City, OK

P13. Abnormal GERD Parameters During Ambulatory pH Monitoring (pHM) Predict Therapeutic Success in Noncardiac Chest Pain (NCCP)

Vijayar Kumar, MD, Michael Kelleher, MD, Gregory Sayuk, MD, MPH, C, Prakash Gwatili, MD, MRCP, Gastroenterology, Washington University School of Medicine, St. Louis, MO

P14. Effects of Intravenous Nutrient Infusion on CCK Levels, LES Pressure, and Gastroesophageal Reflux (GER)

Brian Lacy, PhD, MD, FACP, Lisa Paquette, RN, Maurice Kelley, MD, Jocelyn Carter, MD, Julia Weiss, MS, Medicine, Division of Gastroenterology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, Community & Family Medicine, Dartmouth Medical School, Hanover, NH

P15. Efficacy and Safety of Radiofrequency Ablation for Barrett’s Esophagus with High Grade Dysplasia: The Washington University Experience

Aarti Oza, BA, MD, Dayna Early, MD, Steven Edmundowicz, MD, Internal Medicine, Division of Gastroenterology, Washington University School of Medicine, St. Louis, MO

P16. How Much Additional Procedure Time is Required to Obtain Multiple Mucosal Surveillance Biopsies in Patients with Barrett’s Esophagus?

Andrew Rackoff, MD, Steven Kucera, MD, Sabo Tanimu, MD, Daohai Yu, PhD, Weimei Zhu, MS, James Barthel, MD, Division of Digestive Diseases, University of South Florida, Tampa, FL, Division of Gastrointestinal Oncology, Moffitt Cancer Center, Tampa, FL

P17. Barrett Esophagus is Associated with a Lower Prevalence of H. pylori Gastritis and a Higher Prevalence of Reactive Gastropathy

Ghazwan Sharabi, MD, Christopher Schuler, MD, Robert Genta, MD, Pathology, Caris Diagnostics, Irving, TX

P18. Lower Rates of Healing of Erosive Esophagitis (EE) in Nonwhite GERD Patients

Prateek Sharma, MD, Hashem El-Serag, MD, MPH, David Johnson, MD, John Monyak, PhD, Marta Illueca, MD, University of Kansas Medical Center, Kansas City, MO, Baylor College of Medicine, Houston, TX, Eastern Virginia Medical School, Norfolk, VA, AstraZeneca LP, Wilmington, DE

P19. Accuracy of Endoscopic Ultrasound for Nodal Staging of Early Gastroesophageal Cancer

Falguni Bhavan, MD, Dustin Shackleton, MD, Sarah Rodriguez, MD, Christopher Corless, MD, Douglas Faigel, MD, Department of Pathology, Department of Gastroenterology, Oregon Health & Sciences University, Portland, OR

P20. A Global, Evidence-Based Consensus on the Definition of Pediatric Gastroesophageal Reflux Disease (GERD)

Benjamin Gold, MD, Philip Sherman, MD, FRCP(C), FAAP, Emory University School of Medicine, Atlanta, GA, The Hospital for Sick Children, Toronto, ON, Canada
P21. Placebo-Controlled Trial of 2 Doses of TAK-390MR, a PPI with Novel Dual Delayed Release Technology, as Maintenance Treatment for Patients with Healed Erosive Esophagitis (EE)
Colin Howden, MD, Lois Larsen, PhD, Robert Palmer, MPH, M. Claudia Perez, MD, Division of Gastroenterology, Northwestern University, Chicago, IL, Research & Development, TAP Pharmaceutical Products Inc., Lake Forest, IL

P22. ERBB Pathways in Barrett’s Esophagus and Esophageal Adenocarcinoma
Vani Konda, MD, John Hart, MD, Amy Notfnger, MD, Irving Waxman, MD, Marc Bissonnette, MD, Center for Endoscopic Research and Therapeutics, Pathology, Gastroenterology, University of Chicago, Chicago, IL

P23. Esophageal Eosinophilia and History of Atopy in Patients with Erosive Esophagitis
Mary Kovalak, MD, Kristen Thomas, BS, Mae Go, MD, Kathryn Peterson, MD, University of Utah, Salt Lake City, UT, Gastroenterology, VA Medical Center, Salt Lake City, UT

P24. TAK-390MR Maintains Relief of Gastroesophageal Reflux Disease (GERD) Symptoms and Improvements in Quality of Life in GERD Patients with Healed Erosive Esophagitis
Reema Mody, PhD, MBA, Lois Larsen, PhD, Maria Perez, MD, Betsy Palmer, RN, BSN, Omar Dabbous, MD, MPH, TAP Pharmaceuticals Products Inc., Lake Forest, IL, Abbott, Abbott Park, IL

P25. The Expression of Epidermal Growth Factor Receptor in H. pylori Infected Intestinal Metaplasia and Gastric Cancer
★ 2008 ACG Presidential Poster Award Recipient
Noriko Nakajima, MD, PhD, Yoko Ito, MS, Soichiro Ota, MD, Shun Kobayashi, MD, Kiyouki Yokoyama, MD, PhD, Akitake Uno, MD, PhD, Noriko Kinukawa, MD, PhD, Nonimichi Nemoto, MD, PhD, Mitsuhiro Moriyama, MD, PhD, Department of Pathology, Department of Gastroenterology & Hepatology, Nihon University School of Medicine, Tokyo, Japan

P26. The Expression of HER2 in Helicobacter pylori Infected Intestinal Metaplasia and Gastric Cancer
Noriko Nakajima, MD, PhD, Yoko Ito, MS, Soichiro Ota, MD, Shun Kobayashi, MD, Kiyouki Yokoyama, MD, PhD, Akitake Uno, MD, PhD, Noriko Kinukawa, MD, PhD, Nonimichi Nemoto, MD, PhD, Mitsuhiro Moriyama, MD, PhD, Department of Pathology, Department of Gastroenterology & Hepatology, Nihon University School of Medicine, Tokyo, Japan

P27. The Addition of Liquid Gastric Emptying to a Solid Gastric Emptying Study Increases Detection of Gastroparesis
Harvey Ziesman, MD, Patrick Okolo, MD, Gerard Mullin, MD, Chander Ankit, MD, Gastroenterology, Nuclear Medicine, Johns Hopkins University, Baltimore, MD

P28. Chronic Proton Pump Inhibitor Therapy Increases Fundic Gland Polyps: How Much is Too Much?
Mazer Ally, MD, Ganesht Veerappan, MD, Timothy Duncan, MD, Joseph Perry, MD, Corinne Maydonovitch, BS, Eric Osgard, MD, Roy Wong, MD, Medicine, Gastroenterology Service, Walter Reed Army Medical Center, Washington, DC

P29. A Simple Formula to Identify Patients with Advanced Stage Gastric Adenocarcinoma
Eric Choi, MD, Masood Mansour, MD, Williamson Strum, MD, Gastroenterology and Hepatology, and Internal Medicine, Scripps Clinic, La Jolla, CA

P30. A Randomized, Single-Blind, Placebo-Controlled, One-Week, Pilot Study of the Effect of Naproxen 500 mg BID, Aspirin 81 mg Daily, Celecoxib 200 mg Daily, or Clopidogrel 75 mg Daily on the Healing of Gastroesophageal Lesions
Andrew Dikman, BA, Shefali Sanyal, BA, Caroline von Althann, BA, Jay Desai, MD, Carol Bodian, DrPH, Andrew Brooks, PhD, Neville Bani, MD, Lawrence Cohen, MD, Kenneth Miller, MD, James Aisenberg, MD, Anesthesiology, Medicine (Gastroenterology), Mount Sinai School of Medicine, New York, NY, Environmental and Occupational Health Science Institute, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, Piscataway, NJ

P31. Detection of H. pylori from Patients with PPIs Treatment
Xiangwen Meng, MD, PhD, Marc Scheer, MD, Tat-Kin Tsang, MD, ENH Research Institute, Evanston Northwestern Healthcare, Evanston, IL, Medicine, Northwestern University Feinberg School of Medicine, Evanston, IL

P32. Prevalence of Helicobacter pylori Infection in Gastric Biopsy Specimens: A National Study
Christopher Schuler, MD, Richard Lash, MD, M. Saboorian, MD, Robert Genta, MD, Caris Diagnostics, Irving, TX

P33. The Cost-Effectiveness of High-Dose Intravenous Esomeprazole in Pugic Ulcer Bleeding—A U.S. Cost Perspective
Alan Barkun, MD, Vivian Adam, MD, Joseph Sung, MD, Ernst Kuipers, MD, Joachim Mössner, MD, Dennis Jensen, MD, Robert Stuart, MD, James Lau, MD, Helena Granstedt, MSc, Tore Lind, MD, Division of Gastroenterology, McGill University Health Center, Montreal, QC, Canada, Institute of Digestive Diseases, Chinese University of Hong Kong, Shatin, Hong Kong, China, Department of Gastroenterology and Hepatology, Erasmus MC University Medical Center, Rotterdam, Netherlands, Medizinische Klinik und Poliklinik II, University of Leipzig, Leipzig, Germany, David Geffen School of Medicine at UCLA and CURE Digestive Diseases Research Center, Los Angeles, CA, Glasgow Royal Infirmary, Glasgow, United Kingdom, AstraZeneca R&D, Mölndal, Sweden

P34. LEND (Levofloxacin, Esomeprazole, Nitazoxanide and Doxycycline) for the Treatment of Previously Non-Responsive Helicobacter pylori
P. Patrick Basu, MD, Krishna Rayapudi, MD, Jose Esteves, MD, Department of Gastroenterology, North Shore University Hospital at Forest Hills, Forest Hills, NY

P35. Percutaneous Endoscopic Gastrostomy (PEG) Tube Placement in Patients on Antiplatelet Agents: Is There an Increased Risk of Bleeding?
Rahassan Friend, DO, Aledamola Lufadeju, MD, Richard Menin, MD, Philip Katz, MD, Medicine, Albert Einstein Medical Center, Philadelphia, PA

P36. Self Reported Practice Patterns Among High Volume Prescribers of Hp Eradication Therapies
Stephen George, PharmD, MS, Nimish Vakil, MD, Conexus, Tampa, FL, Medicine, Marquette University, Milwaukee, WI

P37. Patients at Risk for Gastrointestinal Bleeding Infrequently Receive Proton Pump Inhibitor Therapy at Discharge: A Single Center Experience
Adam Levy, MD, Philip Katz, MD, Department of Medicine, Division of Gastroenterology, Albert Einstein Medical Center, Philadelphia, PA

P38. PIES (Predictors of Improvement After Electrical Stimulation) in Gastroparesis
Narendra Siddaiah, MD, William Johnson, PhD, Robert Schmieg, MD, Stephen Weeks, MD, Jay Salameh, MD, Thomas Abell, MD, Surgery, Epidemiology and Biostatistics, Medicine, Digestive Diseases, University of Mississippi Medical Center, Jackson, MS
P39. Usefulness and Discriminant Value of Rome III Questionnaire in Dyspeptic Patients without Anti-Secretory Therapy
Shahab Abid, MD, FACC, Shaheryar Siddiqui, MBBS, Wasiim Jafri, MD, FACC, Medicine, Aga Khan University, Karachi, Pakistan

P40. Biliary Tract Candidiasis: Insights into a Rising Disease Entity
Philipp Lenz, MD, Beate Conrad, MD, Torsten Kucharzik, MD, Wolfgang Fegeler, MD, Hansjörg Ullrich, MD, Ekkehard Hilker, MD, Achim Heinzecke, MD, Wolfram Domschke, MD, Dirk Domagk, MD, Department of Medicine B, University of Muenster, Muenster, Germany

P41. Adiponectin Polymorphisms and Serum Adiponectin Levels in Severe Acute Pancreatitis
Arun Sharma, MD, Venkata Muddana, MD, Janette Lamb, PhD, David Whitcomb, MD, PhD, Georgios Papachristou, MD, Division of Gastroenterology, Hepatology and Nutrition, University of Pittsburgh Medical Center, Pittsburgh, PA

P42. The Diagnosis of Acinar Cell Carcinoma (ACC) of the Pancreas via Endoscopic Ultrasound Guided Fine Needle Aspiration (EUS-FNA): A New Approach
David Yamini, MD, Jane Tongsong-Ignacio, MD, Kenneth Chang, MD, John Lee, MD, Raman Muthusamy, MD, Pathology, Medicine / Gastroenterology, University of California, Irvine, Orange, CA

P43. Feasibility of Endoscopic Intra-Ductal Balloon Cryotherapy in the Bile Duct Using a Swine Model
John David Horwhat, MD, William Norris, MD, Patrick Young, MD, Walter Reed Army Medical Center, Washington, DC, Department of Medicine, National Naval Medical Center, Bethesda, MD

P44. Do U.S. Regions with the Highest Rates of Obesity Have the Highest Frequency of Hospital Discharges for Pancreatic Adenocarcinoma? An Analysis of U.S. Secular Trends ★ 2008 ACG Presidential Poster Award Recipient
Benjamin Young, MD, Alphonso Brown, MD, MS ClinEpi, Beth Israel Deaconess Medical Center, Boston, MA

P45. Glycemic Control in Patients Post Total Pancreatectomy (TP) for Intraductal Papillary Mucinous Neoplasm (IPMN)
Laith Jamil, MD, John Stauffer, MD, Shon Meek, MD, Kanwar Gill, MD, Massimo Raimondo, MD, Timothy Woodward, MD, Ana Maria Chindris, MD, Justin Nguyen, MD, Kirk Martin, MD, Michael Wallace, MD, MPH, Endocrinology, Surgery, Gastroenterology, Mayo Clinic, Jacksonville, FL

P46. Radial vs. Linear EUS in Evaluation of Suspected Pancreatic Cancer. Is It Sufficient to Use Linear EUS Alone?
Laith Jamil, MD, Kanwar Gill, MD, Seth Gross, MD, Julia Crook, PhD, Massimo Raimondo, MD, Timothy Woodward, MD, Michael Wallace, MD, MPH, Biostatistics, Gastroenterology, Mayo Clinic, Jacksonville, FL

P47. Does Rate of Growth Differentiate Between Mucinous and Non-Mucinous Pancreatic Cysts?
Ketan Kulkarni, MD, Neal Schamborg, MD, Roberto Gonzalez, MD, Savreeta Sarkaria, MD, Mark Pochapin, MD, Felice Schnoll-Sussman, MD, Division of Gastroenterology and Hepatology, Weill Cornell Medical Center, New York-Presbyterian Hospital, New York, NY

P48. Elevated Serum Creatinine as a Marker of Pancreatic Necrosis in Acute Pancreatitis
Venkata Muddana, MD, David Whitcomb, MD, PhD, Asif Khalid, MD, Adam Silvka, MD, PhD, Georgios Papachristou, MD, Division of Gastroenterology, Hepatology and Nutrition, University of Pittsburgh Medical Center, Pittsburgh, PA

P49. Antibiotic Prophylaxis Reduces the Infectious Complications and Mortality in Severe Acute Pancreatitis: Practical Review and Meta-Analysis of 12 Trials
Rubayat Rahman, MD, Faisal Bukhairat, MD, Yevgeniy Ostrinsky, MD, Digestive Diseases, West Virginia University, School of Medicine, Morgantown, WV

P50. Poster Withdrawn

P51. Actual Incidence of Acute Pancreatitis in Cystic Tumor of Pancreas
Jeong Kyun Seo, MD, Ji Kon Ryu, MD, Sang Hyub Lee, MD, Joo Kyung Park, MD, Ki Young Yang, MD, Yong-Tae Kim, MD, Yong Bum Yoon, MD, Department of Internal Medicine, Liver Research Institute, Seoul National University College of Medicine, Seoul, South Korea, Department of Internal Medicine, Seoul National University Bundang Hospital, Seongnam, South Korea

P52. Evaluation of Intrathoracic Chemotherapy Induced Sclerosing Cholangitis by Endoscopic Therapy: Incidence and Outcome Analysis
Trupti Shinde, MD, Sankar Alaguguraswamy, MD, Mark Roh, MD, Abhijit Kulkarni, MD, Surgical Oncology, Gastroenterology, Medicine, Allegheny General Hospital, Pittsburgh, PA

P53. Despite Aggressive Hydration, Hematocrit and Urinary Trypsinogen Activation Peptide (U-TAP) Predict Severity Early in Patients with Acute Pancreatitis
Ian Wall, DO, Nison Badalov, MD, Jack Braha, DO, Konstantin Vaizman, MD, Anita Torok, MD, Peretz Lock, DO, Jianjun Li, MD, FACG, Kadirawel Iswara, MD, FACG, Scott Tenner, MD, MPH, FACP, Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Medicine / Gastroenterology, State University of New York, Brooklyn, NY

P54. Pancreatic Stent-Induced Ductal Injury: Clinical Presentation and Outcomes of Endoscopic Therapy
Yan Bakman, MD, Martin Freeman, MD, Pancreas and Biliary Center, Division of Gastroenterology, Department of Internal Medicine, University of Minnesota, Minneapolis, MN

P55. Patient Characteristics or Type of Biliary Anastomosis with or without T-Tube Placement Does Not Influence Biliary Complication Rate After Liver Transplantation
Tarek Abu-Rajab Tamimi, MD, Mansour Parsi, MD, Saurabh Agrawal, MD, Madhusudhan Sanaka, MD, Rocío Lopez, MS, Nizar Zein, MD, Quantitative Health Sciences, Digestive Disease Institute, Internal Medicine Institute, Cleveland Clinic, Cleveland, OH

P56. Large Cell Width Expandable Metal Stents for Endoscopic Bilateral Stent Within Stent Placement of Malignant Hilar Biliary Obstruction
Prabhleen Chahal, MD, Todd Baron, MD, Brett Petersen, MD, Mark Topazian, MD, Christopher Gostout, MD, Gastroenterology, Mayo Clinic, Rochester, MN

P57. Gabexate for Prevention of Post-ERCP Pancreatitis: A Meta-Analysis
Abhishek Choudhary, MD, Matthew Bechtold, MD, Srinivas Puli, MD, Mainor Antillon, MD, Wilson Pais, MD, Mohamed Othman, MD, Praveen Roy, MD, Division of Gastroenterology, University Hospital of Missouri, Columbia, MO, Division of Gastroenterology, University of New Mexico, Albuquerque, NM
P58. Outcomes of Interventional ERCP in Hereditary Pancreatitis
John Dever, MD, Shayan Irani, MD, Richard Kozarek, MD, Gastroenterology, Internal Medicine, Virginia Mason Medical Center, Seattle, WA

P59. Long-Term Follow-up of Pancreatic Necrosis with CT Scan: Will the Pancreas Regenerate?
Matthew Lohse, BA, David Hough, MB, ChB, Santhi Vege, MB, ChB, PhD, Radiology, Gastroenterology and Hepatology, College of Medicine, Mayo Clinic, Rochester, MN

P60. Role of Endoscopic Ultrasonography and a Trial of Tricyclic Antidepressants in Patients with Suspected Sphincter of Oddi Dysfunction III
Savio Reddyrasu, MD, Shailender Singh, MD, Melissa Oropesa-Vail, RN, Mojtaba Olyaei, MD, Kansas University Medical Center, Kansas City, KS

P61. Occlusion Rate and Complications of Plastic Biliary Stents in Patients Undergoing Neoadjuvant Chemoradiotherapy for Pancreatic Cancer Associated with Biliary Obstruction
Brian Boulay, MD, MPH, Stuart Gordon, MD, Section of Gastroenterology & Hepatology, Dartmouth-Hitchcock Medical Center, Lebanon, NH

P62. Prevalence of Acute Pancreatitis in Sickle Cell Disease
Srirshashasti Jasti, MD, Vonzel Williams, MD, Arunan Venadavan, MD, Peter Gillette, MD, Frank Gress, MD, Hematology / Oncology, Gastroenterology, Medicine, SUNY Downstate Medical Center, Brooklyn, NY

SMALL INTESTINE / UNCLASSIFIED

P63. Interaction Between Psychiatric and Autoimmune Disorders in Celiac Disease Patients in the United States ★ 2008 ACG Presidential Poster Award Recipient
Sagar Garud, MD, MPH, Daniel Leffler, MD, MS, Melinda Dennis, RD, MS, Shalalaj Jamma, MD, Jessica Edwards-George, PhD, Diana Saryan, BS, Ciaran Kelly, MD, Gastroenterology, Beth Israel Deaconess Medical Center, Boston, MA

P64. Teduglutide, a GLP-2 Analog Enhances Intestinal Structure in Short Bowel Syndrome (SBS) Patients Dependent on Parenteral Nutrition (PN)
Kelly Tappen, MD, Marek Pertkiewicz, MD, Richard Gilroy, MD, Johane Allard, MD, Marek Kunecki, MD, Hans Sauerwein, MD, Nancy McGraw, Paille Beker Jeppesen, MD, Bernard Messing, MD, University of Illinois, Urbana, IL, Medical University of Warsaw, Warsaw, Poland, University of Kansas Medical Center, Kansas City, KS, Toronto General Hospital, Toronto, ON, Canada, Pinqg Hospital, Lodz, Poland, Academic Medical Center, Amsterdam, Netherlands, NPS Pharmaceuticals, Bedminster, NJ, Rigshospitalet, Copenhagen, Denmark, Hospital Beaujon, Clichy, France

P65. Histopathologic Manifestations of Microscopic Colitis in Celiac Disease
Jun Yang, MD, Jianfeng Cheng, MD, PhD, Bhagat Govind, MD, Peter Green, MD, FACP, Department of Medicine, Sound Shore Medical Center, New Rochelle, NY, Columbia University, New York, NY

P66. Searching for Celiac Disease in the Urban Jungle: Yield of Small Bowel Biopsies in Patients with Iron Deficiency Anemia in a Diverse Urban Population ★ 2008 ACG / AstraZeneca Senior Fellow Award Recipient
Spyed Mohammed Jafri, MD, Disha Awasthi, MBBS, Anand Madan, MD, FACP, Gastroenterology, University of Texas Health Science Center, Houston, TX

P67. No-Show Rate of Accepted Posters at the Annual ACG Meeting, 2007
Nirmal Mann, MD, MS, PhD, DSc, Kanat Ransibrahmankul, MD, Gastroenterology, University of California Davis, Folsom, CA

P68. The Association Between H. pylori Infection and Migraine: Systematic Evaluation of 1084 Cases with Qualitative Meta-Analysis
Nirmal Mann, MD, MS, PhD, DSc, Gastroenterology, University of California Davis, Folsom, CA

P69. Clostridium difficile Infection: Not Only for Colon Anymore!
Amulya Konda, MD, Laith Jamil, MD, Michael Duffy, MD, FACG, Gastroenterology and Hepatology, William Beaumont Hospital, Royal Oak, MI, Gastroenterology and Hepatology, Mayo Clinic, Jacksonville, FL

P70. Digestive Disease Disparities in the Prevalence and Screening of Hispanic Population in Omaha, Nebraska
Harry Lazarte, MD, Chakravarthi Pureti, MD, Helen Fasanya, MD, John O’Brien, MD, Gastroenterology, Creighton University, Omaha, NE

P71. Survival of Patients with Small Bowel Neuroendocrine Tumors
Kalpesh Patel, MD, Sheryl Serbowicz, BS, Steven Itzkowitz, MD, Noam Harpaz, MD, PhD, Michelle Kim, MD, MSc, Division of Gastroenterology, Mount Sinai School of Medicine, New York, NY

P72. A Retrospective Study of Small Intestinal Bacterial Overgrowth in Patients with Bloating
William Cobell, MD, Kristen Hilden, MS, Ashok Tuteja, MD, John Fang, MD, School of Medicine, Division of Gastroenterology, University of Utah, Salt Lake City, UT

P73. Are Marsh Patients Really Celiac Patients?
Claudio Cortezzetti, MD, Marco Parravicini, MD, Giuseppe Chianese, MD, Marcella Lombardini, MD, Sergio Segato, MD, Gastroenterology Unit, Azienda Ospedaliera Macchi, Varese, Italy

P74. Prostaglandin Receptor Activation Properties of Lubiprostone
Guilherme Macedo, MD, PhD, FACP, Artur Machado, MD, Susan Lopes, MD, Raquel Gonçalves, MD, Carla Rolanda, MD, Pedro Pereira, MD, Mario Marcelino, MD, Gastroenterology Unit, H S. Marcos, Braga, Portugal

P75. Enteroscopy with Real Time Viewer: The First 100 Cases
Guilherme Macedo, MD, PhD, FACP, Artur Machado, MD, Susan Lopes, MD, Raquel Gonçalves, MD, Carla Rolanda, MD, Pedro Pereira, MD, Mario Marcelino, MD, Gastroenterology Unit, H S. Marcos, Braga, Portugal

P76. Comparison of Pathology and Location of Findings Between Capsule Endoscopy (CE) and Single Balloon Assisted Enteroscopy (SBAE) in Patients with Occult Gastrointestinal Bleeding ★ 2008 ACG Presidential Poster Award Recipient
Madsushudhan Sanaka, MD, Anuja Choure, MD, Janice Santisi, RN, Milan Dodig, MD, Rocio Lopez, MS, Bennie Upchurch, MD, John Vargo, MD, Gastroenterology, Internal Medicine, Cleveland Clinic, Cleveland, OH

P77. Duodenal Intraepithelial Lymphocytosis: A Distinct Condition with a Seasonal Incidence?
Christopher Schuler, MD, Gay Lindberg, MD, Robert Genta, MD, Caris Diagnostics, Irving, TX

LIVER

P78. Does Fatigue Play a Role in Hepatic Encephalopathy-Associated Driving Impairment? ★ 2008 ACG Presidential Poster Award Recipient
Jasminoh Bajaj, MD, Muhammad Hafeezullah, MD, Yelena Zadvornova, MD, Eric Martin, MD, Kia Saieian, MD, FACG, Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI

P79. Poster Withdrawn
P80. Long-Term Outcome of Chronic Hepatitis B Patients Initially Treated with Adefovir Dipivoxil in a Community Practice
Nghiem Ha, BS, Nghi Ha, BS, Ruel Garcia, MD, Huy Trinh, MD, Huy Nguyen, MD, Khanh Nguyen, MD, Brian Levitt, MD, Nghia Nguyen, BA, Mindie Nguyen, MD, MAS, Pacific Health Foundation, San Jose, CA, San Jose Gastroenterology, San Jose, CA, GI and Hepatology, Stanford University Medical Center, Palo Alto, CA

P81. Increasing Intra-Abdominal Pressure Increases Hepatic Venous Pressure Gradient (HVPG) in Cirrhotic Patients
Pankaj Jairi, MD, Ashish Kumar, MD, DM, Praveen Sharma, MD, DM, Shiv Sarin, MD, DM, Gastroenterology, G B Pant Hospital, New Delhi, India

P82. Risk Score for Predicting the Lack of Response to Antiviral Treatment in Patients with Chronic Hepatitis C Virus Infection
Ibrahim Hannehueh, MD, Mustafa Steven Ascha, Medical Student, Aniel Feldstein, MD, Rosio Lopez, MS, Nizar Zein, MD, Quantitative Health Sciences, Pediatric Gastroenterology and Cell Biology, Gastroenterology and Hepatology, Internal Medicine, The Cleveland Clinic, Cleveland, OH

P83. Hepatitis B Virus Gene Mutation and Its Clinical Significance in Human Liver Diseases
Premashis Kar, MD, DM, Abdul Malik, PhD, Akhtar Husain, PhD, Bhudev Das, PhD, Ranjana Gondal, MD, Manash Sarma, MSc, Medicine, Maulana Azad Medical College, New Delhi, India, Bioscience, Jamia Millia Islamia, New Delhi, India, Institute of Cytology and Preventive Oncology (ICMR), Noida, India, Department of Pathology, G.B. Pant Hospital, New Delhi, India

P84. Epidemiology and Outcome of Hepatitis B in a U.S. Community
W. Ray Kim, MD, Sumeet Asrani, MD, Joanne Benson, BA, Jan Petz, RN, Division of Biostatistics, Division of Gastroenterology and Hepatology, Mayo Clinic College of Medicine, Rochester, MN

P85. Spontaneous ALT Flares in Asymptomatic HBeAg Negative Chronic Hepatitis B Virus Infected Patients Presenting with Normal ALT
Manoj Kumar, MD, DM, Ranjit Chauhan, MSc, PhD, Nitin Gupta, MD, Syed Hissar, MBBS, Puja Sakhija, MD, Shiv Sarin, MD, DM, Pathology, Gastroenterology, GB Pant Hospital, New Delhi, India

P86. Statin Enhances Cisplatin Induced Effect on Hepatoma Cell Lines
David Roberts, MD, Teddy Bader, MD, William Berry, BS, Shripati Sureban, PhD, Shrikant Anant, PhD, Digestive Diseases Section, University of Oklahoma, Oklahoma City, OK

P87. Impact of Screening for Hepatocellular Carcinoma on Survival
David Roberts, MD, Teddy Bader, MD, Christopher Ashton, PhD, Digestive Diseases, Internal Medicine, University of Oklahoma Health Sciences Center, Veterans Affairs Medical Center, Oklahoma City, OK, General Clinical Research Center, Department of Pediatrics, University of Oklahoma Health Sciences Center, Oklahoma City, OK

P88. Response to Hepatitis A/B Vaccine Alone or in Combination in Patients with Chronic Hepatitis C Virus (HCV) and Advanced Fibrosis
Richard Sterling, MD, MSc, Seth Kramer, MPH, Charlotte Hoffmann, RN, Paula Smith, RN, BSN, Mitchell Shapiro, MD, Virginia Commonwealth University, Richmond, VA

P89. Impact of Indication for Admission on Hospital Outcomes Among Patients Awaiting Liver Transplantation
Jason Williams, MD, Antoina Maninang, NP, Andrew Samuelson, MD, Maureen Morgan, MD, Ahmad Kamal, MD, Aijaz Ahmed, MD, Division of Gastroenterology and Hepatology, Liver Transplant Program, Stanford University School of Medicine, Stanford, CA, Division of Gastroenterology, Santa Clara Valley Medical Center, San Jose, CA

P90. Prevalence of Vitamin D Deficiency in Chronic Liver Disease
Jihad Arteh, MD, MBBS, Sri Lakshmi Narra, MD, MBBS, Satheesh Nair, MD, MBBS, Internal Medicine, Gastroenterology, University of Tennessee, Memphis, TN

P91. Clinical Significance of Serum Levels of Vascular Endothelial Growth Factor and Basic Fibroblast Growth Factor in Hepatocellular Carcinoma
Yogesh Chawla, MD, DM, Balkrishan Sharma, MSc, MPhil, Nitin Saini, MSc, PhD, Radhika Srinivasan, MD, PhD, Anuradha Chakraborty, MSc, PhD, Ajay Duseja, MD, DM, Radhakrishan Dhiman, MD, DM, Naveen Kalra, MD, Arunanshu Behera, MS, Hepatology, PGIMER, Chandigarh, India, ExperRadiGeneral Surgery, Radiology, Experimental Medicine & Biotechnology, Cytology, Chandigarh, India

P92. Is the NASH CRN Histological Scoring System for the NAFLD Generalizable? Expert Hepatopathologist vs. Community General Pathologist
Ravi Juluri, MD, Raj Vuppulanchi, MD, John Olson, MD, Mark Van Natta, MHS, Oscar Cummings, MD, Naga Chalasani, MD, Medicine, Gastroenterology, Indiana University, Indianapolis, IN, Pathology, Witham Health Services, Lebanon, IN, Center for Clinical Trials, The Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD

P93. Serum Concentration-Dependent Hepatotoxicity in Individuals Receiving Oral Salsalate
Ravi Juluri, MD, Samir Gupta, MD, Raj Vuppulanchi, MD, Medicine, Gastroenterology, Indiana University, Indianapolis, IN

P94. Increased Risk of Prediabetes in Noncirrhotic Chronic Hepatitis C Patients with Persistently Normal Alanine Aminotransaminase Levels; 5-Year Follow-up Study
Seung Won Lee, Fellow, Yong Kyu Cho, Professor, Jung Won Yun, Fellow, Hong Joo Kim, Professor, Jong Ho Park, Professor, Dong Il Park, Professor, Chong Il Sohn, Professor, Woo Kyu Jeon, Professor, Byung Ik Kim, Professor, Internal Medicine, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, Seoul, South Korea

P95. Efficacy and Safety of Long-Term Oral Administration of Pioglitazone for Treatment of Nonalcoholic Fatty Liver Disease
★ 2008 ACG Presidential Poster Award Recipient
Masahiro Matsushita, MD, Yukimi Takahashi, MD, Yoshimasa Kobayashi, MD, Gastroenterology, Haibara General Hospital, Makinohara, Japan, 2nd Division Department of Internal Medicine, Hamamatsu University School of Medicine, Hamamatsu, Japan

P96. Standard Ultrasonography of the Liver Does Not Correlate with APRI Score or Histological Level of Fibrosis in a Population with Hepatitis C
Sashidhar Sagi, MD, Praveen Guturu, MD, Roger Soloway, MD, Ned Snyder, MD, Shu-Yuan Xiao, MD, Pathology, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P97. Acute Renal Failure in Hospitalized Patients with Chronic HCV Infection: An Etiological and Prognostic Evaluation
Sanjaya Satapathy, MD, DM, Chandra Sekhar Lingisety, MD, Shobhana Chaudhuri, MCh, FACP, Ashok Chaudhuri, MD, Susan Williams, MD, Liver Diseases, Mount Sinai Hospital Medical Center, New York, NY, Gastroenterology, Medicine, New York Medical College/Metropolitan Hospital, New York, NY

P98. Acute, Clinically Evident Hepatitis C Virus Infection and Liver Injury: A Clinico-Pathological Summary of Five Patients
Alastair Smith, MB, ChB, Rebecca Burbridge, MD, Judith Gentile, ANP, Cynthia Guy, MD, Pathology, Medicine, Duke University, Durham, NC
P102. Pilot Study of the Effects of Interferon, With or Without an Angiotensin-2 Receptor Antagonist, on the Expression of Fibrosis-Related Genes in the Liver of Patients with Chronic Hepatitis C

John Gross, MD, Greg Gores, MD, Stephanie Johnson, RN, Mayo Clinic, Rochester, MN

P103. Outcomes in 46 Pts with Type 1 Hepatorenal Synd (HRS-1): Treated with Midoctrine and Octreotide (MIDO/OCTR); Correlation with Underlying Liver Disease and Patient Demographics

Yasmin Karim, MD, Eashen Liu, MD, James Lewis, MD, Department of Gastroenterology, Georgetown University Hospital, Washington, DC

P104. Increased Risk of Hepatocellular Carcinoma Among Hispanics with Hepatitis C

Maryam Kashi, DO, Roger Sanchez, BS, Robert Page, PA-C, Paul Brock, PA, Ana Herrera, MD, MPH, Gary Chisholm, MS, Anastacio Hoyumpa, MD, Epidemiology and Biostatistics, Gastroenterology and Nutrition, University of Texas Health Science Center at San Antonio, San Antonio, TX, San Antonio Metropolitan Health District, San Antonio, TX

P105. Systemic Inflammatory Response Syndrome (SIRS) and Cirrhosis: Association with Sepsis and High Short Term Mortality

Kaushal Madan, MD, DM, Soumya Mahapatra, MBBS, Smruti Mishra, MD, Ashish Kumar, MD, DM, Ramchander Soni, MD, Hitender Garg, MD, Shiv Sarin, MD, DM, Hepatology, Institute of Liver and Biliary Sciences, New Delhi, India, Gastroenterology, G.B. Pant Hospital, New Delhi, India

P106. Increased MRNA Expression of CCL22 in Hepatocellular Carcinoma with Infiltration of Fopx3+ Regulatory T Cell

Naboru Mitsuhashi, MD, PhD, Fumio Kimura, MD, PhD, Hiroaki Shimizu, MD, PhD, Hiroyuki Yoshidome, MD, PhD, Masayuki Ohtsuka, MD, PhD, Atsushi Kato, MD, PhD, Hideyuki Yoshitomi, MD, PhD, Katsunori Furukawa, MD, PhD, Dan Takeuchi, MD, PhD, Masaru Miyazaki, MD, PhD, Section for Medical Nanotechniques, Research Center for Frontier Medical Engineering, Chiba University, Chiba, Japan, Department of General Surgery, Graduate School of Medicine, Chiba University, Chiba, Japan

P107. Fibrosing Cholestatic Hepatitis C and Viral Clearance in the Post Transplant Setting: A Report of 3 Cases

Sumana Moole, MD, Thomas Riley, MD, John Liang, MD, Ian Schreibman, MD, Division of Gastroenterology, Hershey Medical Center, Hershey, PA

P108. Outcomes of Chest Tube Insertion for Hepatic Hydrothorax

Eric Orman, MD, Anna Lok, MD, Department of Internal Medicine, University of Michigan, Ann Arbor, MI

P109. A Study of Non Compliance with Hepatitis Vaccine in Patients with Chronic Hepatitis B or Hepatitis C

Calvin Pan, MD, Mount Sinai School of Medicine, New York, NY, Gastroenterology and Hepatology, University of California, Irvine, Orange, CA, Stony Brook University, Long Island, NY, Gastroenterology and Hepatology, University of California Davis School of Medicine, Davis, CA

P110. Prevalence of HCV and Risk of HCV Acquisition in Hepatitis C Screening Programs in Asian Community in New York City

Sanjaya Satapathy, MD, DM, Costica Aloman, MD, Stephen Ward, MD, Yvette Lam, MD, Peter Eils, MD, M. Isabel Fiel, MD, Juan Del Rio Martin, MD, Thomas Schiano, MD, Liver Diseases, Mount Sinai School of Medicine, New York, NY, Gastroenterology, Medicine, State University of New York/Stony Brook University Hospital, Long Island, NY, Pathology, Mount Sinai School of Medicine, New York, NY, Liver Transplantation, Recanati-Miller Transplantation Institute, New York, NY

P111. Single U.S. Center Experience with High Dose Consensus Interferon and Ribavirin in Hepatitis C Patients who are Resistant to PEG-Interferon and Ribavirin

Kenneth Rothstein, MD, Ramesh Koka, MD, Holly Hargrove, PA, Angel Fernandez, MD, Shailender Singh, MD, Victor Araya, MD, Santiago Munoz, MD, Hepatology, Albert Einstein Medical Center, Philadelphia, PA

P112. Successful Treatment of Hepatitis C with Subsequent Remission of Waldenstrom’s Macroglobulinemia: A Case for Another Extrahepatic Manifestation of Hepatitis C

Kenneth Rothstein, MD, David Denny, MS3, Olufunmilayo Olugbesan, MD, Ricardo Restrepo, MD, John Leighton, MD, Oncology, Hepatology, and Medicine, Albert Einstein Medical Center, Philadelphia, PA

P113. Digital Image Analysis of Endoscopic Images of Diminutive Polyps: Differentiating Adenomatous Polyps from Hyperplasic Polyps

Ananya Das, MD, Feng Li, MD, Suryakanth Gurudu, MD, Mayo Clinic, Scottsdale, AZ

P114. Identification of Protein Biomarkers Associated with Lymph Node Metastasis in Colorectal Cancer

Ying Lin, MD, Jeffrey Lee, MD, Paul Meeh, MS, Christopher Farrell, BS, Philip Buckhaults, PhD, Robert Poldolsky, PhD, Robert Schade, MD, William Dyann, PhD, IMMAG, Medical College of Georgia, Augusta, GA, Department of Pathology, Medical College of Georgia & VAMC, Augusta, GA, South Carolina Cancer Center & Department of Pathology & Microbiology, University of South Carolina, Columbia, SC, Department of Medicine, CBGM, Medical College of Georgia, Augusta, GA

P115. Oral Cyclic Guanosine Monophosphate (CGMP) Desensitizes Colonic Afferents in an Animal Model of Experimental Colitis

Elena UstinoVan, PhD, Alexander Bryant, PhD, Tammi Reza, Mark Currie, PhD, Michael Pezzone, MD, PhD, Medicine, University of Pittsburgh, Pittsburgh, PA, Ironwood Pharmaceuticals, Inc., Cambridge, MA

P116. ‘Time to Change’: Utilization of Monitor Mounted Timers to Improve Withdrawal Time During the Performance of Colonoscopy

Kirsten Weiser, MD, MPH, Arifa Toor, MD, Peter Anderson, MD, Maren Flynn, BA, Lynn Butterly, MD, Douglas Robertson, MD, MPH, Karen Homa, PhD, Gastroenterology, Dartmouth Hitchcock Medical Center, Lebanon, NH

P117. Sessile Serrated Adenomas: Demographic, Clinical and Endoscopic Characteristics in a Patient Population

Suryakanth Gurudu, MD, Evelyn Heigh, BS, Russell Heigh, MD, Giovanni De Petris, MD, Jonathan Leighton, MD, Shabana Pasha, MD, Isaac Malagon, BS, Ananya Das, MD, Mayo Clinic Arizona, Scottsdale, AZ, Arizona State University, Phoenix, AZ
P118. Wheat Dextrin, Psyllium, and Inulin Produce Distinct Short-Chain Fatty Acid (SCFA) Profiles, Fermentation Patterns, and Gas Volumes in Vitro
Derek Timm, BS, Maria Stewart, MS, Alberto Paredes-Diaz, PhD, Ashok Hospattankar, MS, PhD, Vincenzo Savarino, MD, Joanne Slavin, PhD, Food Science and Nutrition, University of Minnesota, St. Paul, MN, Medical Affairs, Novartis Consumer Health, Parsippany, NJ, Internal Medicine, Gastroenterology Unit, Genoa, Italy

P119. Risk Factors of Patients Who have Only Protruded Adenomas Versus Those with Only Flat Adenomas
Joseph Anderson, MD, Benjamin Stein, MD, Charles Kahi, MD, Ramona Rajapakse, MD, Zvi Alpern, MD, Gastroenterology, University of Connecticut, Farmington, CT, Gastroenterology, Stony Brook University, Stony Brook, NY, Gastroenterology, Indiana University, Indianapolis, IN

P120. Body Weight is an Independent Risk Factor for Calcium Phosphate Nephropathy with Sodium Phosphate Colonoscopy Preparation. A Simulation Study
Eli Ehrenpreis, MD, Kranthi Varala, BS, Bruce Hannon, PhD, Gastroenterology, Evanston/Northwestern Healthcare, Highland Park, IL, Geography, University of Illinois, Urbana-Champaign, IL

P121. Comparison of GI Transit Parameters in Functional/Idiopathic Versus Constipation Predominant Irritable Bowel Syndrome (IBS) Patients Assessed by Wireless pH/Pressure Recording Capsule
Irene Sarosiek, MD, Salish Rao, MD, Henry Parkman, MD, Braden Kuo, MD, William Chey, MD, John DiBase, MD, Richard Saad, MD, Jerzy Sarosiek, MD, PhD, Jack Semler, PhD, Richard McCallum, MD, Internal Medicine, Kansas University Medical Center, Kansas City, KS, SmartPill Corporation, Inc., Buffalo, NY, Multicenter Clinical Trial, SmartPill Team, Buffalo, NY

P122. The Characteristics of Small and Diminutive Colorectal Polyps in Caucasians and African Americans
Sheetal Sharma, MD, Nisheeth Verma, MD, Wallace Wang, MD, Soren Gandhi, BS, Gloria Gupitil, BS, Veena Nannegari, MD, Amee Mapara-Shah, MD, Gregg Brodsky, MD, Seth Richter, MD, Division of Gastroenterology, Department of Internal Medicine, Albany Medical Center, Albany, NY, Albany Medical College, Albany, NY

P123. Prospective Evaluation of Mismatch Repair Protein Expression in Primary Colorectal Cancer
Christopher South, MD, Martha Yearsley, MD, Heather Hampel, MD, Wendy Frankel, MD, Division of Human Genetics, Department of Pathology, Division of Gastroenterology, Hepatology, and Nutrition, The Ohio State University Medical Center, Columbus, OH

P124. MUC2 and MUC5AC Expression in Aberrant Crypt Foci
Michael Vincent Tablang, MD, Christopher Flynn, MD, Joel Levine, MD, PhD, Thiruchandurai Rajan, MD, PhD, Colon Cancer Prevention Program, Pathology, Internal Medicine, University of Connecticut Health Center, Farmington, CT

P125. The Yield of Repeat Colonoscopy for a Positive Fecal Occult Blood Test (FOBT) After a Prior “ Cleared” Colonoscopy
Brindusa Truta, MD, Francisco Ramirez, MD, FACP, Carl T. Hayden VA Medical Center, Phoenix, AZ

P126. A Pilot Program for Screening Colonoscopy in the Uninsured: An Analysis of Factors Influencing Screening Participation
Waqar Ahmad, MD, Muhammad Hasan, MD, Barbara Williamson, RN, William Tierney, MD, Internal Medicine, Oklahoma University Health Sciences Center, Oklahoma City, OK

P127. Polyelectrolyte Glycol (PEG) vs. Sodium Phosphate (NAP) for Bowel Preparation: A Meta-Analysis of Randomized Controlled Trials by Treatment Arm
Ravi Juluri, MD, George Eckert, MAS, Thomas Imperiale, MD, Medicine, Indiana University School of Medicine, Indianapolis, IN

P128. Polyelectrolyte Glycol (PEG) vs. Sodium Phosphate (NAP) for Colonoscopy Preparation: A Meta-Analysis of Randomized Controlled Trials
Ravi Juluri, MD, George Eckert, MAS, Thomas Imperiale, MD, Medicine, Indiana University School of Medicine, Indianapolis, IN

P129. Fecal Incontinence in Working Women
Susan McCormick, MD, Stephanie Del Tufo, College Student, Otto Lin, MD, Gastroenterology, Virginia Mason Medical Center, Seattle, WA

P130. The Metastatic Lymph Node Ratio (LNR) is a Powerful Predictor of Survival and Recurrence in Colon and Rectal Cancer
Emilio Mignanelli, MBBS, Victor Fazio, MD, Elena Maniliich, MS, Ravi Kiran, MBBS, MS, Matthew Kalady, MD, Ian Lavery, MD, Colon and Rectal Surgery, Cleveland Clinic Foundation, Cleveland, OH

P131. Self-Expandable Metal Stents are Effective and Useful in the Management of Malignant Colorectal Obstruction
Carlos Noronha Ferreira, MBBS, Antonio Marques, MD, Rui Palma, MD, David Serra, MD, Jose Velosa, MD, PhD, Estela Monteiro, MD, PhD, Servicio de Gastroenterologia e Hepatologia, Hospital de Santa Maria, Lisboa, Portugal, Servicio de Gastroenterologia, Hospital da Luz, Lisboa, Portugal

P132. Community Microarray for Quantitative Analysis of Human Intestinal Microflora
Oleg Paliy, PhD, Harshvardhan Kenche, BSc, Frank Abernathy, PhD, Sonia Michial, MD, Boonshoft School of Medicine, Wright State University, Dayton, OH, Gastroenterology, Dayton Children’s Hospital, Dayton, OH

P133. Normal Distributions of Colorectal Anatomy in a General Adult Population: Detailed Assessment Using CT Colonography
Mouen Khashab, MD, Perry Pickhardt, MD, David Kim, MD, Douglas Rex, MD, Department of Internal Medicine, Division of Gastroenterology, Indiana University Medical Center, Indianapolis, IN, Department of Radiology, University of Wisconsin, Madison, WI

P134. Clostridium difficile Infection: A Community-Based Epidemiological Study
Scott Aronson, MD, Patricia Kammer, Darrell Pardi, MD, Miles and Shirley Filerman Center for Digestive Diseases, Division of Gastroenterology, Mayo Clinic, Rochester, MN

P135. Patterns of Involvement in 350 Cases of Biopsy-Proven Ischemic Colitis
Matthew Blaszka, MD, Lawrence Brandt, MD, MACG, Montefiore Medical Center, New York, NY

P136. Retrospective Analysis of Complications and Risk Factors in Colonic Snare Polypectomies
Edson da Silva, MD, Alexandre Pelosi, MD, Glaucia de Freitas, MD, Proctology, Hospital dos Servidores do Estado do Rio de Janeiro, Rio de Janeiro, Brazil, Endoscopy, Casa de Portugal, Rio de Janeiro, Brazil

P137. How Good is the Quality of Colonoscopy Preparation Under Monitored Anesthesia Care (MAC)?
Sahil Mittal, MD, Sashidhar Sagi, MD, G. Raju, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P138. Is Clostridium difficile Infection (CDI) More Difficult to Eradicate in Patients with Diverticulosis?
Andy Thanjan, MD, William Southern, MD, Neeraj Anand, MD, Sonia Yoon, MD, Lawrence Brandt, MD, MACG, Internal Medicine, Division of Gastroenterology, Albert Einstein College of Medicine, Bronx, NY, Montefiore Medical Center, Bronx, NY
P140. Appendicitis: A Rare Complication of Screening Colonoscopy
Danny Yen, MD, Surinder Mann, MD, University of California, Davis, Sacramento, CA

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Joseph Yarze, MD, FACG, Michael Chase, MD, Charles Lowe, MD, Edward Orris, MD, Gastroenterology Associates of Northern New York, Glens Falls, NY, Department of Medicine, Glens Falls Hospital, Glens Falls, NY, Albany Gastroenterology Consultants, Albany, NY

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Joseph Yarze, MD, FACG, Gastroenterology Associates of Northern New York, Glens Falls, NY

P143. Prolonged Retention of Endoscopically Placed Hemoclips in a Pediatric Patient—A Case Report
Matthew Wyenski, MD, Orhan Atay, MD, Marsha Kay, MD, Vera Hupertz, MD, Pediatric Gastroenterology, Cleveland Clinic Foundation, Cleveland, OH

P144. Post-Stomal Pyoderma Gangrenosum—A Rare Extraintestinal Manifestation of Crohn’s Disease in a Pediatric Patient
Matthew Wyenski, MD, Naim Alkhoury, MD, Lon Mahajan, MD, Pediatric Gastroenterology, Cleveland Clinic Foundation, Cleveland, OH

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Sharheel Wasan, MD, Christopher Huang, MD, Gastroenterology, Boston Medical Center, Boston, MA

P146. Shortness of Breath in a Patient with Crohn’s Disease
Sharheel Wasan, MD, Ansu Mamman Noronha, MD, Carl O’Hara, MD, Francis Farraye, MD, MSc, Pathology, Gastroenterology, Boston Medical Center, Boston, MA

P147. Superficial Angiomyxoma Presenting as an Intra-Luminal Rectal Polyp: A Newly Described Type of Colonic Neoplasia
Ian Wall, DO, Nison Badalow, MD, Neli Farazmand, RPAC, Muhammad Abdullah, MD, Kadirawel Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Pratap Gadiangi, MD, Department of Medicine, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Department of Surgery, Coney Island Hospital, Brooklyn, NY

P148. Hepatocellular Carcinoma in a Previously Non-Cirrhotic Patient with Celiac Disease 26 Months After Successful Eradication of HCV
Ian Wall, DO, Nison Badalow, MD, Jack Braha, DO, Kadirawel Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Michael Bernstein, MD, Department of Internal Medicine, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Department of Internal Medicine, Division of Gastroenterology, Coney Island Hospital, Brooklyn, NY

P149. A Rare Case of Budd-Chiari Syndrome with Inferior Vena Cava Obstruction in a Patient with Sickle Cell Trait
Matthew Tsushima, MD, Deborah Anghesom, MD, Bruce Runyon, MD, Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P150. The Use of Percutaneous Endoscopic Gastrostomy for Nutrition Support in Pregnancy Associated with Hyperemesis Gravidarum
Matthew Tsushima, MD, Michael Walter, MD, Snorri Olafsson, MD, Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P151. Is Plummer-Vinson Syndrome a Form of Celiac Disease?
Hui Hing Jack Tin, MD, Kadirawel Iswara, MD, FACG, Jianjun Li, MD, FACG, Scott Tenner, MD, MPH, FACG, Internal Medicine, Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P152. Anorectal Tuberculosis Mimicking Anal Carcinoma
Hui Hing Jack Tin, MD, Anita Tokor, MD, Yarmel Lafortune, PA, Scott Tenner, MD, MPH, Pratap Gadiangi, MD, Surgery, Coney Island Hospital, Brooklyn, NY, Internal Medicine-Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P153. Significant Iron Overload in an H63D Hemochromatosis Heterozygote with Chronic Hepatitis C Infection
Lakshminarayan Sooraj, MD, MPH, Mary Atten, MD, Bashar Attar, MD, PhD, FACG, Victoria Angelova, MD, Benjamin Go, MD, Gastroenterology and Hepatology, Cook County-John H. Stroger Hospital, Rush University, Chicago, IL

P154. Small Fibrovascular Polyp of Esophagus—A Diagnostic Challenge
Lakshminarayan Sooraj, MD, MPH, Melchor Demetria, MD, Bashar Attar, MD, PhD, Division of Gastroenterology and Hepatology, Cook County-John H. Stroger Jr. Hospital, Rush University, Chicago, IL

P155. Dicloxacillin-Induced Mixed Cholestatic Liver Injury: Treatment with Ursodiol
Amer Skopic, DO, James Lewis, MD, Gastroenterology, National Naval Medical Center, Bethesda, MD, Gastroenterology, Georgetown University Hospital, Washington, DC

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Amer Skopic, DO, Dong Lee, MD, Gastroenterology, National Naval Medical Center, Bethesda, MD

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Muhammad Siddiqui, MD, Charles Berkelhammer, MD, FACG, Internal Medicine, University of Illinois, Oak Lawn, IL

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Muhammad Siddiqui, MD, Charles Berkelhammer, MD, FACG, Internal Medicine, University of Illinois, Oak Lawn, IL

P159. Feasibility of Non-Fluoroscopic Esophageal Stent Placement: A Case Report
Sohail Shaikh, MD, Kavitha Tipirneni, DO, Joseph DePasquale, MD, Gastroenterology, Seton Hall University, South Orange, NJ

P160. Constellation of Uveitis, Sacroileitis, and Arthropathy Antecedent Crohn’s Disease
Sohail Shaikh, MD, Chintan Modi, MD, Hamid Shaaban, MD, Robert Spira, MD, Gastroenterology, Seton Hall University, South Orange, NJ

P161. Unusual Complication of Salem Sump Tube
Nan Sandar, MD, Jeremiah Kurz, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Gastroenterology, St. Barnabas Hospital, Bronx, NY

P162. Pancreatitis and Cholecystitis from Gastrostomy Tube
Nan Sandar, MD, Mahesh Krishniah, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Gastroenterology, Lutheran Medical Center, Brooklyn, NY

P163. Angiodysplasia: Life Threatening Bleeding in the Young
Nan Sandar, MD, Sharique Nazir, MD, Philip Xiao, MD, Mohammed Aladdin, MD, Alan Go, MD, FACS, Sury Anand, MD, Interventional Radiology, Pathology, Surgery, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY
P164. Chylous Ascites Due to Mycobacterium Avium Intracellular Complex (MAC) Peritonitis
Nan Sandar, MD, Mojdeh Momeni, MD, Jeremiah Kurz, MD, Michelle Dahdouh, MD, Frederick Fallick, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Infectious Disease Department, Gastroenterology, St. Barnabas Hospital, Bronx, NY

P165. The Other Campylobacter Species: Can Campylobacter Fetus also be Linked to Gastrointestinal Manifestations?
Ritu Saha, MD, Jessica Widmer, DO, Eugene Sullivan, MD, Gastroenterology, Hepatology and Nutrition, Winthrop University Hospital, Mineola, NY

P166. Early Enteral Feeding and Anticoagulation in Pylephlebitis with Hepatic Dysfunction
Ritu Saha, MD, Timothy Wong, MD, Gastroenterology, Hepatology and Nutrition, Winthrop University Hospital, Mineola, NY

P167. Ruminant Syndrome: A Diagnosis of Thorough History
Ritu Saha, MD, Robert Bonasera, MD, Kavita Kongara, MD, Gastroenterology, Hepatology and Nutrition, Winthrop University Hospital, Mineola, NY

P168. A “Case” of Granuloma
Nikila Ravindran, MD, Maria Cino, MSc, MD, University of Toronto, Toronto, ON, Canada

P169. Tropical Pancreatitis: A Case Report
Nikila Ravindran, MD, Paul Kortan, MD, University of Toronto, Toronto, ON, Canada

P170. Isolated Splenic Vein Thrombosis in a Patient with Polycythemia Vera
Andrew Rackoff, MD, Patrick Brady, MD, Division of Digestive Diseases, University of South Florida, Tampa, FL

P171. Looks Can Be Deceiving: Cap Polyposis
Andrew Rackoff, MD, Prasad Kulkarni, MD, Division of Digestive Diseases, University of South Florida, Tampa, FL, Gastroenterology, Tampa, FL

P172. Symptomatic Annular Pancreas in an Elderly Adult Diagnosed by EUS and Secretin MRCP
Scott Pollack, MD, Thomas Parambil, MD, Fredric Regenstein, MD, Shobha Joshi, MD, Internal Medicine, Tulane University School of Medicine, New Orleans, LA

P173. Post-Transplant Lymphoproliferative Disorder, Hyperviscosity Syndrome and Waldenstrom's Macroglobulinemia in a Patient with Orthotopic Liver Transplant
Scott Pollack, MD, Thomas Parambil, MD, Fredric Regenstein, MD, Shobha Joshi, MD, Internal Medicine, Tulane University School of Medicine, New Orleans, LA

P174. Colitis Cystica Profunda of the Right Colon Mimicking Colonic Polyposis
Kumaravel Perumalsamy, MD, Alejandra Borenstein, MS, Natalia Segal, MS, Kadirawal Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Maimonides Medical Center, Brooklyn, NY

P175. Successful Endoscopic Closure of a Gastro-Gastric Fistula with Endo-CliPS
Kumaravel Perumalsamy, MD, Muthukumar Muthusamy, MD, Muhammad Abdullah, MD, Kadirawal Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P176. Early Identification of Biliary Papillomatosis Through Endoscopic Evaluation of the Common Bile Duct
Kumaravel Perumalsamy, MD, Jack Tin, MD, Kadirawal Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P177. Primary Pneumatosis Intestinalis on Routine Screening Colonoscopy
Payal Patel, MD, Asif Zarrar, MD, FACG, Muhammed Nathani, MD, FACG, Gastroenterology, Kelsey-Seybold Clinic, Houston, TX, Internal Medicine, Baylor College of Medicine, Houston, TX

P178. Portal Vein Thrombosis After Gastric Bypass Surgery
Payal Patel, MD, Angela McGee, MD, Muhammed Nathani, MD, FACG, Gastroenterology, Kelsey-Seybold Clinic, Houston, TX, Internal Medicine, Baylor College of Medicine, Houston, TX

P179. Presentation of Metastatic Leiomyosarcoma of the Uterus as Upper GI Bleeding
Jitendrakumar Patel, MD, Julio Ventura, MD, Avani Patel, MD, Internal Medicine, Jamaica Hospital Medical Center, Jamaica, NY

P180. An Enigmatic Entity—Idiopathic Granulomatous Appendicitis
Jitendrakumar Patel, MD, Kashyapkumar Patel, MD, Kelly Cervel-ion, MA, Avani Patel, MD, Internal Medicine, Jamaica Hospital Medical Center, Jamaica, NY

P181. Idiopathic Pneumatosis Coli Presenting as an Isolated Submucosal Mass Confirmed by Endoscopic Ultrasound
Thomas Park, MD, Asad Ullah, MD, Ashok Shah, MD, FACG, Gastroenterology, University of Rochester, Rochester, NY

P182. GIST of the Duodenum Masquerading as a Pancreatic Head Tumor
Thomas Park, MD, Kevin Jo, MD, Ashok Shah, MD, FACG, Asad Ullah, MD, Gastroenterology, University of Rochester, Rochester, NY

P183. Rare Association of Leukocytoclastic Vasculitis and Crohn’s Disease
Thomas Park, MD, Richard Farmer, MD, FACG, Ashok Shah, MD, FACG, Gastroenterology, University of Rochester, Rochester, NY

P184. Duodenal Carcinoid Tumors: A Review of Five Cases
Thomas Park, MD, Kevin Jo, MD, Ashok Shah, MD, FACG, Asad Ullah, MD, Gastroenterology, University of Rochester, Rochester, NY

P185. Recurrent Esophageal Candidiasis: Consider Thymoma
Martin Moehlen, MD, MPH, John Hutings, MD, Kenneth Paris, MD, Stephen Abshire, MD, FACG, Internal Medicine, Section of Gastroenterology, Tulane University School of Medicine, New Orleans, LA, Department of Internal Medicine, Division of Allergy/Immunology, LSU Health Sciences Center and Jeffrey Modell Foundation, New Orleans, LA

P186. Sickle Cell-Induced Hepatopathy with Fulminant Hepatic Failure. Successful Treatment with Plasma Exchange
Martin Moehlen, MD, MPH, Fredric Regenstein, MD, FACG, Section of Gastroenterology and Hepatology, Internist Medicine, Tulane University School of Medicine, New Orleans, LA

P187. Cricopharyngeal Intramural Hematoma: An Unusual Complication of Gastroesophageal Reflux Disease
Marty Meyer, MD, Edward Levine, MD, Gastroenterology, Hepatology, and Nutrition, The Ohio State University Medical Center, Columbus, OH

P188. Acute Hemorrhagic Crohn’s Disease Controlled with Infliximab
Marty Meyer, MD, Edward Levine, MD, Gastroenterology, Hepatology, and Nutrition, The Ohio State University Medical Center, Columbus, OH

P189. A Case Report of Strictureting Diverticular Disease-Associated Colitis Mimicking Segmental Sigmoid Crohn’s Disease
Joel McFarland, MD, Jason Gutman, MD, Arthur DeCross, MD, Gastroenterology and Hepatology, University of Rochester, Strong Memorial Hospital, Rochester, NY
Poster Presentations — Sunday, October 5

Joel McFarland, MD, Ashok Shah, MD, MACG, Gastroenterology and Hepatology, University of Rochester, Strong Memorial Hospital, Rochester, NY

P191. Extra-Luminal Gastric Leiomyosarcoma Masquerading as a Pancreatic Mass on CT—Unmasked by Endoscopic Ultrasound (EUS)
Siddharth Mathur, MD, Niket Sonpal, BS, William Thelmo, MD, Yashpal Arya, MD, Mukul Arya, MD, Wyckoff Heights Medical Center, Brooklyn, NY

P192. Endoscopic Ultrasound Characteristics of a Malignant Rectal Lymphoma
Siddharth Mathur, MD, Niket Sonpal, BS, William Thelmo, MD, Yashpal Arya, MD, Mukul Arya, MD, Wyckoff Heights Medical Center, Brooklyn, NY

Nirmal Mann, MD, MS, PhD, DSc, Gastroenterology, University of California Davis, Folsom, CA

P194. Suction Polypectomy: A Novel and Safe Method for Removing Colonic Lipoma
Nirmal Mann, MD, MS, PhD, DSc, Kanat Brahmanakul, MD, Gastroenterology, University of California Davis, Folsom, CA

P195. Mysterious Gastric Nodule in a Patient with Advanced HIV Disease: A Case Report and Review of Literature
Chandra S. Lingisetty, MD, Smitha Kanak, MD, Kiran Goli, MD, Theodore Lenox, MD, Kyamalya Ismailova, MD, Shobhana Chaudhari, MD, FACP, Jennifer Harley, MD, Susan Williams, MD, Gastroenterology, Medicine, New York Medical College / Metropolitan Hospital, New York, NY

Chandra S. Lingisetty, MD, Kiran Goli, MD, Sandip Ghuge, MD, Shobhana Chaudhari, MD, Susan Williams, MD, Gastroenterology, Medicine, New York Medical College, New York, NY, Metropolitan Hospital, New York, NY

P197. A Rare Case of Gastrointestinal Histoplasmosis in a 15-year-old Male Patient with a History of Cardiac Transplant and Diarrhea: A Case Report
Nelson Lim, MD, Mia Perez, MD, Donald Rankin, MD, Michael Lim, BS, Manoj Shan, MD, Department of Pediatric Gastroenterology, Department of Pathology, Department of Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P198. A Rare Case of a Neuroendocrine Tumor (NET) of the Common Bile Duct with Metastasis to a Porta Hepatis Lymph Node: A Case Report
Nelson Lim, MD, Donald Rankin, MD, Michael Lim, BS, Hin Wah Lee, MD, Department of Pathology, Department of Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P199. Cholangiocarcinoma Associated with Chronic Hepatitis B: A Case Report
Cynthia Lau, MD, Stanley Cohen, MD, Joseph Ahn, MD, Shriram Jakate, MD, Mariano Dy-Liacco, MD, Nikunj Shah, MD, General Surgery, Pathology, Gastroenterology and Hepatology, Rush University Medical Center, Chicago, IL

P200. Acute Fatty Liver of Pregnancy Complicated by Severe Pancreatitis: Successful Outcome After Liver Transplantation, A Case Report
Cynthia Lau, MD, Stanley Cohen, MD, Joseph Ahn, MD, Edie Chan, MD, Shriram Jakate, MD, Nikunj Shah, MD, Pathology, General Surgery, Gastroenterology and Hepatology, Rush University Medical Center, Chicago, IL

P201. Poster Withdrawn

P202. Poster Withdrawn

P203. A Rare Cause of Small Bowel Hemorrhage: CMV Infection with Massive Bleeding from the Ileum without Concomitant Colitis
Vinod Kurupath, MD, Khurshed Mazumdar, MD, Mahesh Krishnaiah, MD, Sury Anand, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY

P204. Mesenteric Pancreatitis Presenting in a Hepatitis C Patient with Cryoglobulinemia
Vinod Kurupath, MD, Lakshibabu Parsa, MD, Frederick Fallick, MD, Jeremiah Kurz, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Gastroenterology, St. Barnabas Hospital, Bronx, NY

P205. Intestinal Spirochetosis: A Cause of Intermittent Diarrhea in an Immunocompetent Patient
Ravi Kurella, MD, Madhavi Rudraranjau, MD, Ravindranath Sawh, MD, Stan Lightfoot, MD, Syed Rizvi, MD, Richard Harty, MD, Primary Care, VA Medical Center, Oklahoma City, OK, Pathology, Department of Gastroenterology, Oklahoma University Health Sciences Center, Oklahoma City, OK

P206. Langerhans Cell Histiocytosis Confined to Colon Polyps, a Rare Presentation
Ravi Kurella, MD, Lilah Mansour, MD, Stan Lightfoot, MD, John Maple, DO Richard Harty, MD, Primary Care, VA Medical Center, Oklahoma City, OK, Pathology, Gastroenterology, Oklahoma University Health Sciences Center, Oklahoma City, OK

P207. Ovarian Cysts and IBD: A Possible Cause of Continued Abdominal Pain in Women with IBD
Rebecca Kowalczyk, MD, Sunanda Kane, MD, Mayo Clinic, Rochester, MN

P208. Abdominal Pain: A Wolf in Sheep's Clothing
Rebecca Kowalczyk, MD, Norman Egger, MD, Mayo Clinic, Rochester, MN

P209. Does a Normal Endoscopic Appearance of Duodenum Rule Out Underlying Hairy Cell Leukemia Infiltrate?
Shivangi Kothari, MD, Chintan Mody, MD, Robert Spira, MD, Joseph DePasquale, MD, Gunwant Gurun, MD, Gastroenterology and Hepatology, St. Joseph's Regional Medical Center, Paterson, NJ, Internal Medicine, and Oncology, St. Michael's Medical Center, Newark, NJ

P210. Collagenous Colitis—A Rare Complication of Lansoprazole
Shivangi Kothari, MD, Nhat Nguyen, MD, Jennifer Brown, DO, Andre Fedida, MD, Gastroenterology and Hepatology, St. Joseph's Regional Medical Center, Paterson, NJ, Internal Medicine, Gastroenterology, St. Michael's Medical Center, Newark, NJ

P211. Small Bowel Lymphangioma: An Unusual Cause of Gastrointestinal Bleeding and Severe Iron Deficiency Anemia
Shivangi Kothari, MD, Sohail Shaikh, MD, Rada Shakov, MD, Robert Spira, MD, Joseph DePasquale, MD, Wald Baddoura, MD, Gastroenterology, Seton Hall University School of Graduate Medical Education, South Orange, NJ
P212. Volcano Ulcers in Stomach—An Unusual Presentation of Metastatic Non Pigmented Melanoma
Shivangi Kothari, MD, Chintan Mody, MD, Robert Spira, MD, Joseph DePasquale, MD, Gastroenterology and Hepatology, St. Joseph’s Regional Medical Center, Paterson, NJ, Internal Medicine, Gastroenterology and Hepatology, St. Michael’s Medical Center, Newark, NJ

P213. Giant Pseudodiverticulum of the Sigmoid Colon—A Rare Manifestation of Diverticular Disease
Shivangi Kothari, MD, Chintan Mody, MD, Robert Spira, MD, Joseph DePasquale, MD, Gastroenterology and Hepatology, St. Joseph’s Regional Medical Center, Paterson, NJ, Gastroenterology and Hepatology, Internal Medicine, St. Michael’s Medical Center, Newark, NJ

P214. Tuberculous Colitis in a Patient with Crohn’s Disease After Treatment with Infliximab
Shivangi Kothari, MD, Nhat Nguyen, MD, Jennifer Brown, DO, Andre Fedida, MD, Gastroenterology and Hepatology, St. Joseph’s Regional Medical Center, Paterson, NJ, Internal Medicine, Gastroenterology, St. Michael’s Medical Center, Newark, NJ

P215. Abdominal Pain Secondary to Tumoral Amyloidosis of the Stomach
Charles Koczka, MD, Adam Goodman, MD, Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY

P216. Metastatic Colorectal Carcinoma in a 20-year-old Afro-Caribbean Female
Charles Koczka, MD, Waqas Khan, MD, Adam Goodman, MD, SUNY Downstate Medical Center, Brooklyn, NY

P217. Idiopathic Portal Cavernoma
Charles Koczka, MD, Alejandra Castillo-Roth, MD, Adam Goodman, MD, SUNY Downstate Medical Center, Brooklyn, NY

P218. Recurrent Gastric Abscess in a 28-year-old Female
Maqsood Khan, MD, Burns Meredith, BS, Jack Leya, MD, FACG, Sonu Dhillon, MD, FACG, Internal Medicine, West Suburban Medical Center, Oak Park, IL, Medicine, Loyola University Medical Center, Maywood, IL

P219. An Unusual Case of Rectal Bleeding
Maqsood Khan, MD, Srinadh Komanduri, MD, FACG, Michael Brown, MD, FACG, Internal Medicine, West Suburban Medical Center, Oak Park, IL, Gastroenterology, Rush University Medical Center, Chicago, IL

P220. Natural Killer Cell Lymphoma at an Unusual Location
Maqsood Khan, MD, Srinadh Komanduri, MD, FACG, Michael Brown, MD, FACG, Internal Medicine, West Suburban Medical Center, Oak Park, IL, Gastroenterology, Rush University Medical Center, Chicago, IL

P221. Fulminant Hepatic Failure in an Adult Patient with Giant Cell Hepatitis
Maqsood Khan, MD, Joseph Ahn, MD, Nukunj Shah, MD, Shiriram Jakate, MD, Ajay Patel, MD, Burns Meredith, BS, Stanley Cohen, MD, Internal Medicine, West Suburban Medical Center, Oak Park, IL, Hepatology, Rush University Medical Center, Chicago, IL, Medicine, Loyola University Medical Center, Maywood, IL

P222. An Unusual Submucosal Tumor in a Pregnant Female
Purna Kashyap, MBBS, Fabiola Medeiros, MD, Michael Levy, MD, David Nagorney, MD, Mark Larson, MD, Surgery, Pathology, Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P223. Mitochondrial Mutations as a Cause of Gastrointestinal Dysmotility in Older Patients
Purna Kashyap, MBBS, Lawrence Szarka, MD, Robert Cima, MD, Giannico Farrugia, MD, Surgery, Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P224. Eosinophilic Hepatitis Case Report
Amitpal Johal, MD, Robert Smith, MD, Gastroenterology, Geisinger Medical Center, Danville, PA

P225. A Rare Case of Aortoduodenal Syndrome
Amitpal Johal, MD, Robert Smith, MD, Gastroenterology, Geisinger Medical Center, Danville, PA

P226. A Rare Case of an Incidentally Discovered Ampulla of Vater Carcinoid
Ritesh Jha, MD, Bashar Attar, MD, PhD, Gijo Vettiankal, MD, Melchor Demetria, MD, Division of Gastroenterology and Hepatology, Cook County-John H. Stroger Hospital, Rush University, Chicago, IL

P227. An Unusual Method of Diagnosing Ascariasis
Ritesh Jha, MD, Bashar Attar, MD, PhD, Mary Atten, MD, Division of Gastroenterology and Hepatology, Cook County-John H. Stroger Hospital, Rush University, Chicago, IL

P228. Drugs Known to Cause Pancreatitis are Used to Treat Pancreatitis in Lupus: A Case Report
Sayeeda Jabeen, MD, Syed Hashmi, MD, Stuart Torgerson, MD, Mukerji Basanti, MD, Gastroenterology, Internal Medicine, Southern Illinois University, Springfield, IL, Rheumatology, Private Practice, Springfield, IL, Internal Medicine, Research, Springfield, IL

P229. An Unusual Case of Acute Budd-Chiari Syndrome (BCS) Presenting with Normal Hepatic Enzymes Mimicking Mesenteric Ischemia
Sayeeda Jabeen, MD, Mei Huang, MD, Syed Hashmi, MD, Gastroenterology, Internal Medicine, Southern Illinois University, Springfield, IL, Internal Medicine, Research, Springfield, IL

P230. A Rare Cause of Gastrointestinal Obstruction: Bouveret’s Syndrome
Michael Harris, MD, Ravi Anapudi, MD, Prakash Viswanathan, MD, Gastroenterology and Hepatology, Stony Brook Medical Center, Stony Brook, NY

P231. Ascites of Unknown Origin: Using the HPVG to Diagnose Michael Harris, MD, Peter Ellis, MD, Gastroenterology and Hepatology, Stony Brook Medical Center, Stony Brook, NY

P232. Hyperammonemia in a Patient Without Liver Disease–Adult Onset Urea Cycle Disorder
Praveen Guturu, MD, Shaad Abdullah, MD, Internal Medicine, UTMB, Galveston, TX

P233. A Rare Cause of Hematemesis: Acute Gastric Volvulus
Praveen Guturu, MD, Advitya Malhotra, MD, Alex Hewlett, MD, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P234. A Case Report of Recurrent Squamous Cell Carcinoma of the Lung Presenting with Tracheo-Esophageal Fistula
Jason Gutman, MD, Asad Ullah, MD, Joel McFarland, MD, Division of Gastroenterology & Hepatology, University of Rochester, Rochester, NY

P235. A Case Report of Metastatic Breast Cancer to the Rectum Presenting 10 Years After Initial Diagnosis and Treatment
Jason Gutman, MD, Thalia Mayes, MD, Asad Ullah, MD, Linda Schiffrauer, MD, Division of Pathology, Division of Gastroenterology & Hepatology, University of Rochester, Rochester, NY
P236. An Interesting Case of Adenovirus Hepatitis in an Adult Cardiac Transplant Recipient
Anand Gupta, MD, Purva Kumari, MD, James Dougherty, MD, Michael Lawlor, MD, Joseph Cappa, MD, Kasturi Ranga, MD, Internal Medicine, University of Connecticut Health Center, Farmington, CT, Internal Medicine, Hartford Hospital, Hartford, CT

P237. An Unusual Case of Colitis: Drug Induced Inflammatory Bowel Disease
Anand Gupta, MD, Jeanette Smith, MD, John Scholes, MD, Martin Hoffman, MD, Michael Butensky, MD, Gastroenterology, Internal Medicine, University of Connecticut, Hartford, CT, Pathology, Gastroenterology, St. Francis Hospital, Hartford, CT

P238. Human Papilloma Virus (HPV) Associated Squamous Cell Carcinoma of the Esophagus (ESCC), a Case Report
Nissrin Ezmerli, MD, Naveen Gupta, MD, Nadim Haddad, MD, Georgetown University Hospital, Washington, DC

P239. The Role of Endoscopic Ultrasound in the Evaluation of Anal Cancer
Nissrin Ezmerli, MD, Naveen Gupta, MD, Aline Charabaty, MD, Haitham Charbel, MD, Division of Gastroenterology, Georgetown University Hospital, Washington, DC

Ihab El Haj, MD, MPH, Mohammad Hawchar, MD, Assaad Soweid, MD, Karim Maasri, MD, Ayman Tawil, MD, Kassem Barada, MD, Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA, Pathology & Laboratory Medicine, Internal Medicine-Division of Gastroenterology, Hepatology and Nutrition, American University of Beirut Medical Center, Beirut, Lebanon

P241. Rapidly Progressive Sclerosing Cholangitis Post-Surgery for Inflammatory Pancreatic Pseudotumor
Ihab El Haj, MD, MPH, Jawad Ahmad, MD, MRCP (UK), Adam Slivka, MD, PhD, Internal Medicine-Division of Gastroenterology, Hepatology and Nutrition, Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA

P242. Celecoxib-Induced Liver Failure Requiring Orthotopic Liver Transplantation
Ihab El Haj, MD, MPH, Shahid Malik, MD, Hany El-Wakeel, MD, Obaid Shaikh, MD, Eizaburo Sasatomi, MD, Hossam Kandiil, MD, PhD, Pathology-Division of Transplantation Pathology, Internal Medicine-Division of Gastroenterology, Hepatology and Nutrition, Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA

Hua Chen, MD, Joseph Hancock, MD, Diana Vega, MD, Grace Sun, FNP, Dixon Santana, MD, Gastroenterology, Texas Tech Health Sciences Center, Lubbock, TX, Surgery, Texas Tech, Lubbock, TX

P244. Intra-Hepatic Lithiasis: A Case Report and Review of Literature
Hua Chen, MD, Joseph Hancock, MD, Grace Sun, FNP, Gizelle Sanchez, MD, Gastroenterology, Texas Tech Health Sciences Center, Lubbock, TX

P245. A Case of Malignant Abdominal Pain
Rajeswari Anaparthy, MD, Aravind Sugumar, MD, MPH, Mayo Clinic, Rochester, MN

P246. Black Esophagus
Rajeswari Anaparthy, MD, Aravind Sugumar, MD, MPH, UTMB, Galveston, TX

P247. Pancreatic Burkitt’s Lymphoma Presenting as Recurrent Acute Pancreatitis in an HIV Patient: Early Diagnosis Using EUS/FNA
Shannon Chang, Lisa Casey, MD, Virendra Joshi, MD, Gastroenterology, Tulane University Health Sciences Center, New Orleans, LA

P248. Two Cases of Gastric Sarcoidosis Manifesting as Symptomatic Anemia: Endoscopic Clues
Shannon Chang, David Victor, MD, John Kalarickal, MD, Scott Pollack, MD, Nadret Copur, MD, Fredric Regenstein, MD, School of Medicine, Department of Gastroenterology, Tulane University, New Orleans, LA

P249. Pseudodiverticulosis of the Esophagus as a Result of HIV-Associated Ulcers
Simon Chan, MD, Parvez Mantry, MD, Department of Gastroenterology, University of Rochester Medical Center, Rochester, NY

P250. A Rare Case of Appendiceal Endometriosis
Simon Chan, MD, Jason Gutman, MD, Ashok Shah, MD, MACG, Department of Gastroenterology, University of Rochester Medical Center, Rochester, NY

P251. Parvovirus B19 Associated Hepatitis Complicated by Aplastic Anemia
Armi Behara, MD, MS, Joseph Ahn, MD, Nikunj Shah, MD, Shriram Jakate, MD, Allison Howard, MD, Stanley Cohen, MD, Pathology, Hepatology, Rush University Medical Center, Chicago, IL

P252. Focast Derived Duplication Cyst Presenting as Abdominal Pain
Armi Behara, MD, MS, Daniel Deziel, MD, Michael Brown, MD, General Surgery, Gastroenterology and Nutrition, Rush University Medical Center, Chicago, IL

P253. Lumbo Sacral Spinal Pathology (LSSP)—A Cause of Lower Abdominal Pain
Gopalan Badarinarayanan, MD, FACG, Gastroenterologist, AVB Gastro Care Clinic, Tirunelveli, India

P254. Screening Colonoscopy Performed by Gastroenterologists and a Nurse Practitioner: A Single Center Experience
★ 2008 ACG Presidential Poster Award Recipient
Michele Limoges-Gonzalez, RN, MSN, ANP, Amar Al-Juburi, MD, Nirmal Mann, MD, David Tseng, BS, Lorenzo Rossaro, MD, University of California, Davis, Folsom, CA

P255. The Impact of Mucosal Healing on the Economic Burden of Crohn’s Disease
D. Esser, MD, H. Waters, MBA, Centocor BV, Leiden, Netherlands, Centocor Ortho Biotech Services, LLC, Horsham, PA

P256. Primary Stomach and Colon Signet Ring Cell Carcinoma Immunohistochemical Staining Patterns Using CDX2, MUC2 and MUC6
Farzad Nowrouzadeh, MD, Robert Lawson, MD, Darren Keller, MD, Dan Albrecht, MD, Benjamin Rodriguez, MD, Andrea Snitchler, MD, Theodore Schafer, MD, Nancy Dow, MD, Jayde Kurland, MD, Department of Gastroenterology, Department of Internal Medicine, National Naval Medical Center, Bethesda, MD, Dept. of Internal Medicine, Naval Hospital, Pensacola, Pensacola, FL, Department of Gastroenterology, Dept. of Anatomic Pathology, DMS, Naval Hospital, San Diego, San Diego, CA, Division of Gastrointestinal Pathology, Armed Forces Institute of Pathology, Washington DC, Department of Internal Medicine, Director for Clinical Support Services, Naval Hospital, Portsmouth, Portsmouth, VA

P257. Infliximab Dosage Increase Rate in Patients with Crohn’s Disease
Scott Plevy, MD, Eric Wu, PhD, Andrew Yu, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC, Analysis Group, Inc., Boston, MA, Abbott Laboratories, Abbott Park, IL
P258. Resolution of Flare or Nonresponse in Patients with Crohn’s Disease Achieved in Most Adalimumab-Treated Patients without a Dosage Increase
Scott Plevy, MD, Stefan Schreiber, MD, Jean Fred Colombel, MD, Paul Pollack, MD, Jingdong Chao, PhD, Parvez Mulani, PhD, Division of Gastroenterology and Hepatology, University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC, Christian-Albrechts University, Kiel, Germany, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Abbott Laboratories, Parsippany, NJ

P259. Treatment of Clostridium difficile Infection in a Community-Based Cohort
Scott Aronson, MD, Patricia Kamerer, Darrell Pardi, MD, Miles and Shirley Fiterman Center for Digestive Diseases, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P260. Efficacy of Adalimumab for the Treatment of TNF-Antagonist-Naive Patients with Crohn’s Disease: Subanalysis of a Phase III Trial
Stephen Hanauer, MD, William Sandborn, MD, Paul Rutgeerts, MD, Jean Fred Colombel, MD, Jingdong Chao, PhD, Parvez Mulani, PhD, University of Chicago Medical Center, Chicago, IL, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN, University Hospital of Gasthuisberg, Leuven, Belgium, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Leuven, France, Abbott Laboratories, Abbott Park, IL

P261. Patient Acceptance and Convenience, and Efficacy of 1-Day Versus 2-Day (Split-Dose) Colonoscopy Bowel Preparation
Maqsood Khan, MD, Meredith Burns, BS, Harry Pictrowski, MS, Michael Brown, MD, FACC, Internal Medicine, West Suburban Medical Center, Oak Park, IL, Gastroenterology, Rush University Medical Center, Chicago, IL, Medicine, Loyola University Medical Center, Maywood, IL

P262. Cumulative Incidence of Gastroparesis in People with Type 1 and 2 Diabetes in the General Population
Rok Seon Choug, MD, G. Richard Locke, MD, Cathy Schleck, BS, Alan Zinsmeister, PhD, Nicholas Talley, MD, PhD, Enteric Neuroscience Program (ENSP), Division of Gastroenterology, Division of Biostatistics, Mayo Clinic, Rochester, MN

P263. Evaluation of Provider Adherence to Clinical Guidelines for Gastroprotection in Patients at Increased Risk of NSAID Associated GI Bleeding, in Response to Education Intervention
Ruben Acosta, MD, Rahim Remtulla, MD, Ryan Bell, MD, Brooks Cash, MD, Internal Medicine, Gastroenterology, National Naval Medical Center, Bethesda, MD

P264. Evidence for Enhanced Telomerase Activity in Barrett’s Esophagus with Dysplasia and Adenocarcinoma
Manish Arora, MD, Sudhir Dutta, MD, Nipun Merchant, MD, Stephen Meltzer, MD, Department of Internal Medicine, Division of Gastroenterology, The Johns Hopkins University School of Medicine/Sinai Hospital of Baltimore and University of Maryland School of Medicine, Baltimore, MD, Department of Surgery, Vanderbilt University Medical Center, Nashville, TN, Division of Gastroenterology, Departments of Medicine and Oncology, The Johns Hopkins University School of Medicine and Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD

P265. Risk Factors for Gastrointestinal Bleeding in Patients with Acute Coronary Syndrome
Ting-Hui Hsieh, MD, Po-Cheng Chu, MD, Xin-Yu Zhao, MD, Hsin-Ling Hsieh, PhD, Jiayi Mirchandani, MD, Kiranawal Iswara, MD, FACC, Jacob Shani, MD, Jianjun Li, MD, FACC, Scott Tenner, MD, MPH, FACC, Division of Gastroenterology, Department of Internal Medicine, Department of Internal Medicine, Maimonides Medical Center, Brooklyn, NY, Department of Economics, Northern Michigan University, Marquette, MI, Division of Cardiology, Department of Internal Medicine, Maimonides Medical Center, Brooklyn, NY

P266. The Access Trial: Adalimumab Improves Work Productivity in Patients with Crohn’s Disease
Edward Loftus, Jr., MD, David Binion, MD, Remo Panaccione, MD, Ju Li, PhD, Kevin McHugh, PhD, Benoit Guerette, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI, Medicine, University of Calgary, Calgary, AB, Canada, Abbott Laboratories, Parsippany, NJ

P267. Adalimumab Treatment Significantly Reduces Hospitalization Risk for TNF-Ant agonist-Naive Patients with Crohn’s Disease
Edward Loftus, Jr., MD, Brian Feagan, MD, Jean Fred Colombel, MD, Eric Wu, PhD, Andrew Yu, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Analysis Group, Inc., Boston, MA, Abbott Laboratories, Abbott Park, IL

P268. Meta-Analysis of Placebo Remission Rate for Patients with Moderately to Severely Active Crohn’s Disease
Edward Loftus, Jr., MD, Eric Wu, PhD, Scott Johnson, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Analysis Group, Inc., Boston, MA, Abbott Laboratories, Abbott Park, IL

P269. Health-Related Quality of Life in Patients with Crohn’s Disease Improves Rapidly and Significantly During Adalimumab Treatment
Edward Loftus, Jr., MD, Jean Fred Colombel, MD, Paul Pollack, MD, Sunil Majethia, PharmD, Naijun Chen, MS, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Abbott Laboratories, Parsippany, NJ

P270. A Prospective Evaluation of Same Day Bidirectional Endoscopy for Occult Bleeding
Amjad Mreyoud, MD, Albert Pahk, MD, Gennadiy Bakis, MD, Ognian Pomakov, MD, Matthew Baichi, MD, Shadih Mehboob, MD, Internal Medicine/Gastroenterology, VAMC / University at Buffalo, Buffalo, NY

P271. Adenoma Detection Rate, Pay-for-Performance, and Colonoscopy: Are Female Gastroenterologists at a Disadvantage?
Eugene Yen, MD, Laura Bianchi, MD, Michael Goldberg, MD, Eric Elton, MD, Hernant Roy, MD, Division of Gastroenterology, Evanston Northwestern Healthcare, Evanston, IL

P272. Changes in Awareness of Gastroesophageal Reflux Disease in Hispanic Adults: A Comparison of Survey Results from 2005 and 2008
Marta Illueca, MD, Joseph Crawley, MS, Astrazeneca LP, Wilmington, DE

P273. PPD Testing in Patients Starting Infliximab for Treatment of Inflammatory Bowel Disease
Melissa Minor, MD, Sanjay Ghimire, MD, Surya Singh, MD, Gastroenterology, General Internal Medicine, Gastroenterology, Brigham & Women’s Hospital, Boston, MA, D2/Hawkeye, Inc., Waltham, MA

P274. Adalimumab Maintenance Therapy is Associated with a Reduced Risk of Major Surgery
Stefan Schreiber, MD, Brian Feagan, MD, William Sandborn, MD, Jean Fred Colombel, MD, Kathleen Lomax, MD, Parvez Mulani, PhD, Jingdong Chao, PhD, First Department of Medicine, Christian-Albrechts University, Kiel, Germany, University of Western Ontario, London, ON, Canada, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Abbott Laboratories, Parsippany, NJ
P275.  Annual Direct and Indirect Cost of Illness in Employees with Irritable Bowel Syndrome Plus Constipation
Richard Brook, MS, MBA, Nathan Kleinman, PhD, Arthur Melkonian, MD, Robert Baran, PharmD, Retrospective Analysis, The JeStArx Group, Newfoundland, NU, Research Services, HCMS Group, Cheyenne, WY, Medical Outcomes Research, Takeda Global Research and Development Center, Inc., Deerfield, IL

P276.  Adalimumab Maintenance Therapy is Cost Effective for Maintaining Remission in Patients with Crohn's Disease
Brian Feagan, MD, Edward Loftus, MD, Scott Johnson, PhD, Eric Wu, PhD, Andrew Yu, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, University of Western Ontario, London, ON, Canada, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Analysis Group, Inc., Boston, MA, Abbott Laboratories, Abbott Park, IL

P277.  Estimation of Induction and Maintenance Costs of Infliximab, Adalimumab and Certolizumab Pegol in Managing Crohn's Disease
Brian Feagan, MD, Seng Tan, MD, Daniel Malone, PhD, Joaquin Hinojosa, MD, Martin Brown, MD, Robarts Clinical Trials, Robarts Research Institute, London, ON, Canada, Global Health Outcomes Research, UCB, Slough, United Kingdom, College of Pharmacy, University of Arizona, Tucson, AZ, Gastroenterology Unit, Hospital Sagunto, Valencia, Spain

P278.  Magnitude and Economic Impact of Inappropriate Use of Proton Pump Inhibitors for Treatment of Upper Gastrointestinal Disorders in the Ambulatory Care Setting
Joel Heidelbaugh, MD, Kathleen Goldberg, PharmD, John Inadomi, MD, Family Medicine, University of Michigan, Ann Arbor, MI, Veteran Affairs, VA Ann Arbor Healthcare System, Ann Arbor, MI, University of California, San Francisco, CA, San Francisco General Hospital, San Francisco, CA

INFLAMMATORY BOWEL DISEASE

P279.  Once-Daily 1.5-G Granulated Mesalamine is Effective and Safe in Maintenance of Remission in Mild-to-Moderate Ulcerative Colitis
Glenn Gordon, MD, Ronald Pruitt, MD, Mark Ringold, MD, Shahriar Sedghi, MD, Kunal Merchant, PhD, Audrey Shaw, PhD, James Yuan, PhD, Enoch Bortey, PhD, William Forbes, PharmD, Center for Digestive and Liver Diseases, Inc., Mexico, MO, Nashville Medical Research Institute and The Maria Nathanson Center at Saint Thomas Hospital, Nashville, TN, New River Research Institute, Christianburg, VA, Gastroenterology Associates of Central Georgia, LLC, Macon, GA, Salix Pharmaceuticals, Morrisville, NC

P280.  The Long-Term, 30 Months, Efficacy and Tolerability of Certolizumab Pegol Therapy for Crohn's Disease
William Sandborn, MD, Gary Lichtenstein, MD, Stefan Schreiber, MD, Brian Feagan, MD, Gastroenterology & Hepatology, Mayo Clinic, Rochester, MN, University of Pennsylvania School of Medicine, Philadelphia, PA, Hospital for General Internal Medicine, Christian-Albrechts University, Kiel, Germany, Robarts Research Institute, University of Western Ontario, London, ON, Canada

P281.  Safety of Delayed-Release Oral Mesalamine 4.8 G/Day (800 mg Tablet) Compared to 2.4 G/Day (400 mg Tablet) for Treatment of Active Ulcerative Colitis: Combined Analysis from Three Randomized, Double-Blind, Active-Controlled Trials
William Sandborn, MD, Mark Hosterman, PharmD, Mayo Clinic, Rochester, MN, Procter and Gamble Pharmaceuticals, Inc., Mason, OH

P282.  MMX™ Mesalamine Therapy for the Induction of Remission Beyond 8 Weeks: How Long Before Symptom Resolution?
William Sandborn, MD, FACC, Michael Kamm, MD, Gary Lichtenstein, MD, FACG, Michael Sumner, MD, Raymond Joseph, MD, Mayo Clinic, Rochester, MN, St. Vincent's Hospital, Melbourne, VIC, Australia, University of Pennsylvania, Philadelphia, PA, Shire Pharmaceuticals Inc., Wayne, PA

P283.  Certolizumab Pegol is Efficacious in Crohn's Disease Patients Who Have Failed Infliximab Regardless of Concomitant Therapy or Reason for Failure
Maria Abreu, MD, William Sandborn, MD, Geert D’Haens, MD, Jean-Frédéric Colombel, MD, Krassimir Mitchev, MD, Andreas Raedler, MD, Scott Lee, MD, Richard Fedorak, MD, Severine Vermeire, MD, Paul Rutgeerts, MD, Gastroenterology, University of Miami, Miami, FL, Gastroenterology & Hepatology, Mayo Clinic, Rochester, MN, Gastroenterology, Imelda General Hospital, Bonheiden, Belgium, Hepatogastroenterology, CHU Lille, Lille, France, Medical, UCB, Braine l’Alleud, Belgium, Gastroenterology, Asklepios Westklinikum, Hamburg, Germany, Gastroenterology, University of Washington School of Medicine, Seattle, WA, Gastroenterology, University of Alberta, Edmonton, AB, Canada, Gastroenterology, University Hospital Gasthuisberg, Leuven, Belgium

P284.  Increased Efficacy of Delayed-Release Mesalamine 4.8g/D (800 mg Tablet) Compared to 2.4g/D (400 mg Tablet) for Treatment of Moderately Active Ulcerative Colitis in Patients with a History of More Difficult to Treat Disease: Combined Analysis from Three Randomized, Double-Blind, Active-Controlled Trials
Stephen Hanauer, MD, David Ramsey, BS, William Sandborn, MD, University of Chicago Medical Center, Chicago, IL, Procter and Gamble Pharmaceuticals, Inc., Mason, OH, Mayo Clinic, Rochester, MN

P285.  Predicting Postoperative Mortality from Comorbidity Indices in Administrative Databases Among Inflammatory Bowel Disease Patients
★ 2008 ACG Presidential Poster Award Recipient
Gilaad Kaplan, MD, MPH, James Hubbard, MSc, Remo Panaccione, MD, Abdel Aziz Shaheen, MD, MPH, Geoffrey Nguyen, MD, PhD, Shane Devlin, MD, Robert Myers, MD, Department of Medicine, Division of Gastroenterology, University of Calgary, Calgary, AB, Canada

P286.  IBD Patients Who Leave Against Medical Advice: Predictors of the Patient Profile
Gilaad Kaplan, MD, MPH, James Hubbard, MSc, Remo Panaccione, MD, Christopher Ma, BSc, Geoffrey Nguyen, MD, PhD, Abdel Aziz Shaheen, MD, MPH, Shane Devlin, MD, Robert Myers, MD, Inflammatory Bowel Disease Clinic, Departments of Medicine and Community Health Sciences, University of Calgary, Calgary, AB, Canada, Medicine, University of Toronto, Toronto, ON, Canada

P287.  Predictive Value of Capsule Endoscopy for the Diagnosis of Crohn's Disease in a Symptomatic Population
★ 2008 ACG Presidential Poster Award Recipient
Melissa Tukey, MD, Douglas Pleskow, MD, Adam Cheifetz, MD, Alan Moss, MD, Gastroenterology, Internal Medicine, Beth Israel Deaconess Medical Center, Boston, MA

P288.  A Patient Support Program (PSP) to Enhance Medication Adherence and Quality-of-Life in Patients Prescribed Mesalamine for Ulcerative Colitis—a Pilot Study
Melissa Tukey, MD, Kenneth Falck, MD, Adam Cheifetz, MD, Alan Moss, MD, Gastroenterology, BIDMC / Harvard Medical School, Boston, MA

P289.  Pyloric Gland Metaplasia is Associated with a Change in Diagnosis to Crohn’s Disease in Ileal Pouch Anal Anastomosis (IPAA) Patients
Shuchi Agarwal, BA, Kleanthis Dendrinos, MD, Arthur Stucchi, PhD, Sandra Cerda, MD, Michael O’Brien, MD, MPH, Wayne Lamorte, MD, MPH, Timothy Heeren, PhD, James Becker, MD, Francis Farraye, MD, MSc, Pathology, Surgery, Gastroenterology, Boston University Medical Center, Boston, MA, Biostatistics, Epidemiology, Boston University School of Public Health, Boston, MA
P294. Long-term Safety of Certolizumab Pegol in Crohn’s Disease: Integrated Safety Findings on Serious Adverse Events of Special Interest
Jean-Frédéric Colombel, MD, Stefan Schreiber, MD, Paul Rutgeerts, MD, Jean-Frédéric Colombel, MD, Michael Kamm, MD, David Schwartz, MD, Remo Panaccione, MD, Du Li, PhD, Kathleen Lomax, MD, Paul Pollack, MD, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Imperial College, London, United Kingdom, Gastroenterology, Vanderbilt University Medical Center, Nashville, TN, Medicine, University of Calgary, Calgary, AB, Canada, Abbott Laboratories, Parsippany, NJ

P295. Natalizumab Use During Pregnancy
Umah Mahadevan, MD, Michelle Nazareth, MD, Lynda Cristiano, MD, Mariska Kooijmans, PhD, Gary Hogge, DVM, MS, PhD, UCSF Center for Colitis and Crohn’s Disease, University of California, San Francisco, San Francisco, CA, Drug Safety and Risk Management, Biogen Idec, Inc., Cambridge, MA, Medical Affairs, Elan Pharmaceuticals, Inc., South San Francisco, CA

P296. Oral Hygiene and Inflammatory Bowel Diseases
Shashideep Singhal, MD, Ashkan Farhadi, MD, MS, FACG, Majid Afsharzadeh, MD, Ali Keshavarzian, MD, FACG, Section of Gastroenterology and Nutrition, Rush University Medical Center, Chicago, IL, Rosalind Franklin University of Medicine and Science, Chicago, IL

P297. The Perspective of Patient with Organic and Functional Bowel Disease on Complementary and Alternative Medicine (CAM)
Shashideep Singhal, MD, Ashkan Farhadi, MD, MS, FACG, Majid Afsharzadeh, MD, Delia Dian, MD, Ali Keshavarzian, MD, FACG, Section of Gastroenterology and Nutrition, Rush University Medical Center, Chicago, IL, Rosalind Franklin University of Medicine and Science, Chicago, IL

P298. Incidence of Colorectal Cancer in Inflammatory Bowel Disease
Liyang Liu, MD, MPH, Fernando Veloyos, MD, MPH, James Allison, MD, Jonathan Terdiman, MD, James Lewis, MD, MSCE, Susan Hutfless, MPH, Lisa Herrington, PhD, Division of Research, Kaiser Foundation Research Institute, Oakland, CA, Department of Gastroenterology, University of California, San Francisco, San Francisco, CA, Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA

P299. Utilization of Cervical Testing Among Women with Inflammatory Bowel Disease
Millie Long, MD, MPH, Carol Porter, BS, Robert Sandler, MD, MPH, Michael Kappelman, MD, MPH, Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC, Cecil G. Sheps Center for Health Services Research, Pediatric Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC

P300. Impact of Anti-TNF-α Treatment Failure Complicating Long-term Maintenance Therapy for Crohn’s Disease
Lilani Perera, MD, Ashwin Ananthakrishnan, MD, MPH, Mazen Issa, MD, Susan Skaros, PA-C, Kathryn Lemke, PA-C, Anita Ward, RN, Josh Knox, PA-C, Yelena Zavdornova, MD, MBA, David Binion, MD, Division of Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI

P301. Perception and Reality: Patterns of Hospitalization, Surgery, Permanent Work Disability and Death in Crohn’s Disease Patients Requiring Anti-TNF-α Therapy
Lilani Perera, MD, Ashwin Ananthakrishnan, MD, MPH, Mazen Issa, MD, Susan Skaros, PA-C, Kathryn Lemke, PA-C, Josh Knox, PA-C, Anita Ward, RN, Yelena Zavdornova, MD, MBA, David Binion, MD, Division of Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI

P302. A Prototype System Dynamics Model to Communicate the Risk of Crohn’s Disease Complications to Patients and Their Predicted Treatment Response
Corey Siegel, MD, Lori Siegel, PhD, Bruce Sands, MD, Iwona Wrobel, MD, Ghassan Wahbeh, MD, Antonio Quiros, MD, Gary Silber, MD, Ron Bahar, MD, Maria Dubinsky, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH, Siegel Environmental Dynamics, LLC, Hanover, NH, Massachusetts General Hospital, Boston, MA, Alberta Children’s Hospital, Calgary, AB, Canada, Seattle Children’s Hospital, Seattle, WA, California Pacific Medical Center, San Francisco, CA, Phoenix Children’s Hospital, Phoenix, AZ, Cedars-Sinai Medical Center, Los Angeles, CA

P303. Adalimumab Effectiveness in TNF-antagonist-Naive Patients and in Infliximab Nonresponders with Crohn’s Disease: Results from the Care Study
Robert Lobberg, MD, Edouard Louis, MD, PhD, Walter Reinsch, MD, Martina Kron, MD, Anne Camez, MD, Paul Pollack, MD, IBD-Unit, Karolinska Institutet, Stockholm, Sweden, University of Liége, Liége, Belgium, Medical University of Vienna, Vienna, Austria, Abbott GmbH & Co. KG, Ludwigshafen, Germany, Abbott Laboratories, Parsippany, NJ

P304. Changing Patterns in the Use of Home Parenteral Nutrition in Crohn’s Disease Patients
Dawn Wiese, BS, Rene Rivera, MD, Douglas Seidner, MD, FACG, Razvi Razack, MD, Rocio Lopez, MS, Ezra Steiger, MD, Quantitative Health Services, General Surgery, Digestive Disease Center, Cleveland Clinic Lerner College of Medicine, Cleveland Clinic, Cleveland, OH, Center for Human Nutrition, Vanderbilt University Medical Center, Nashville, TN, Internal Medicine, University of Medicine and Dentistry of New Jersey, Newark, NJ
P305. The Effect of Delayed Diagnosis of Inflammatory Bowel Disease on Disease Management and Course

Ugonna Iruku, MD, MHS, Brian Bosworth, MD, Ellen Scherl, MD, FACP, College of Physicians and Surgeons, Columbia University, New York, NY, Weill Medical College of Cornell University, New York, NY

P306. Early and Sustained Efficacy of Delayed-Release Oral Mesalamine in Moderately Active Ulcerative Colitis Patients: Combined Results from the Ascend I, II, & III Trials

Gary Lichtenstein, MD, David Ramsey, BS, Edward Lofts, MD, Hospital of the University of Pennsylvania, Philadelphia, PA, Procter & Gamble Pharmaceuticals, Inc., Mason, OH, Mayo Clinic, Rochester, MN

P307. The Clinical Value of the Terminal Ileum Biopsy: A Nation-Wide Clinico-Pathologic Analysis

M. Saboorian, MD, Christopher Schuler, MD, Kevin Stuckhoff, MS, Robert Genta, MD, Caris Diagnostics, Irving, TX

P308. Crohn's Disease is Associated with Restless Legs Syndrome: A New Extraintestinal Manifestation

Leonard Weinstock, MD, Brian Bosworth, MD, Ellen Scherl, MD, Ellen Li, MD, Melissa Munsell, MD, Gerard Mullin, MD, Arthur Walters, MD, Stephen Dunlay, MD, Gastroenterology, Specialists in Gastroenterology, St. Louis, MO, Gastroenterology, Weill Cornell Medical Center, New York, NY, Gastroenterology, Washington University School of Medicine, St. Louis, MO, Gastroenterology, Johns Hopkins University School of Medicine, Baltimore, MD, NJ Neuroscience Institute at JFK Medical Center, Seton Hall University School of Graduate Medical Education, Edison, NJ, Neurology, Washington University School of Medicine, St. Louis, MO

P309. Outcomes After Acute Severe Ulcerative Colitis: Ten-Year Single-Center Experience

Steven Ingle, MD, Edward Lofts, MD, William Harmsen, MS, Alan Zinsmeister, PhD, William Sandborn, MD, MileBiostatistics, Miles & Shirley Fiterman Center for Digestive Diseases, Mayo Clinic, Rochester, MN

P310. Adalimumab is Effective in Patients with Fistulizing Crohn's Disease Who Were Primary Nonresponders to Infliximab Treatment

Simon Lichtiger, MD, David Binion, MD, Douglas Wolf, MD, Daniel Present, MD, Kathleen Lomax, MD, Shuvobrata Rafiq, MA, Fred Holdbrook, PhD, Gastroenterology, Mount Sinai Medical Center, New York, NY, Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI, Atlanta Gastroenterology Associates, Atlanta, GA, Internal Medicine, Mount Sinai Medical Center, New York, NY, Abbott Laboratories, Parsippany, NJ

FUNCTIONAL BOWEL DISORDERS

P311. Efficacy of Fiber in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Nicholas Talley, MD, PhD, Brennan Spiegel, MD, Amy Fox-Orenstein, DO, Lawrence Schiller, MD, Eamonn Quigley, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Department of Medicine, Mayo Clinic Florida, Jacksonville, FL, VA Greater Los Angeles Healthcare System; David Geffen School of Medicine at UCLA, UCLA School of Public Health, UCLA/VA Center for Outcomes Research and Education (CORe), Los Angeles, CA, Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN, Digestive Health Associates of Texas, Baylor University Medical Center, Dallas, TX, Department of Medicine, Cork University Hospital, Cork, Ireland

P312. Efficacy of Antidepressants in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Nicholas Talley, MD, PhD, Philip Schoenfeld, MD, Eamonn Quigley, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Department of Medicine, Mayo Clinic Florida, Jacksonville, FL, Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI, Department of Medicine, Cork University Hospital, Cork, Ireland

P313. Efficacy of Psychological Therapies in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Nicholas Talley, MD, PhD, Philip Schoenfeld, MD, Eamonn Quigley, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Department of Medicine, Mayo Clinic Florida, Jacksonville, FL, Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI, Department of Medicine, Cork University Hospital, Cork, Ireland

P314. Efficacy of SHT3-Antagonists in Non-Constipation Predominant Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Lawrence Brandt, MD, Amy Fox-Orenstein, DO, William Chey, MD, Philip Schoenfeld, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Division of Gastroenterology, Montefiore Medical Center, New York, NY, Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN, Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI

P315. Efficacy of SHT4-Agonists in Non-Diarrhea Predominant Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Lawrence Brandt, MD, Amy Fox-Orenstein, DO, William Chey, MD, Philip Schoenfeld, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Division of Gastroenterology, Montefiore Medical Center, New York, NY, Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN, Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI

P316. Efficacy of Antispasmodics and Peppermint Oil in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, Nicholas Talley, MD, PhD, Brennan Spiegel, MD, Amy Fox-Orenstein, DO, Lawrence Schiller, MD, Eamonn Quigley, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Department of Medicine, Mayo Clinic Florida, Jacksonville, FL, VA Greater Los Angeles Healthcare System; David Geffen School of Medicine at UCLA, UCLA School of Public Health, UCLA/VA Center for Outcomes Research and Education (CORe), Los Angeles, CA, Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN, Digestive Health Associates of Texas, Baylor University Medical Center, Dallas, TX, Department of Medicine, Cork University Hospital, Cork, Ireland

P317. Utility of Diagnostic Tests for Celiac Disease in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

Alexander Ford, MD, William Chey, MD, Nicholas Talley, MD, PhD, Ashish Malhotra, MD, Brennan Spiegel, MD, Paul Moayyedi, MD, Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada, Division of Gastroenterology, Mayo Clinic Florida, Jacksonville, FL, VA Greater Los Angeles Healthcare System; David Geffen School of Medicine at UCLA, UCLA School of Public Health, UCLA/VA Center for Outcomes Research and Education (CORe), Los Angeles, CA
P318. Expressive Writing as a Therapeutic Modality in Irritable Bowel Syndrome (IBS)
Albena Haipert, MD, Abha Verma, BA, Gastroenterology, Boston University Medical Center, Boston, MA

P319. Efficacy of Long Term Treatment Regimens on Cyclic Vomiting Syndrome in Adults
Reza Hejazi, MD, Teri Lavenbarg, RN, Savio Reddymasu, MD, Per-
Syndrome in Adults
nilla Foran, LPN, Richard McCallum, MD, FACP, FACC, Center for Gastrointestinal Nerve and Muscle Function and GI Motility Division, Department of Medicine, Kansas University Medical Center, Kansas City, KS

P320. Gastric Emptying Patterns in Cyclic Vomiting Syndrome in Adults
Reza Hejazi, MD, Pavan Saridena, MD, Teri Lavenbarg, RN, Richard McCallum, MD, FACP, FACC, Center for GI Nerve & Muscle Function and GI Motility Division, Department of Medicine, Kansas University Medical Center, Kansas City, KS, Gastroenterology, Bridgeport Hospital-

P321. Caucasian IBS Patients Have Higher Prevalence of Prior Traveler’s Diarrhea as Compared to African Americans
Anil Minocha, MD, FACG, William Johnson, PhD, William Wigon-

P322. Sexual Abuse, Physical Abuse and General Health Issues Associated with IBS Patients in a Multiethnic Population: Comparison Between African American and Caucasian American Patients
Anil Minocha, MD, FACG, William Johnson, PhD, William Wiggins, MD, Medical Service, VA Medical Center, Shreveport, LA, University of Mississippi Medical Center, Jackson, MS

P323. Investigation of Colonic and Rectal Sensory Properties and Compliance and Its Reproducibility in Humans
Satish Rao, MD, PhD, Jessica Paulson, BS, Braden Kuo, MD, Richard McCallum, MD, Michael Sitrin, MD, William Chey, MD, Jeffrey Lackner, PsyD, John Semler, PhD, Greg Wilding, PhD, Henry Parkman, MD, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA

P324. Relationship Between the Colonic Transit of Wireless Capsule (Smartpill®) and Radio Opaque Markers in Constipation
Satish Rao, MD, PhD, Jessica Paulson, BS, Braden Kuo, MD, Richard McCallum, MD, Michael Sitrin, MD, William Chey, MD, Jeffrey Lackner, PsyD, John Semler, PhD, Greg Wilding, PhD, Henry Parkman, MD, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA, Gastroenterology Unit, Massachusetts General Hospital, Boston, MA, Center for GI Nerve & Muscle Function & GI Motility, University of Kansas Medical Center, Kansas City, KS, Internal Medicine, University of Michigan, Ann Arbor, MI, Medicine, University of Buffalo School of Medicine, SUNY at Buffalo, Buffalo, NY, The Smartpill Corporation, Buffalo, NY, Biostatistics, SUNY at Buffalo, Buffalo, NY, Medicine, Temple University School of Medi-

P325. A Study on the Association Between Self-Reported Functional Gastrointestinal Symptoms and Travelers’ Diarrhea Among U.S. Troops Deployed to Southwest Asia and the Middle East
Mark Riddle, MD, DPh, Brooks Cash, MD, FACC, John Sanders, MD, MPH&TM, Shannon Putnam, PhD, Adam Armstrong, DO, MSPH, David Tribble, MD, DPh, Enteric Diseases Department, Na-

P326. Functional Bowel Symptoms After an Episode of Travelers’ Diarrhea Among U.S. Military Personnel Returning from Deployment to Egypt and Turkey
Mark Riddle, MD, DPh, Carey Schlett, MPH, David Tribble, MD, DPh, Marshall Monteville, PhD, Adam Armstrong, DO, MSPH, John Sanders, MD, MPH&TM, Enteric Diseases Department, Naval Medical Research Center, Silver Spring, MD, Uniformed Services University of the Health Sciences, Bethesda, MD, Navy and Marine Corps Public Health Center, Norfolk, VA, Naval Medical Research Unit No. 3, Cairo, Egypt, Naval Medical Research Center Detach-

P327. Rome Criteria for Irritable Bowel Syndrome (IBS) Should Be a Quantitative Trait and Not a Qualitative Trait
Yuri Saito-Loftus, MD, MPH, Ann Almazar-Elder, BS, Joseph Larson, BS, Elizabeth Atkinson, MS, Nicholas Talley, MD, PhD, Department of Internal Medicine, Department of Health Sciences Research, Division of Biostatistics, Enteric Neuroscience Program, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P328. Irritable Bowel Syndrome (IBS) is Not a Major Gene, Mendelian Disorder
Yuri Saito-Loftus, MD, MPH, Joseph Larson, BS, Elizabeth Atkinson, MS, Brooke Fridley, PhD, Nicholas Talley, MD, PhD, Department of Internal Medicine, Department of Health Sciences Research, Division of Biostatistics, Enteric Neuroscience Program, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

ENDOSCOPY
P329. The Fujinon Intelligent Color Enhancement System (FICE): A New Computed Virtual Chromoendoscopy Tool for Diagnosing Colorectal Neoplasia During Colonoscopy
Anna Buchner, MD, PhD, Marwan Ghabrial, MD, Murli Krishna, MD, Herbert Wolf, MD, Michael Wallace, MD, MPH, Pathology, Gastroenterology, Mayo Clinic, Jacksonville, FL

P330. Are Four Eyes Better than Two? Effect of Trainee Participation in Colonoscopy on Adenoma Detection Rate. A Retrospective Study of 1273 Patients
Anna Buchner, MD, PhD, Marwan Ghabrial, MD, Seth Gross, MD, Anthony Sclore, MD, Kanwar Gill, MD, Michael Picco, MD, PhD, David Loeb, MD, Herbert Wolf, MD, Michael Wallace, MD, MPH, Gastroenterology, Mayo Clinic, Jacksonville, FL

P331. Magnetic Resonance Imaging (MRI) Compatibility of Endoclips
Kanwar Gill, MD, Robert Pooley, PhD, Michael Wallace, MD, MPH, Gastroenterology, Mayo Clinic, Jacksonville, FL, Radiology, Mayo Clinic, Jacksonville, FL

P332. Endosonographic Morphological Features for the Identification of Mediastinal Lymph Node Metastasis in Lung Cancer
Kanwar Gill, MD, Marwan Ghabrial, MD, Laith Jamil, MD, Seth Gross, MD, Massimo Raimondo, MD, Timothy Woodward, MD, Brenda Hoffman, MD, Robert Hawes, MD, Joseph Romagnuolo, MD, Michael Wallace, MD, MPH, Gastroenterology, Mayo Clinic, Jackson-

Aaron Bartoo, PhD, Silvia Santos, MS, Jerome Mertz, PhD, Satish Singh, MD, Medicine-Gastroenterology, Boston University School of Medicine, Boston, MA, Biomedical Engineering, Boston University College of Engineering, Boston, MA
P334. Risk of Clinically Significant Postpolypectomy Hemorrhage in Patients Taking Clopidogrel

Thomas Judge, MD, Niranjani Patel, MD, Steven Peikin, MD, FACP, Adam Eilant, MD, FACC, Christopher Deitch, MD, Hunter Krystal, MBA, Dept. of Biostatistics, Dept. of Gastroenterology, St. Luke's Roosevelt Hospital Center, New York, NY

P335. Poster Withdrawn

P336. Endoscopic Full-Thickness Plication for the Treatment of Gastroesophageal Reflux Disease Using Multiple Plicator Implants: 12-Month Multi-Center Study Results

Daniel von Renteln, MD, Karl-Hermann Fuchs, MD, Michael Philipp, MD, Susanne Raczynski, MD, Wolfram Breithaupt, MD, Ingolf Schiefke, MD, Karel Caca, MD, Horst Neuhaus, MD, Department of Gastroenterology, Klinikum Ludwigsburg, Ludwigsburg, Germany, Department of Gastroenterology, University of Leipzig, Leipzig, Germany, Department of Surgery, Markuskrankenhaus Frankfurt, Frankfurt, Germany, Medizinische Klinik, EVK Duesseldorf, Duesseldorf, Germany

P337. The Endoscopic Plicator Procedure for GERD Using Two Full-Thickness Plications: 18-Month Pilot Study Results

Daniel von Renteln, MD, Ulrike Brey, MD, Bettina Rieckten, MD, MPH, Karel Caca, MD, Department of Gastroenterology, Klinikum Ludwigsburg, Ludwigsburg, Germany

P338. Appropriateness of the 'Straight to Test' Gastroscopy Requests for Patients with Suspected Gastrointestinal Cancers

Irfan Amin, MBBS, Pamela Steer, RN, Ravi Machotra, MBBS, FRCGP, Gastroenterology, Milton Keynes General Hospital, Milton Keynes, United Kingdom

P339. Evaluation of Open Access Colonoscopy in Ontario; An Assessment of Its Prevalence and Patient, Physician and Institutional Determinants of Its Use

Shane Hadlock, MD, Lawrence Paszat, MD, MS, FRCPC, Linda Rabeneck, MD, MPH, FRCPC, Andrew Witoson, MS, Rinku Sudharth, PhD, Jill Tinnmouth, MD, PhD, FRCPC, University of Toronto, Toronto, ON, Canada, Institute for Clinical Evaluative Sciences, Toronto, ON, Canada

P340. A Prospective Study Evaluating Colonoscopy Complications

Jennifer Leigh, MD, MPH, Mitchel Hoffman, MD, MPH, Martin Max, MD, James Roa, DO, Angelo Fernandes, MD, Terri Buchanan, BS, Gastroenterology, Bay Pines VA Health System, St. Petersburg, FL, USF College of Medicine, Tampa, FL

P341. Endoscopic Necrosectomy in the Management of Symptomatic Walled Off Pancreatic Necrosis

Udayakumar Navaneethan, MD, Mayar Ali Mohajer, MD, Nathan Schmulewitz, MD, Shailendra Chauhan, MD, Syed Ahmad, MD, Joseph Palascak, MD, Andres Gelrud, MD, MMSc, Surgery, Internal Medicine, University of Cincinnati College of Medicine, Cincinnati, OH

P342. Affect of Advancing Technology on the Accuracy in Nodal Staging of Rectal Cancers with Endoscopic Ultrasound: A Meta-Analysis and Systematic Review

Srinivas Puli, MD, Jyotsna BK Reddy, MD, Matthew Bechtold, MD, Abhishek Choudhary, MD, Farzana Rashid, MD,MAINor Antillo, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO

P343. Developing an Ulcerative Colitis Endoscopic Index of Severity (UCEIS): Results of Pilot Phase

William Sandborn, MD, Simon Travis, DPhil, FRCP, UCEIS Study Group, MD, Dan Schnell, PhD, Piotr Krzeski, MD, Christopher Bernhardt, PhD, Mayo Clinic, Rochester, MN, John Radelica Hospital, Oxford, United Kingdom, Procter & Gamble Pharmaceuticals, Inc., Mason, OH

P344. Extracorporeal Shock Wave Lithotripsy (ESWL) with ERCP for Management of Chronic Pancreatitis with Pancreatic Duct Calculi

Mihir Wagh, MD, Lee McHenry, MD, James Watkins, MD, Evan Fogel, MD, Stuart Sherman, MD, Glen Lehman, MD, Division of Gastroenterology, University of Florida, Gainesville, FL, Division of Gastroenterology, Indiana University Medical Center, Indianapolis, IN

P345. Oral Administration of Edible Oil Prior to ERCP: Effect on Selective Biliary Cannulation

Mihir Wagh, MD, James Watkins, MD, Evan Fogel, MD, Lee McHenry, MD, Stuart Sherman, MD, Glen Lehman, MD, Division of Gastroenterology, University of Florida, Gainesville, FL, Division of Gastroenterology, Indiana University Medical Center, Indianapolis, IN

P346. High Resolution Colonoscopy with Narrow-Band Imaging Capability Does Not Improve Polyp Detection Rates Compared with Standard Resolution Colonoscopy

Tolga Erim, DO, John Rivas, MD, Evelio Velis, MD, MS, Fernando Castro, MD, Department of Gastroenterology, Cleveland Clinic Florida, Weston, FL, Health Services Administration Master Program, Barry University, Miami Shores, FL

P347. Does Lubiprostone Decrease Gastric and Small Bowel Transit Time and Improve Visualization of Small Bowel with Capsule Endoscopy?

Bennett Hooks, MD, Travis Rutland, MD, Jack Di Palma, MD, Gastroenterology, University of South Alabama College of Medicine, Mobile, AL

P348. Stenting for Malignant Colonic Obstruction: A Comparison of Colon and Extracolonic Malignancy

Rajesh Keswani, MD, Riad Azar, MD, Steven Edmundowicz, MD, Qin Zhang, MD, Tarek Ammar, MD, Sreenivasa Jonnalagadda, MD, Biostatistics, Gastroenterology, Washington University, St. Louis, MO

P349. Feasibility of Single-Balloon Enteroscopy for Evaluation of the Small Bowel: High Diagnostic Value and Easier Handling Compared to Double-Balloon Enteroscopy

Andreas Leodolter, MD, Dietmar Zielinski, MD, Joachim Labenz, MD, Medical Department, Evangelisches Jung-Stilling Hospital, Siegen, Germany

P350. Comparative Efficacy of Two Low-Volume (2L) Polyethylene Glycol (PEG) Electrolyte Lavage Solutions for Bowel Cleansing Prior to Colonoscopy: A Pilot Study

Shefali Sanyal, BA, Lawrence Cohen, MD, Caroline von Althann, BA, Andrew Dikman, BA, Kenneth Miller, MD, James Allenberg, MD, Medicine, Mount Sinai School of Medicine, New York, NY

P351. From the Urinary Tract to Gastrointestinal Tract—Cost Experience—a Pilot Study

Ravindra Satarasinghe, MD, Ravi Jayawardana, MBBS, Upul Wickramasingha, MBBS, Ahamed Riyaaz, MBBS, Anura Perera, Endoscopy Unit, Department of Medicine, Ward 6, Sri Jayewardenepura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka
P352. Psychomotor Recovery After Endoscopic Procedures Using a Computer-Assisted Personalized Sedation System to Administer Propofol or Standard of Care Sedation: Implications for Care Efficiency
Michael Weinstein, MD, Robert Hardi, MD, Daniel Pambianco, MD, John Vargo, MD, MPP, Metropolitan Gastroenterology Group, Chevy Chase, MD, Charlottesville Medical Research, Charlottesville, VA, Department of Gastroenterology, The Cleveland Clinic Foundation, Cleveland, OH

P353. Endosonographic (EUS) Diagnosis of Foregut Duplication Cysts: Just Say No to the Needle!
Rekha Cheruvattath, MD, Dennis Go, MD, David Diehl, MD, Radiology, Gastroenterology, Geisinger Medical Center, Danville, PA

P354. PA, a Novel Combination of Delayed Release (DR) Aspirin (ASA) and Immediate-Release (IR) Omeprazole, is Associated with a Decreased Risk of Gastroduodenal Mucosal Injury: Pooled Data from Three Phase I, 4-Week Endoscopic Studies
John Fort, MD, Eric Orelman, PhD, Cemal Unal, PhD, John Platecheka, PharmD, Pozen, Inc, Chapel Hill, NC

P355. Radial EUS vs. Linear EUS in Evaluation of Mediastinal Lymph Nodes in Lung Cancer Staging: A Prospective Double Blind Trial
Laith Jamil, MD, Kenwar Gill, MD, Seth Gross, MD, Julia Crook, PhD, Timothy Woodward, MD, Massimo Raimondo, MD, Michael Wallace, MD, MPH, Biostatistics, Gastroenterology, Mayo Clinic, Jacksonville, FL

P356. Understanding of Clear Liquid Instructions as Part of Colonoscopy Preparation
Shefali Paranjape, MD, Nicholas Nickl, MD, Lisbeth Selby, MD, Gastroenterology, University of Kentucky, Lexington, KY

P357. Gastrointestinal Symptoms are More Common in Young School Aged Children with Sleep Disturbances
Sumana Moole, MD, Ravi Singareddy, MD, Susan Calhoun, PhD, Alexandros Vgontzas, MD, Edward Bixler, PhD, Division of Gastroenterology, H045 Hershey Medical Center, Hershey, PA, Sleep Research & Treatment Center, Penn State College of Medicine, Hershey, PA

P358. Disease Duration Does Not Affect Outcome Following Infliximab in Children with Crohn’s Disease
Jeffrey Hyams, MD, W. Crandall, MD, S. Kugathasan, MD, A. Griffiths, MD, M. Blank, PhD, G. Lang, PhD, R. Heuschkel, G. Veereman-Wauters, MD, R. Baldassano, MD, Connecticut Children’s Medical Center, Hartford, CT, Columbus Children’s Hospital, Columbus, OH, Medical College of Wisconsin, Milwaukee, WI, The Hospital for Sick Children, Toronto, ON, Canada, Centocor Research and Development, Inc., Malvern, PA, Royal Free Hospital, London, United Kingdom, Queen Paola Children’s Hospital, Antwerp, Belgium, Children’s Hospital of Philadelphia, Philadelphia, PA

P359. Clinical Outcomes of Children with IBD with Unfavorable Thiopurine Metabolism: Effect of Allopurinol
Nina Candela, MD, Elizaveta Iofil, MD, Libia Moy, MD, Toba Weinstein, MD, Jeremiah Levine, MD, James Markowitz, MD, Pediatric Gastroenterology and Nutrition, Schneider Children’s Hospital, North Shore-LIJ Health System, New Hyde Park, NY

P360. Overweight Children and Parental Perceptions
Rona Levy, MSW, PhD, MPH, Nancy Sherwood, PhD, Shelby Langer, PhD, Robert Reid, MD, PhD, Sheri Ballard, BA, School of Social Work, University of Washington, Seattle, WA, Epidemiology, University of Minnesota, Minneapolis, MN, Preventive Care, Group Health, Seattle, WA

P361. Pharmacokinetics of Two Dose Levels of Pantoprazole Sodium Delayed-Release Granules for Oral Suspension in Infants Aged 1 Through 11 Months with a Presumed Diagnosis of GERD
Brinda Tammar, PhD, Janice Sullivan, MD, Margaret Ann Springer, MD, Jaroslaw Kerkus, MD, Natalie Rath, BS, RN, Cai Feng Fu, MS, Xu Meng, PhD, Mary Maguire, PharmD, Gail Comer, MD, FACG, Wyeth Research, Collegeville, PA, Kosair Charities Pediatric Clinical Research Unit, University of Louisville, Louisville, KY, Louisiana State University Health Sciences Center, Shreveport, LA, Department of Gastroenterology, Hepatology and Immunology, The Children’s Memorial Health Institute, Warsaw, Poland

P362. Pharmacokinetics of Single and Multiple Doses of Pantoprazole in Adolescents with GERD
Brinda Tammar, PhD, Robert Ward, MD, Gregory Kearns, PharmD, PhD, Molly O’Gorman, MD, Laura James, MD, Mitchell Katz, MD, Mary Maguire, PharmD, Natalie Rath, BS, RN, Xu Meng, PhD, Gail Comer, MD, FACG, Wyeth Research, Collegeville, PA, Pediatric Pharmacology Program, University of Utah, Salt Lake City, UT, Children’s Mercy Hospitals and Clinics and the University of Missouri, Kansas City, KS, University of Utah Health Sciences Center, Salt Lake City, UT, Arkansas Children’s Hospital Research Institute and the University of Arkansas for Medical Sciences, Little Rock, AR, Division of Pediatric Gastroenterology, Children’s Hospital of Orange County, Orange, CA

P363. Pharmacokinetics of Two Dose Levels of Pantoprazole Sodium Granules and Tablets in Children Aged 1 Through 11 Years with Endoscopically Proven GERD
Brinda Tammar, PhD, Kim Adcock, PharmD, Gregory Kearns, PharmD, PhD, Robert Ward, MD, John Giblin, MD, FAAP, Carol Shaheen, BSN, Xu Meng, PhD, Mary Maguire, PharmD, Gail Comer, MD, FACG, Wyeth Research, Collegeville, PA, University of Mississippi Medical Center, Jackson, MS, Children’s Mercy Hospitals and Clinics and the University of Missouri, Kansas City, MO, University of Utah Primary Children’s Medical Center, Salt Lake City, UT, Clinical Study Centers, LLC, Little Rock, AR

P364. Colon Cancer Not Prevented by Colonoscopy
Rohit Gupta, MS, Brian Brownlow, BS, Robert Domnick, BS, Gavin Harewood, MD, Michael Steinbach, PhD, Vipin Kumar, PhD, Piet de Groen, MD, Internal Medicine & Gastroenterology, Mayo Clinic, Rochester, MN, Computer Science and Engineering, University of Minnesota, Minneapolis, MN, Information Technology, Mayo Clinic, Rochester, MN, Gastroenterology, Beaumont Hospital, Dublin, Ireland

P365. Poster Withdrawn

P366. The Long-Term Use of Statins is Associated with a Decreased Incidence of Advanced Adenomatous Colon Polyps
All Siddiqui, MD, Sandeep Pantone, MD, Aamir Mahgoub, MD, Stuart Specchler, MD, Hector Nazario, MD, Internal Medicine, UT Southwestern Medical Center, Dallas, TX, Internal Medicine, Dallas Veteran’s Affairs Medical Center, Dallas, TX
P373. **Induction of C-Terminal SRC Kinase (CSK) Activity as a School, Norfolk, VA**
Danilo Pilocarpio, DO, Gastroenterology, Eastern Virginia Medical School, Boston University Medical Center, Boston, MA

**Cleanliness During Colonoscopy?**
P374. **Just How Adequate is the Term “Adequate” to Describe Bowel Cleanliness During Colonoscopy?**
Dhananjay Kunte, PhD, Hemant Roy, MD, Research Institute, Evanston Northwestern Healthcare, Evanston, IL

**Modulation by PRL-3**
Raj Majithia, MD, David Johnson, MD, FACG, Dana Freeman, MD, Danilo Piloarcio, DO, Gastroenterology, Eastern Virginia Medical School, Norfolk, VA

**Stage Disease in Virginia and the U.S.**
P371. **An Updated Look at Colorectal Carcinoma Incidence and Stage Disease in Virginia and the U.S.**
★ 2008 ACG Presidential Poster Award Recipient
Raj Majithia, MD, David Johnson, MD, FACG, Dana Freeman, MD, Danilo Piloarcio, DO, Gastroenterology, Eastern Virginia Medical School, Norfolk, VA

★ 2008 ACG Presidential Poster Award Recipient

**Poster Presentations – Monday, October 6, 10:30 am - 4:00 pm**

**MONDAY, OCTOBER 6, 2008**

**ESOPHAGUS**

P375. **Intragastric (IG) pH Control in Hispanic Adults with Symptomatic Gastroesophageal Reflux Disease (GERD): Comparator Trial of Esomeprazole, Lansoprazole, and Pantoprazole**
Douglas Morgan, MD, John Pandolfino, MD, Philip Katz, MD, Jay Goldstein, MD, Peter Barker, PhD, Marta Illueca, MD, University of North Carolina School of Medicine, Chapel Hill, NC, Northwestern University, Chicago, IL, Albert Einstein Medical Center, Philadelphia, PA, University of Illinois, Chicago, IL, AstraZeneca LP, Wilmington, DE

**Characteristics of Patients with Dysplastic Barrett’s Esophagus Failing Radiofrequency Ablation**
Ganapathy Prasad, MD, MS, Shalini Achra, MBBS, Yuvnish Bhardwaj, MBBS, Navtej Buttar, MD, Rami Badredline, MD, Lori Lutzke, LPN, Lynn Borkenhagen, RN FNP, Kelly Dunagan, LPN, Kenneth Wang, MD, Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P377. **Impact of Baseline LA Grade on Healing of Erosive Esophagitis (EE) Following Treatment with TAK-390MR, a Proton Pump Inhibitor (PPI) with a Novel Dual Delayed Release Formulation, Compared with Lansoprazole (LAN)**
Nicholas Shaheen, MD, MPH, David Peura, MD, M. Claudia Perez, MD, Betsy Pilmer, RN, BSN, Galen Witt, MS, Prateek Sharma, MD, Division of Gastroenterology and Hepatology, University of North Carolina School of Medicine, Chapel Hill, NC, Division of Gastroenterology and Hepatology, University of Virginia Health System, Charlottesville, VA, Research & Development, TAP Pharmaceutical Products Inc., Lake Forest, IL, Division of Gastroenterology and Hepatology, University of Kansas School of Medicine, Kansas City, KS

**Gender-Related Variation in Lower Esophageal Sphincter Pressure and Esophageal Body Function**
★ 2008 ACG/Radhika Srinivasan Gender-Based Research Award
Kenneth Vega, MD, Tracy Langford-Legg, RN, M. Mazen Jamal, Marcelo Vela, MD, MSCR, Donald Castell, MD, Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC, Gastroenterology, University Hospital of Zurich, Zurich, Switzerland

**Evaluation of Symptom Association with GERD: Is There Consensus Among the Experts?**
★ 2008 ACG Presidential Poster Award Recipient
Neeraj Sharma, MD, Amrit Agrawal, MD, Radu Tutuian, MD, Marcelo Vela, MD, MSCR, Donald Castell, MD, Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC, Gastroenterology, University Hospital of Zurich, Zurich, Switzerland

**Diet Restriction Reduces Day-to-Day Variability in Acid Reflux Patterns Using the Bravo pH Monitoring System**
Emmanuelle Abate, MD, John Lipham, MD, Jessica Leers, MD, Shahin Ayazi, MD, Arzu Oezcelik, MD, Jeffrey Hagen, MD, Farzaneh Banki, MD, Steven DeMeester, MD, Tom DeMeester, MD, Surgery, University of Southern California, Los Angeles, CA

**The Acid and the Pain: Diagnosing and Treating GERD**
Jonathan Aron, MD, MA, Armar Al-Juburi, MD, Gastroenterology, Internal Medicine, University of California Davis Medical Center, Sacramento, CA

**Esophageal Thickness in Normal Esophagus: Endoscopic Esophageal Ultrasound (EUS) Assessment**
Kanwar Gill, MD, Marwan Ghabril, MD, Laith Jamil, MD, Seth Gross, MD, Timothy Woodward, MD, Michael Wallace, MD, Herbert Wollson, MD, Sami Achem, MD, Massimo Raimondo, MD, Gastroenterology, Mayo Clinic, Jacksonville, FL

**Esophageal Thickness in Normal Esophagus**
Emmanuelle Abate, MD, John Lipham, MD, Jessica Leers, MD, Shahin Ayazi, MD, Arzu Oezcelik, MD, Jeffrey Hagen, MD, Farzaneh Banki, MD, Steven DeMeester, MD, Tom DeMeester, MD, Surgery, University of Southern California, Los Angeles, CA
P383. Use of Cracker Swallow for Detection of Motility Abnormality on High-Resolution Manometry
Igor Nastaskin, MD, Jamal Abedi, PhD, Christopher Bowlus, MD, Juan Garcia, MD, School of Education, Gastroenterology and Hepatology, University of California, Davis, Sacramento, CA

P384. Pathophysiology of Upright vs. Supine Gastroesophageal Reflux: Use of High-Resolution Esophageal Manometry, Gastric Emptying Scintigraphy, and Esophageal pH Monitoring
Amanda Fehring, MD, Zeeshan Ramzan, MD, Alan Maurer, MD, Joel Richter, MD, Robert Fisher, MD, Frank Friedenberg, MD, Henry Parkman, MD, Radiology, Medicine, Temple University School of Medicine, Philadelphia, PA

P385. Differences in GERD Patients Evaluated by Primary Care Physicians and Gastroenterologists
William Chey, MD, Borko Nokjok, MD, Richard Saad, MD, Susan Adlis, MS, Michael Shaw, MD, University of Michigan Medical Center, Ann Arbor, MI, Park Nicollet Clinic, Minneapolis, MN

P386. A Model of Healing of LA Grade C and D Erosive Esophagitis: Is There a Threshold Percent Time pH>4 for Maximal Healing?
Philip Katz, MD, Doug Levine, MD, Kerstin Röhnss, PhD, Ola Junghard, PhD, Magnus Astrand, PhD, Tore Lind, MD, Albert Einstein Medical Center, Philadelphia, PA, AstraZeneca R&D, Mölndal, Sweden

P387. Differences in Adult vs. Pediatric Onset Eosinophilic Esophagitis
Chaya Krishnamurthy, MD, Kristen Thomas, BS, Mae Go, MD, John Fang, MD, Kathryn Peterson, MD, MSc, Gastroenterology, University of Utah, Salt Lake City, UT, Gastroenterology, VA, Salt Lake City, UT, Internal Medicine, Intermountain Health Care, Murray, UT

P388. An Open-Label, Multicenter Study of Rabeprazole Safety and Efficacy for Gastroesophageal Reflux Disease (GERD) in Adolescents
Yufang Lu, MD, Thirumazhisai Gunasekaran, MD, Ibrahim Haddad, MD, Shanti Varughese, MS, Richard Kao, MS, Caroline Thompson, MD, Guillermo Rossiter, MD, Eisai Global Clinical, Ridgefield Park, NJ, Lutheran General Children’s Hospital, Park Ridge, IL, Northeastern Ohio University College of Medicine, Youngstown, OH, Eisai Global Clinical, London, United Kingdom

P389. Ablation of Short Segment Barrett Esophagus (BE) Using BARRX Device: Preliminary Results of a Prospective Study
Yasser Shaib, MD, MPH, Suhaib Abudayyah, MD, MPH, David Graham, MD, Gastroenterology, Baylor College of Medicine/Michael E. Debakey VA Medical Center, Houston, TX

P390. The Accuracy and Safety of Esophageal Capsule Endoscopy for the Diagnosis of Barrett’s Esophagus: A Systematic Review and Meta-Analysis
Thad Wilkins, MD, Dimple Raina, MD, Sherman Chamberlain, MD, Mark Ebell, MD, Medical College of Georgia, Augusta, GA, University of Georgia, Athens, GA

P391. Long-Term Safety of TAK-390MR, a PPI with a Novel Dual Delayed Release Formulation in GERD Patients
Aruna Dabholkar, MD, Peter Yu, PhD, Maria Paris, MD, Research & Development, TAP Pharmaceutical Products Inc., Lake Forest, IL

P392. Radiofrequency Ablation of Barrett’s Esophagus May Exacerbate Eosinophilic Esophagitis
Gulchin Ergun, MD, Alberto Barroso, MD, Mary Schwartz, MD, Atilla Ertan, MD, The Methodist Hospital, Houston, TX, Baylor College of Medicine, Houston, TX

P393. Body Mass-Index (BMI) is Associated with Increased Reflux Episodes but Does Not Affect Lower Esophageal Sphincter (LES) Characteristics
Lubin Arevalo, MD, Marcelo Vela, MD, MSCR, Neeraj Sharma, MD, Amit Agrawal, MD, Janice Freeman, RN, Donald Castell, MD, Gastroenterology & Hepatology, Medical University of South Carolina, Charleston, SC

P394. TAK-390MR, a Novel Dual Delayed Release Formulation of a PPI, is Bioequivalent When Administered as Granules Sprinkled Over Applesauce or as an Intact Capsule
Richard Czerniak, PhD, Majid Vakily, PhD, Jingtao Wu, PhD, Research & Development, TAP Pharmaceutical Products Inc., Lake Forest, IL

P395. Esophageal Food Bolus Impaction: Experience from a Single Tertiary Care Center
Adviya Malhotra, MD, Ashutosh Naniwadekar, MD, Larry Scott, MD, Internal Medicine, Gastroenterology and Hepatology, UTMB, Galveston, TX

P396. Role of Endoscopic Ultrasound (EUS) in Staging of Esophageal Cancer—A Retrospective Study of 200 Patients
Tobias Meister, MD, Philipp Lenz, MD, Hauke Heinzw, MD, Hansjörg Ullierich, MD, Wolfram Dornschke, MD, PhD, Dirk Domagk, MD, PhD, Department of Medicine B, University of Muenster, Muenster, Germany

P397. The Esophageal Inlet Patch: More than an Incidental Finding?
Sateesh Prakash, MD, David Estores, MD, MACG, H. Worth Boyce, MD, MACG, Katheryne Downes, MPH, Matthew Haller, BS, Joy McCann Culverhouse Center for Esophageal and Swallowing Disorders, University of South Florida College of Medicine, Tampa, FL

P398. Can Acid Control Be Improved with a Modified-Release Formulation of a Proton Pump Inhibitor?
Kerstin Röhnss, PhD, Clive Wilder-Smith, MD, Mohamed Sagar, PhD, Sara Bokelund-Singh, MSc, Peter Nagy, MD, Doug Levine, MD, Tore Lind, MD, AstraZeneca R&D, Mölndal, Sweden, Brain-Gut Research Group, Gastroenterology Group Practice, Berne, Switzerland, AstraZeneca, Wilmington, DE

P399. Dose and Timing Effects of Esomprazole Administration on 24-H Intragastric pH Control
Kerstin Röhnss, PhD, Clive Wilder-Smith, MD, Mohamed Sagar, PhD, Sara Bokelund-Singh, MSc, Peter Nagy, MD, Doug Levine, MD, Tore Lind, MD, AstraZeneca R&D, Mölndal, Sweden, Brain-Gut Research Group, Gastroenterology Group Practice, Berne, Switzerland, AstraZeneca, Wilmington, DE

STOMACH

P400. Is Two-Channel Synchronized, Multipoint Gastric Electrical Pacing (MGP) Able to Control Upper GI Symptoms and Improve Gastric Emptying in Patients with Severe Diabetic Gastroparesis?
★ 2008 ACG Presidential Poster Award Recipient
Irene Sarosiek, MD, Jameson Forster, MD, Kathy Roeser, BS, Richard McCullum, MD, Surgery, Internal Medicine, Kansas University Medical Center, Kansas City, KS

P401. Efficacy of a Nitazoxanide Based Regimen for Helicobacter pylori (Hp) Eradication
E. Campitelli, MD, A. Paszkiewich, MD, D. Ibarra, MD, R. Ronchetti, MD, N. Lago, MD, R. Corti, MD, E. Chaar, MD, C. Di Risio, MD, T. Barcia, MD, H. Rubio, MD, Hospital Aeronáutico, Buenos Aires, Argentina, Hospital Udaondo, Buenos Aires, Argentina, Hospital Penaa, Buenos Aires, Argentina, CEED, Buenos Aires, Argentina

P402. Efficacy and Safety of S-1-Based Chemotherapy in Patients with Advanced Gastric Adenocarcinoma: A Single Institute Retrospective Study
Motoko Izumiya, MD, BA, Gen Sakai, MD, Yoshiyuki Yamagi, MD, PhD, Masayuki Adachi, MD, PhD, Hajime Higuchi, MD, PhD, Hiromasa Takaishi, MD, PhD, Toshifumi Hibi, MD, PhD, Internal Medicine, Keio University, Tokyo, Japan
P403. Effect of Endoscopic Ultrasound's Technology in Diagnosing Various T Stages of Gastric Cardia Cancers: A Meta-Analysis and Systematic Review
Sriniivas Puli, MD, Jyotsna BK Reddy, MD, Matthew Bechtold, MD, Abhishek Choudhary, MD, Major Antillon, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO.

P404. Upper Gastrointestinal Pathology in Non-Cirrhotic Hepatitis C Patients
Rubayat Rahman, MD, MPH, Yevgeniy Ostyrnsky, MD, Sarah Hadique, MD, Uma Sundaram, MD, Division of Digestive Diseases, Department of Medicine, West Virginia University School of Medicine, Morgantown, WV.

P405. Symptoms During Gastric Emptying Scintigraphy: Correlation of Symptoms with Delayed Gastric Emptying
Priyanka Sachdeva, MD, Zeeshan Ramzan, MD, Alan Maurer, MD, Robert Fisher, MD, Henry Parkman, MD, Radiology, Medicine, Temple University School of Medicine, Philadelphia, PA.

P406. A Single Center's Experience with EUS Surveillance of Gastric GISTs
Karen Canlas, MD, Paul Jowell, MD, Jorge Obando, MD, Darren Pavey, MD, Malcolm Branch, MD, John Evans, MD, Gastroenterology/Hepatology, Duke University, Durham, NC.

Takayuki Okada, Dr, Kazutoshi Hori, Dr, Graham Adkins, Dr, Hiroto Miwa, Prof, Okada Medical Clinic, Spring Hill, QLD, Australia, Endoscopic Center, Hyogo College of Medicine, Nishinomiya, Japan, Sullivan Nicolaides Private Pathology, Taringa, QLD, Australia, Internal Medicine, Hyogo College of Medicine, Nishinomiya, Japan.

P408. Is Total Gastrectomy a Good Option for Refractory Gastrroparesis? One Site Experience
Pavan Saridena, MD, Reza Hejazi, MD, Irene Sarosiek, MD, Richard Mccallum, MD, Bridgeport Hospital, Yale University, Bridgeport, CT, Internal Medicine, Kansas University Medical Center, Kansas City, KS.

P409. A Retrospective Analysis of the Management of Dyspepsia
Sonia Yoon, MD, David Greenwald, MD, Gastroenterology, Medicine, Montefiore Medical Center, Bronx, NY.

P410. Intragastric Acid Suppressing Effect of Proton Pump Inhibitors Twice Daily at Steady State in Healthy Volunteers: Evidence of an Unmet Need?
Yuhong Yuan, MD, PhD, Richard Hunt, MD, FRCPC, FACP, AGAF, Department of Medicine, McMaster University, Hamilton, ON, Canada.

P411. Intraspilary Botulinum Toxin Injection for Gastroparesis: A Meta Analysis
Sufian Chaudhry, MD, Mohammad Ismail, MD, Gastroenterology, University of Tennessee, Memphis, TN.

P412. Healing of Gastric Ulcers Associated with Low-Dose Aspirin Use in Patients Continuing to Take Low-Dose Aspirin
Jay Goldstein, MD, Lisa Suchower, MA, Kurt Brown, MD, University of Illinois at Chicago, Chicago, IL, AstraZeneca LP, Wilmington, DE.

P413. The Interrelationship Between Gastric pH and Therapeutic Response to Esomeprazole in Patients with Uninvestigated Dyspepsia: Its Potential Pathogenetic Implication
Marek Majewski, MD, PhD, Irene Sarosiek, MD, Grzegorz Wallner, MD, PhD, Jerzy Sarosiek, MD, PhD, Medicine/GI/Motility Center, KUMC, Kansas City, KS, 2nd Department of General Surgery, Medical University of Lublin, Lublin, Poland.

P414. Usefulness of the Smartpill® GI Monitoring System to Assess Gastric Emptying Time in Subjects on Acid Suppression
Sabb심 Maqbool, MD, Henry Parkman, MD, Frank Friedenberg, MD, MS (Epi), Gastroenterology, Temple University School of Medicine, Philadelphia, PA.

P415. Same-Day Combined EUS/ERCP to Investigate Biliary and Pancreatic Disorders: Better Together
Samir Charbel, MD, James Kimberly, MD, Jason Conway, MD, MPH, John Gilliam, MD, John Baillie, MD, ChB, Girish Mishra, MD, MS, Gastroenterology, Wake Forest University, Winston-Salem, NC.

P416. EUS-FNA and ERCP as a Single Tandem Procedure: Safety and Outcomes
YeonSuk Kim, MD, Jose Vega, MD, Shawn Mallery, MD, Rebecca Li, MD, Timothy Kinney, MD, Kapil Gupta, MD, MPH, Kamran Safdar, MD, Martin Freeman, MD, Internal Medicine, Gacheon Gil Medical Center of Gacheon Medical School, Incheon, South Korea, Internal Medicine, University of Minnesota, Hennepin County Medical Center, Minneapolis, MN.

P417. Serum Pepsinogen Level, Atrophic Gastritis and the Risk of Incident Pancreatic Cancer—A Long-Term Prospective Study
Adeyinka Layemo, MD, MPH, Farin Kamangar, MD, PhD, Pamela Marcus, PhD, Philip Taylor, MD,ScD, Jarroo Virtamo, MD, Demetrios Albanes, MD, Rachael Stolzenberg-Solomon, PhD, Division of Cancer Prevention, Division of Cancer Epidemiology and Genetics, Cancer Prevention Fellowship Program, National Cancer Institute, Bethesda, MD, Department of Health Promotion and Chronic Disease Prevention, National Public Health Institute, Helsinki, Finland.

P418. Trainees’ Perspective—New Development in the Comparison of Simulators for ERCP Practice
Joseph Leung, MD, FRCP, FACP, FACG, Brian Lim, MD, Wing Luk, MD, Michael Li, MD, Robert Wilson, BVD, Felix Leung, MD, Gastroenterology, Sacramento VA Medical Center, Mather, CA, Gastroenterology, UC Davis Medical Center, Sacramento, CA, Minimal Access Surgery Training Center, Pamela Youde Nethersole Eastern Hospital, Hong Kong, China, Research and Medical Services, Sepulveda ACC, VAGLAHCS, David Geffen UCLA School of Medicine, Los Angeles, CA.

P419. Didactic Teaching and Practice Papillotomy Cuts Facilitate Trainees’ Understanding of the Essence of a “Perfect Cut”
Joseph Leung, MD, FRCP, FACP, FACG, Brian Lim, MD, Danny Yen, MD, Robert Wilson, BVD, Felix Leung, MD, FACG, Gastroenterology, Sacramento VA Medical Center, Mather, CA, Gastroenterology, UC Davis Medical Center, Sacramento, CA, Research and Medical Service, Sepulveda ACC, VAGLAHCS and David Geffen UCLA School of Medicine, Los Angeles, CA.

P420. Meta-Analysis: Somatostatin or Its Long Acting Analogue, Octreotide for Prophylaxis Against Post-ERCP Pancreatitis

P421. Long-Term Follow-up of Patients with Dilated Common Bile Duct (CBD) and Negative Endoscopic Ultrasonography (EUS)—A Single-Center Experience
Jan Prazak, MD, Rana Sabbagh, MD, Gregory Olds, MD, Internal Medicine, Gastroenterology, Henry Ford Hospital, Detroit, MI.
P422. Impact of Alcohol Use Patterns on Clinical Outcomes in Patients with Chronic Pancreatitis
Bimaljit Sandhu, MD, DM, Dace Svikis Pickens, PhD, Doumit Bou-Haidar, MD, Alvin Zfasz, MD, Arun Sanjay, MD, Department of Psychology, Gastroenterology, Hepatology & Nutrition, Virginia Commonwealth University Medical Center, Richmond, VA

P423. In Vivo Translational Drug Development Model in Pancreatic Cancer
Sanjay Vinjamaram, MD, John Gibbs, MD, Thaer Khoury, MD, Elizabeth Repasky, Bonnie Hylander, Renuka Iyer, MD, Immunology, Surgery, Pathology, Medicine, Roswell Park Cancer Institute, Buffalo, NY

P424. Current Smoking is an Independent Predictor of Chronic Pancreatitis
Ryan Law, DO, Tyler Stevens, MD, Mansour Parsi, MD, Gregory Zuccaro, MD, Digestive Disease Institute, Cleveland Clinic Foundation, Cleveland, OH

P425. Smoking May Increase the Risk of Pancreatic Cancer Precursor Lesions in Familial at-Risk Individuals
Emmy Ludwig, MD, Sara Olson, PhD, Jennifer Simon, MA, Sharon Bayuga, MA, Robert Kurtz, MD, Memorial Sloan-Kettering Cancer Center, New York, NY

P426. The Relationship Between Autoimmune Pancreatitis and IgG4-Related Systemic Disorder in Japanese Patients: Special Notice of Mikulicz’s Disease
Ikuya Miki, Hiroto Kustumi, Yuko Matsumoto, Dr, Atsuhiro Masuda, Shigeto Mizuno, Takeshi Azuma, Medical Pharmaceutics, Kobe Pharmaceutical University, Kobe, Japan, Gastroenterology, Kobe University Graduate School of Medicine, Kobe, Japan

P427. Assessing Malnutrition Risk in Outpatients with Pancreas Exocrine Insufficiency (PEI)
April Tignor, MD, Darwin Conwell, MD, MS, Kate Repas, BS, Bechien Wu, MD, MPH, Peter Banks, MD, Gastroenterology, Hepatology and Endoscopy, Harvard Medical School, Brigham and Women’s Hospital, Boston, MA

P428. Evaluation of Post-Cholecystectomy Common Bile Duct (CBD) Dilatation: An Age Matched Study
Saurabh Chawla, MD, William Trick, MD, Susan Gilkey, MD, Bashar Attar, MD, PhD, Gastroenterology, Radiology, Medicine, Cook County Hospital-John H. Stroger Jr. Hospital of Cook County, Chicago, IL

P429. Prior Endoscopic Sphincterotomy Can Affect the Interpretation of Secretin-Stimulated Magnetic Resonance Cholangiopancreatography (S-MRCP)
Ashish Chopra, MD, Samer Alkaade, MD, Numan Balci, MD, Frank Burton, MD, Radiology, Gastroenterology and Hepatology, St. Louis University, St. Louis, MO

P430. Effect of Pancreatic Duct Stent Diameter on Rate of Hospitalization in Chronic Pancreatitis
Bryan Sauer, MD, MS, Matthew Gurka, PhD, Kristi Ellen, RN, Vanessa Shami, MD, Michel Kahaleh, MD, Department of Public Health Sciences, Division of Biostatistics and Epidemiology, Digestive Health, University of Virginia, Charlottesville, VA

P431. The Yield of Repeat Cholangiogram with Balloon Sweep at the Time of Biliary Stent Removal for Post-Cholecystectomy Bile Leak
Michael Anssitas, MD, Somal Shah, MD, Saad Alkaade, MD, Rajesh Keswani, MD, Basem Abdeen, MD, Sreenivasa Jonnalagadda, MD, Steven Edmundowicz, MD, Riad Azar, MD, Internal Medicine, Division of Gastroenterology, Washington University, St. Louis, MO

P432. Alcoholic Acute Pancreatitis or Idiopathic Pancreatitis: An Unclear Distinction
Nison Badalov, MD, Ian Wall, DO, Jack Braha, DO, Samantha Tenner, MS, Robin Baradarian, MD, William Steinberg, MD, FACG, Scott Tenner, MD, MPH, FACC, Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Gastroenterology, George Washington University Hospital, Washington, DC

P433. Nafamostat for the Prophylaxis of Post-ERCP Pancreatic Damage Comparing with Gabexate and Risk Factor Analysis: A Case Control Study
Jae Hyuck Chang, MD, In Seok Lee, MD, Chul Hyun Lim, MD, Kwan Woo Nam, MD, Myung Gyu Choi, MD, In Sik Chung, MD, Internal Medicine, The Catholic University of Korea, Seoul, South Korea

P434. Quality of Life Issues in Chronic Pancreatitis
Pavan Manchikalapati, MD, Judith Savageau, PhD, Wahid Wassef, MD, Family Medicine and Community Health, Gastroenterology, University of Massachusetts, Worcester, MA

P435. Abnormal Biliary Scintigraphy Should Not Be an Indication for Cholecystectomy
Charles Randall, MD, Carlo Taboada, MD, Gary Gossen, MD, Russell Havrenek, MD, Jorge Munoz, MD, Franz Zurita, MD, David Slump, MD, Christopher Fincke, MD, Rodrigo Adama, MD, Josepito Alvaredo, MD, Research, Gastroenterology Research of San Antonio, San Antonio, TX, Research, Gastroenterology Clinic of San Antonio, San Antonio, TX, Medicine, University of Texas Health Science Center, San Antonio, TX

P436. Influence of Chronic Ethanol Consumption on Extra-Pancreatic Secretory Function in Rat
Yoshihisa Urita, MD, PhD, Toshiyasu Watanabe, MD, PhD, Tsunehiko Imai, MD, Tadashi Maeda, MD, Yosuke Sasaki, MD, Susumu Ishihara, MD, Kazuo Hike, MD, Masaki Sanaka, MD, PhD, Hitoshi Nakajima, MD, PhD, Motonobu Sugimoto, MD, PhD, Department of Environmental and Occupational Health, Department of General Medicine, Toho University, Tokyo, Japan

P437. Increased Risk of Acute Pancreatitis Observed in Patients with Type 2 Diabetes
Gary Bloomgren, MD, MBA, Ruth Patterson, PhD, Daniel Braun, MD, PhD, Rebecca Noel, DrPh, MSPH, Global Safety, Amylin Pharmaceuticals, San Diego, CA, Global Safety, Eli Lilly, Indianapolis, IN

P438. Yield of Double Balloon Enteroscopy (DBE) at a Tertiary Care Hospital
Ramh Abbass, MD, Halim Charbel, MD, Naveen Gupta, MD, Kathy Bull-Henry, MD, Georgetown University Hospital, Arlington, VA

P439. Prospective Comparison of Capsule Endoscopy and Dual-Phase CT Enterography in the Evaluation of Obsolete Gastrointestinal Bleeding
Jaya Agrawal, MD, MPH, Anne Travis, MD, MSc, Koenraad Mortelet, MD, Stuart Silverman, MD, Sarathchandra Reddy, MD, MPH, John Saltzman, MD, Radiology, Gastroenterology, Brigham and Women's Hospital, Boston, MA

P440. Single Balloon Enteroscopy in Comparison to Capsule Endoscopy in the Diagnosis and Management of Small Bowel Disease
Maya Al Mohajer, MD, Udayakumar Navaneethan, MD, Joseph Palascak, MD, Andres Gelrud, MD, MSc, Internal Medicine, University of Cincinnati Medical Center, Cincinnati, OH

P441. Risk Factors Associated with Small Intestinal Bacterial Overgrowth (SIBO) After Roux-en-Y Gastric Bypass Surgery
Bikram Bal, MD, Hiral Shah, MD, Frederick Finelli, MD, JD, John Kirkpatrick, MD, Timothy Koch, MD, Medicine, Washington Hospital Center, Washington, DC, Georgetown University School of Medicine, Washington, DC, Surgery, Washington Hospital Center, Washington, DC
P442. Hypoalbuminemia After Roux-en-Y Gastric Bypass Surgery is Not Related to Small Intestinal Bacterial Overgrowth
Bikram Bal, MD, Hiral Shah, MD, Frederick Finelli, MD, JD, John Kirkpatrick, MD, Timothy Koch, MD, Surgery, Medicine, Washington Hospital Center, Washington, DC, Georgetown University School of Medicine, Washington, DC

P443. Can Endoscopic Visualization Predict Histological Changes and Early Rejection of Small Intestine Allografts?
Ihab El Hajj, MD, MPH, Tong Wu, MD, PhD, Kareem Abu-Elmagd, MD, Stephen O’Keeffe, MD, MSc, Transplant Surgery, Transplantation Pathology, Gastroenterology, University of Pittsburgh, Pittsburgh, PA

P444. Bevacizumab as a Means of Treating Anemia and Active Bleeding Secondary to Vascular Ectasia, a Case Series
Christian Jackson, MD, Clifford Cabansag, MD, Anas Kawayeh, MD, Gastroenterology, Loma Linda VA Healthcare System, Loma Linda, CA, Internal Medicine, Loma Linda University Medical Center, Loma Linda, CA

P445. Gastric Heterotopia in the Duodenum: Endoscopic and Histopathologic Associations
Richard Kinsey, MD, Robert Genta, MD, Caris Diagnostics, Irving, TX

P446. Larazotide Acetate (AT-1001) Prevents Immunologic Changes Induced by Gluten Challenge in Patients with Celiac Disease
Daniel Leffler, MD, Mark David Pescevitz, MD, Francesco Leon, MD, PhD, Blake Paterson, MD, John Jiang, PhD, Anthony Di Marino, MD, Joseph Murray, MD, Ciaran Kelly, MD, Celiac Center, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, Division of Transplant Surgery, Indiana University Medical Center, Indianapolis, IN, Clinical R&D, Alba Therapeutics, Baltimore, MD, Department of Gastroenterology, Thomas Jefferson University Hospital, Philadelphia, PA, Division of Gastroenterology, Mayo Clinic, Rochester, MN

P447. Celiac Disease is Associated with Restless Legs Syndrome
Leonard Weinstein, MD, Arthur Walters, MD, Stephen Duntley, MD, Gerard Mullin, MD, Gastroenterology, Specialists in Gastroenterology, St. Louis, MO, NJ Neuroscience Institute at JFK Medical Center, Seton Hall University School of Graduate Medical Education, Edison, NJ, Neurology, Washington University School of Medicine, St. Louis, MO, Gastroenterology, Johns Hopkins Medical Institute, Baltimore, MD

P448. Rifaximin Improves Restless Legs Syndrome Associated with Small Intestinal Bacterial Overgrowth
Leonard Weinstein, MD, St. Louis, MO

P449. A Comparison of Diagnostic Yield and Degree of Agreement Between Capsule Endoscopy and Double Balloon Enteroscopy in Evaluating Small Intestinal Disorders
Aman Ali, MD, Mylan Satchi, MD, Eric Rosen, MD, Deepak Vadada, MD, Gregory Haber, MD, FACC, Division of Gastroenterology/Hepatology and Center of Advanced Therapeutic Endoscopy, Lenox Hill Hospital, New York, NY

P450. Small Bowel Arteriovenous Malformations Found in Capsule Endoscopy Findings
Disaya Chavalitdhamrong, MD, Oren Goltzer, James Sul, MD, Rome Jutabha, MD, David Geffen School of Medicine at University of California, Los Angeles, CA, Capsule Endoscopy Services, Los Angeles, CA

P451. Chronic Superficial Enteritis: A Novel Form of Inflammatory Bowel Disease
Dmitry Finkelberg, MD, Jason Wong, MD, Kanishka Bhattacharya, MD, David Cave, MD, PhD, Department of Surgery, Gastroenterology, UMass Medical Center, Worcester, MA

P452. Association of Celiac Disease, Abdominal Pain and Intussusception in Adults
Tamas Gonda, MD, Sharif-Uz-Zaman Khan, MD, Jian Chen, MD, Suzanne Lewis, MD, Moshe Rubin, MD, Peter Green, MD, Celiac Disease Center, Division of Digestive and Liver Diseases, Columbia University Medical Center, New York, NY

P453. A Retrospective Analysis of the Safety of Outpatient Percutaneous Liver Biopsy in Patients with Von Willebrand Disease
P. Patrick Basu, MD, Krishna Rayapudi, MD, Jose Esteves, MD, Robert Brown, MD, MPH, Department of Gastroenterology and Hepatology, New York Hospital-Queens, New York, NY, Department of Gastroenterology, North Shore University Hospital at Forest Hills, Forest Hills, NY, Division of Digestive and Liver Diseases, Columbia University Medical Center, New York, NY

P454. A Pilot Study Utilizing Nitazoxanide for Hepatic Encephalopathy in Chronic Liver Failure
P. Patrick Basu, MD, Krishna Rayapudi, MD, Jose Esteves, MD, Robert Brown, MD, MPH, Department of Gastroenterology, North Shore University Hospital at Forest Hills, Forest Hills, NY, Division of Digestive and Liver Diseases, Columbia University Medical Center, New York, NY

P455. Prevalence and Characterisation of Abnormal Alanine Aminotransferase in Chronic Hepatitis C Patients with HCV-RNA Negative During Pegylated-Interferon and Ribavirin Therapy
Monica Basso, MD, Edoardo Giannini, MD, PhD, Sabrina Bianchi, MD, Vincenzo Savarino, MD, Antonio Picciotto, MD, Dipartimento di Medicina Interna, Cattedra di Gastroenterologia, Genova, Italy, Dipartimento di Medicina Interna, Centro per le Diagnosi e Terapia delle Epatiti, Genova, Italy

P456. Statins are Associated with Milder Degrees of Fibrosis in Patients with Chronic Hepatitis C
Edmond Bou Assaf, MD, Martine Sanon, MD, Nadia Rajack, MD, Sabina Kirtich, NP, Gul Bahatiy, Samy McFarlane, MD, MPH, Ayse Aytaian, MD, Division of Gastroenterology, State University of New York, Downstate, Brooklyn, NY, Division of Gastroenterology, VA New York Harbor Healthcare Center Brooklyn Campus, Brooklyn, NY, Division of Endocrinology, Diabetes and Hypertension, State University of New York, Downstate, Brooklyn, NY

P457. Hepatitis A and B Vaccination of Patients with Hepatitis C in Internal Medicine Residency Clinics: Practice Assessment and Intervention
Ayse Aytaman, MD, Division of Gastroenterology, State University of New York, Downstate, Brooklyn, NY, Division of Gastroenterology and Hepatology, VA New York Harbor Healthcare Center Brooklyn Campus, Brooklyn, NY, Division of Endocrinology, Diabetes and Hypertension, State University of New York, Downstate, Brooklyn, NY

P458. Excessive Gestational Weight Gain in Chronic Liver Disease is Associated with Advanced Fibrosis
Li Hua, MD, Ian Schreibman, MD, Mohammad Taheri, MD, Thomas Riley, MD, Division of Gastroenterology and Hepatology, Hershey Medical Center, Penn State University, Hershey, PA

P459. Transarterial Chemoembolization (TACE) in Patients with Hepatocellular Carcinoma—A Useful Tool?
Vladislava Buntic, MD, Rakhee Mangla, MD, Kamal Syad, MD, Stephen Atlas, MD, Jonathan Fine, MD, Dennis Meighan, MD, William Hale, MD, Gastroenterology and Hepatology, Norwalk Hospital, Norwalk, CT, Gastroenterology and Hepatology, Hospital of St. Raphael, New Haven, CT

P460. Is Serum Alanine Aminotransferase (ALT) Elevation in Obese Children and Adolescents Just Non-Alcoholic Fatty Liver Disease (NAFLD)?
Daniel Preud’Homme, MD, La Tanya Higginbottom, BS, Leigh Ann Phelps, BSN, Judy Blair-Elortegui, MD, Pediatrics, University of South Alabama, Mobile, AL
P461. Components of Metabolic Syndrome and Type 2 Diabetes are Associated with Advanced Liver Disease
Nila Rafiq, MD, Ravindra Gupta, MD, Ruben Aquino, BS candidate, Jillian Kallman, MS, Mike Garone, BS candidate, Caitlin Quigley, BS candidate, Arvind Murthy, MD, Surbhi Ahmad, MD, Shubhada Kumar, MD, Zobair Younossi, MD, MPH, Center for Liver Disease, Inova Fairfax Hospital, Falls Church, VA, Outcomes Research Program, Inova Health System, Falls Church, VA

P462. The Demographic Features of the Prevalence of Non-Alcoholic Steatohepatitis (NASH) in a Cohort of Adult Sri Lankans, Investigated for Suspected Chronic Liver Disease in a Medical Unit—Data From a Tertiary Care Center
Ravindra Satarasinghe, MD, MACG, Ravi Jayawardana, MBBS, Upul Wickramasingha, MBBS, Ahamed Riyaaz, MBBS, Department of Medicine, Ward 6, Sri Jayawardenepeura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka

P463. Comparison of Demographics and Laboratory Parameters of a Cohort of Adult Sri Lankan Alcoholic and Non Alcoholic Cirrhotics Who Had Undergone Banding Ligation of Oesophageal Varices
Ravindra Satarasinghe, MD, MACG, Ravi Jayawardana, MBBS, Upul Wickramasingha, MBBS, Ahamed Riyaaz, MBBS, Anura Perera, Department of Endoscopy, Department of Medicine, Sri Jayawardenepeura General Hospital & Postgraduate Training Center, Nugegoda, Sri Lanka

P464. 51Cr-EDTA Permeability Test in Ascitic Cirrhotic Patients with and without History of Spontaneous Bacterial Peritonitis
Emidio Scarpellini, MD, Giuseppe Merra, MD, Antonio Dal Lago, MD, Venanzio Valenza, MD, Antonio Gasbarrini, MD, Giovanni Ghirlanda, MD, Department of Nuclear Medicine, Department of Internal Medicine, Institute of Medical Pathology, Catholic University of Sacred Heart, Agostino Gemelli General Hospital, Rome, Italy

P465. Poster Withdrawn

P466. The Impact of Filgrastim and Epoetin Use on Sustained Viral Response (SVR) Rates in Hepatitis C Patients Treated with Peg-Interferon and Ribavirin
Waqar Ahmad, MD, Diane Hughes, ARNP, Monica Dunnam, PharmD, Qaiser Khan, MBBS, Javid Fazili, MD, Digestive Diseases, University of Oklahoma Health Sciences Center, Oklahoma City, OK

P467. What is the Prevalence of Celiac Disease Among U.S. Patients with Autoimmune Hepatitis?
Rebecca Burbridge, MD, Judith Gentile, ANP, Alastair Smith, MB, ChB, Medicine, Duke University Medical Center, Durham, NC

P468. African-American Patients with Chronic Hepatitis C Respond Similarly to PEG-IFN Alpha 2a and Ribavirin as Compared to PEG-IFN Alpha 2b and Ribavirin
Afreen Khan, MD, Milton Mutchnick, MD, Murray Ehrinpreis, MD, Firdous Siddiqui, MD, Gastroenterology, Wayne State University, Detroit, MI

P469. Low LDL Independent of Insulin Resistance is a Better Predictor of Early Virologic Response (EVR) Rates in Genotype 1 Chronic Hepatitis C (CHC)
Linda Lee, MD, Jagdish Nachnani, MD, Ryan Taylor, MD, Owen Smith, MD, Wendell Clarkston, MD, Laura Alba, MD, UMKC, Kansas City, MO

P470. Risk of Hepatocellular Carcinoma (HCC) in Hepatitis C Patients without Cirrhosis
Mohammad Madhoun, MD, Javid Fazili, MD, Teddy Bader, MD, David Roberts, MD, Digestive Diseases/ Internal Medicine, University of Oklahoma Health Sciences Center, Oklahoma City, OK

P471. Predictors of Post-Transplant Survival in Patients with and without Hepatitis B
Parvathi Myer, MD, Andrew Samuelson, MD, Maureen Morgan, MD, Maximilian Lee, MD, Ahmad Kamal, MD, Ajaz Ahmed, MD, Division of Gastroenterology and Hepatology, Stanford University School of Medicine, Stanford, CA

P472. The Risk Factors for Mortality in Patients with Hepatitis B Virus Infection and Hepatocellular Carcinoma Following Liver Transplantation
Parvathi Myer, MD, Andrew Samuelson, MD, Maureen Morgan, MD, Maximilian Lee, MD, Ahmad Kamal, MD, Ajaz Ahmed, MD, Gastroenterology and Hepatology, Stanford University School of Medicine, Stanford, CA

P473. Poster Withdrawn

P474. Characterization of the First Episode of Decompensation of Liver Cirrhosis with Rupture of Esophageal Varices and Prognostic Factors
Carlos Noronha Ferreira, MBBS, Teresa Rodrigues, Bachelor in Mathematics, Helena Cortez-Pinto, MD, PhD, Fatima Serejo, MD, PhD, Fernando Ramalho, MD, PhD, Alexandra Pinto, Bachelor in Mathematics, Estela Monteiro, MD, PhD, Serviço de Gastroenterologia e Hepatologia, Hospital de Santa Maria, Lisboa, Portugal, Laboratorio de Biomatematica, Faculdade de Medicina de Lisboa, Lisboa, Portugal

P475. Characterization and Determination of Prognostic Factors at the First Episode of Decompensation of Liver Cirrhosis with Asciits
Carlos Noronha Ferreira, MBBS, Teresa Rodrigues, Bachelor in Mathematics, Helena Cortez-Pinto, MD, PhD, Fatima Serejo, MD, PhD, Fernando Ramalho, MD, PhD, Alexandra Pinto, Bachelor in Mathematics, Estela Monteiro, MD, PhD, Serviço de Gastroenterologia e Hepatologia, Hospital de Santa Maria, Lisboa, Portugal, Laboratorio de Biomatematica, Faculdade de Medicina de Lisboa, Lisboa, Portugal

P476. Nonalcoholic Fatty Liver Disease is Associated with Insulin Resistance and Metabolic Syndrome in Majority of Indian Patients
Kiran Thamburu, MSc, Radha Dhiman, MD, DM, Ajay Duseja, MD, DM, Yogesh Chawla, MD, DM, Ashim Das, MD, Anil Bharsali, MD, DM, Naveen Kalra, MD, Krishan Kohli, MSc, PhD, Hepatology, Postgraduate Institute of Medical Education and Research, Chandigarh, India, Biochemistry, Radiodiagnosis, Endocrinology, Histopathology, Chandigarh, India

P477. Natural History and Outcome of Monotherapy of Chronic Hepatitis B: Multicenter Study in Thailand
Sombat Treeprasertsuk, MD, MSc, Varacha Mahachai, MD, Taweesak Tanwandeex, MD, Teerha Piaratchvuth, MD, Chutima Pramoolsinsap, MD, Anuchit Jutaputi, MD, Kanchana Pornpininworakij, MD, Lily Ingririsawang, PhD, Taksin Keentupthai, MSc, Aphantree Jampaeng, MSc, Medicine, Chulalongkorn University, Thailand, Medicine, Siriraj Hospital, Mahidol University, Bangkok-noi, Thailand, Medicine, Prince Songklaakarind University, Muang, Thailand, Medicine, Ramathibodi Hospital, Mahidol University, Rajthavee, Thailand, Medicine, King Pramongkrutkao Hospital, Rajthavee, Thailand, Tropical Medicine, Hospital for Tropical Disease, Mahidol University, Rajavithi, Thailand, Statistics, Kasetsart University, Vibhavadee, Thailand, Data Management, Clinical Research Collaborative Network (CRCN), Pakkred, Thailand

P478. Poster Withdrawn
P482.  Serum GGT Predicts Virological Response to Pegylated-Interferon and Ribavirin Therapy in Patients with Chronic Hepatitis C
Xinyu Zhao, MD, Scott Tenner, MD, MPH, Jianjun Li, MD, Michael Bernstein, MD, Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Gastroenterology, Coney Island Hospital, Brooklyn, NY

P483.  Physicians More Frequently Test for HIV in Patients with Chronic Hepatitis C Who Have a History of Intravenous Drug Use
Raziuddin Ali, MD, Jay Agrawal, BS, Marie Borum, MD, EdD, MPH, Department of Medicine, University of Washington, Washington, DC

P484.  Treatment Outcomes of Entecavir, Adefovir and Telbivudine in Chronic Hepatitis C Patients Treated with Interferon & Ribavirin
Israr Haque, MBBS, FCPS, Shamali Zafar, MBBS, FCPS, Ghias Tayyab, MBBS, FCPS, MRCP, Gulsena Khan, MBBS, MD, Nusrat Chaudry, MBBS, MRCP, Department of Gastroenterology and Hepatology, Lahore General Hospital, Lahore, Pakistan, Department of Internal Medicine, Lahore General Hospital, Lahore, Pakistan

P485.  Designing and Evaluation of Taqman Chemistry for Quantification of Human Hepatitis B Virus
Chittor Habibullah, MD, Ajeaz Habib, MD, Madhavi Chandra, PhD, Yalamanchili Naresh, MSc, Gastroenterology and Hepatology, Deccan College of Medical Sciences and Allied Hospitals, Hyderabad, India

P486.  Safety and Efficacy of Hepatic Progenitor Cell Transplantation Through Hepatic Artery for the Treatment of Chronic Liver Failure
Chittor Habibullah, MD, DM, Aleeem Khan, PhD, Parveen Nyamath, PhD, Mahabooob Shaik, MSc, Rajendra Prasad, MSc, Ravindra Prakash, MBBS, Venkateswarlu Jampala, MD, Balaji Patel, MBBS, Gopal Pande, PhD, Ajeaz Habib, MD, Gastroenterology and Hepatology, Deccan College of Medical Sciences and Allied Hospitals, Hyderabad, India, Molecular Biology, CCMB, Hyderabad, India

P487.  Characterization of Hepatic Progenitors from Human Fetal Liver During Second Trimester
Chittor Habibullah, MD, DM, Aleeem Khan, PhD, Subba Rao, MSc, Gopal Pande, PhD, Parveen Nyamath, PhD, Gastroenterology and Hepatology, Deccan College of Medical Sciences and Allied Hospitals, Hyderabad, India, Molecular Biology, CCMB, Hyderabad, India

P488.  Are All Preparations for Colonoscopy the Same?
Konstantin Vaizman, MD, K. Ishwara, MD, Ira Mayer, MD, Nison Badalov, MD, Scott Tenner, MD, MPH, Internal Medicine/ Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P489.  Successful Utilization of a Prolonged Course of Nitazoxanide for the Treatment of Multi-Recurrent Clostridium difficile Infection
Bienvenido Yangco, MD, MPH, Infectious Disease Research Institute, Inc., Tampa, FL

P490.  Diverticular Bleeding in African-American and Hispanic Patients: Natural History and Risk Factors for Recurrence
Abbasi Akhtar, MD, Medicine-Gastroenterology, Charles Drew University of Medicine and Science, Los Angeles, CA

P491.  Ischemic Colitis and Lower Gastrointestinal Bleeding in African-American and Hispanic Patients
Abbasi Akhtar, MD, Gastroenterology, Charles Drew University of Medicine and Science, Los Angeles, CA

P492.  Dysmotility of the Cecum in Patients with Severe Slow-Transit Constipation: Characteristic Radiologic and Motility Patterns and Clinical Relevance
William Chey, MD, Cameron Hoelirich, Student, Vincent Chang, MD, Katherine Fulton, RN, Deborah Corcoran, RN, Sydney Lee, Student, Kae Lee, MD, Rochester Institute for Digestive Diseases & Sciences, Rochester, NY

P493.  Re-Evaluation of Diagnosis of ‘Benign’ Colon Polyp
Priyanka Kanth, MBBS, Lee Wilkinson, BS, Joel Levin, MD, Melinda Sanders, MD, T. Rajan, MD, Internal Medicine, University of Connecticut Health Center, Farmington, CT, Gastroenterology, Pathology, University of Connecticut Health Center, Farmington, CT

P494.  Fecal Incontinence: Insights from Evaluation in a GI Motility Laboratory
Kian Makipour, MD, Zeeshan Ramzan, MD, Robert Fisher, MD, Henry Parkman, MD, Medicine, Temple University School of Medicine, Philadelphia, PA

P495.  Clostridium difficile Infection Was Not Detected in Patients Who Received Rifaximin for Hepatic Encephalopathy in Community and University Practices
Guy Neff, MD, V. Zacharias, MD, M. Jones, MD, M. Jonas, MD, R. Ravinuthala, MD, D. Novick, MD, T. Kaiser, MD, N. Kemmer, MD, University of Cincinnati College of Medicine, Cincinnati, OH, Tri-State Gastroenterology Associates, Dayton, OH, Greater Cincinnati Gastroenterology Associates, Cincinnati, OH, Digestive Specialists, inc, Dayton, OH
Poster Presentations — Monday, October 6

P496. Affect of Endoscopic Ultrasound’s Technology in Diagnosing Various T Stages of Rectal Cancers: A Meta-Analysis and Systematic Review
Srinivas Puli, MD, Jyotsna BK Reddy, MD, Matthew Bechtold, MD, Abhishek Choudhary, MD, Farzanah Rashid, MD, Mairon Antillon, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO

P497. Prevalence and Site Distribution of Adenomatous Polyps on Screening Colonoscopy in the Average-Risk Lebanese Population: Impact of the Mediterranean Diet?
Ali Sharrar, MD, Karim Maasri, MD, Jana Hashash, MD, Assaad Soweid, MD, Fadi Mourad, MD, Kassim Barada, MD, of Internal Medicine-Division of Gastroenterology, American University of Beirut, Beirut, Lebanon

P498. Multiple Setons as Treatment of Complex or High Fistula in Ano
Subodh Varshney, MD, FRCS, Vikrant Singh, MS, Rajneesh Varshney, MS, Dipak Purohit, MS, Ajit Sewkani, MS, Sandesh Sharma, MS, GI Surgery, Bhopal Memorial Hospital and Research Centre, Bhopal, India

P499. Prevalence and Utility of Inflammatory Bowel Disease (IBD) Markers in Colon Ischemia (CI)
Olga Aroniadis, MD, Paul Feuerstadt, MD, Lawrence Brandt, MD, MACG, Gastroenterology, Montefiore Medical Center, Bronx, NY

P500. Prevalence of Adenomas and Colorectal Cancer in 50-75 Year Old Individuals at Average Risk for Colorectal Cancer: A Systematic Review and Meta-Analysis
Stephen Heitman, MD, MSc, Paul Ronksley, BSc, Robert Hilsden, MD, PhD, Braden Manns, MD, MSc, Alaa Rostom, MD, MSc, Jennifer Skuce, BA, Andrea Morrison, BA, Brenda Hemmelgarn, MD, PhD, Community Health Sciences, Medicine, University of Calgary, Calgary, AB, Canada, Canadian Agency for Drugs and Technologies in Health, Ottawa, ON, Canada

P501. Comparison of Quality of Colonoscopy bowel Preparation Among In-Patients, Out-Patients with Standard Bowel Preparation and Out-Patients Who Had Reinforcement of Instructions by Nurses
Bini John, MD, MPH, Madhusudhan Sanaka, MD, Venkata Rajesh Konjeti, MD, Rocio Lopez, MS, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH

P502. Clinical Characteristics of Primary Epiploic Appendagitis
Sun Moon Kim, MD, Ji Young Cheun, MD, Young Suk Kim, MD, Tae Hee Lee, MD, Euyi Hyeog Lim, MD, Young Woo Choi, MD, Young Woo Kang, MD, Division of Gastroenterology, Departments of Internal Medicine, Konyang University College of Medicine, Metropolitan City Daejon, South Korea

P503. Influence of Site of Primary on Postoperative Outcomes for Patients with Metastatic Colorectal Cancer Undergoing Surgery
Lei Lian, MD, Ravi Kiran, MD, Ian Lavery, MD, Digestive Disease Institute, Cleveland Clinic Foundation, Cleveland, OH

P504. Effect of Gastric Acid Suppression on Recurrence of Clostridium difficile-Associated Disease
Kishore Maganty, MD, Jatinder Ahluwalia, MD, Gastroenterology / Medicine, Southern Illinois University School of Medicine, Springfield, IL

P505. Family History and Appropriate Referral for Colorectal Cancer Screening: A Survey of Trends in an Open Access Endoscopy Center
Sumana Moole, MD, Thomas McGarvity, MD, Maria Baker, PhD, Tareq Yasir, MD, Saroja Ramperattab, MD, Division of Gastroenterology, Hershey Medical Center, Hershey, PA

P506. Colon Tumor Biomarkers-Maldi Imaging of Tissue Microarray
Paul Pevsner, MD, Jonathan Melamed, MD, Tiffany Remsen, BA, Sushil Duddemudri, MD, Fritz Francois, MD, Mojdeh Momeni, MD, Nan Sandar, MD, Paul Kessler, PhD, Arnold Stern, MD, PhD, Sury Anand, MD, Department of Medicine, Department of Pathology, Department of Pharmacology, New York University School of Medicine, New York, NY, Department of Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY

P507. Are Patients with Cirrhosis at Increased Risk for Colorectal Neoplasia?
Deepa Shah, MD, Veronika Karasek, MD, Richard Gerkin, MD, Erin Tharalson, ANP, Francisco Ramirez, MD, FACG, Nooman Gilani, MD, FACG, GI, Carl T. Hayden VAMC, Phoenix, AZ

P508. Nitazoxanide to Treat Community Acquired Clostridium difficile-Associated Disease
William Stuppy, MD, Private Practice, Los Angeles, CA

P509. Screening Colonoscopy for Colorectal Neoplasia in Patients with Sporadic Fundic Gland Polyps of Stomach
Byung Wook Kim, MD, PhD, Internal Medicine, The Catholic University of Korea, Incheon, South Korea

P510. Evaluation of Risk Factors of Clostridium difficile Associated Diarrhea (CDAD) in Medicine and Surgical Inpatients
Mandeep Matta, MD, Sofia Novak, MD, H. Neemat, MD, M. Lesser, PhD, R. Hussain, MPH, MBA, B. Edwards, MD, Y. Drulacz, PhD, G. Wolf-Klein, MD, Long Island Jewish Medical Center, New Hyde Park, NY, Krasnoff Institute, Great Neck, NY, Feinstein Institute, Manhasset, NY

P511. Mortality Difference Among Inner City Minority New Yorkers Presenting with Colorectal Cancer
Tarun Narang, MD, Tegpal Atwal, MD, Ying Gu, MD, Doru Paul, MD, Sulaiman Azeem, MD, Balavenkatesh Karna, MD, MPH, Hematology-Oncology, Gastroenterology, Medicine, Lincoln Medical and Mental Health Center, affiliated with Weill Medical College of Cornell University, New York, NY

P512. Should Diagnostic Colonoscopy be Indicated for Patients with Constipation?
Emmanuel Obuse, BS, M1, Rocio Lopez, MS, Carol Burke, MD, Bo Shen, MD, Digestive Diseases Center, Cleveland Clinic Lerner College of Medicine, Cleveland Clinic Foundation, Cleveland, OH

P513. Predictors of Recurrent Clostridium difficile-Associated Diarrhea at Rochester General Hospital
Jawaid Shaw, MD, Sunny Tunmangday, MD, Pamela Polashenski, MD, Internal Medicine, Rochester General Hospital, Rochester, NY

P514. Glucagonoma Presenting as Isolated Chronic Diarrhea in an Irritable Bowel Syndrome Patient
Emmanuel Obuse, BS, M1, Rocio Lopez, MS, Carol Burke, MD, Bo Shen, MD, Digestive Diseases Center, Cleveland Clinic Lerner College of Medicine, Cleveland Clinic Foundation, Cleveland, OH

P515. A New Modality for Diagnosing Rumination Syndrome: 24-Hour Esophageal pH-Impedance
Wendy Mikulski, DO, Teresa Fergus, LPN, John Long, MD, Internal Medicine, Wake Forest University, Winston-Salem, NC, Internal Medicine, Drexel University, Philadelphia, PA

P516. Asymptomatic Incidental Colon Adenoma Associated with Schistosoma Mansoni
Neil Nagaria, MD, Ankit Kansagra, MBBS, Sushil Ahlawat, MD, Gastroenterology, UMDNJ-NJMS, Newark, NJ
P517. Mucosal Tear in Collagenous Colitis
Thomas Dunzendorfer, MD, Sarah Wilkins, MD, Rebecca Johnson, MD, Pathology, Gastroenterology, Berkshire Medical Center, Pittsfield, MA

P518. Acute Ischemic Colitis in a Patient with Metastatic Breast Cancer Undergoing Bevacizumab Therapy
Brian Yu, MD, Aekarach Ariyachaipanich, MD, Ghassan Zalzaleh, MD, Hareth Raddawi, MD, FACG, Department of Internal Medicine, University of Illinois at Chicago/Advocate Christ Medical Center, Oak Lawn, IL, Gastroenterology, Oncology-Hematology, Advocate Christ Medical Center, Oak Lawn, IL

P519. Sebaceous Carcinoma is a Recognized Risk Factor for Colon Cancer That Indicates Urgent Screening Colonoscopy; The Muir-Torre Syndrome
Mohammad Titi, MD, T. Kothari, MD, S. Devgun, MD, P. Leve, MD, K. Patei, MD, Internal Medicine, Unity Hospital, Rochester, NY

P520. Klebsiella Oxytoca and Antibiotic-Associated Hemorrhagic Colitis
Ketan Kulkarni, MD, Doug Weine, MD, Charles Maltz, PhD, Department of Gastroenterology and Hepatology, Weill Cornell Medical Center, New York, NY

P521. Colonoscopy Diagnosis of Amyloidosis
Kyong Ae Kim, MD, Kong Peng Yap, MD, Dennis Moseley, MD, Internal Medicine, UCSF Fresno, Fresno, CA, Gastroenterology, Pathology, VA Central California Health Care System, Fresno, CA

P522. Rapidly Growing Large B-Cell Lymphoma of the Colon
Subhra Banerjee, MD, Aaron Waltish, MD, Vivek Gumaste, MD, Maria Angelova, MD, Gastroenterology, Mount Sinai Hospital at Elmhurst Hospital Center, Elmhurst, NY, Pediatrics, Winthrop University Hospital, Mineola, NY

P523. Sumatriptan-Associated Ischemic Colitis (IC)
Thuc Quyen Nguyen, MD, Adrien Mazer, BS, James Lewis, MD, FACP, Gastroenterology, Medicine, Georgetown University, Washington, DC

P524. Diffuse Colonic Ulceration Secondary to Aeromonas Sobria
Paula Dionisio, MD, Kevin Ruff, MD, Holenarasipur Vikram, MD, Lucinda Harris, MD, Tisha Lunsford, MD, Infectious Diseases, Gastroenterology, Mayo Clinic Scottsdale, Scottsdale, AZ

P525. Acute Colonic Pseudo-Oclusion: Is Tegaserod a Treatment Option?
Ruben Ramirez, MD, Marc Zuckerman, MD, Sita Chokhavatia, MD, Medicine, Texas Tech University Health Sciences Center, El Paso, TX, Medicine, Mount Sinai School of Medicine, New York, NY

P526. Gastrointestinal Bleeding Secondary to Splenic Artery Pseudoaneurysm Fistulizing to the Colon
Seth Sweetser, MD, Louis-Michel Wong Kee Song, MD, Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P527. Death from Clozapine-Induced Gastrointestinal Hypomotility
Robert Swiec, MD, Baseer Qazi, MD, Marc Fine, MD, Gastroenterology, Internal Medicine, Advocate Lutheran General Hospital, Park Ridge, IL

P528. Colonoscopic Polypectomy in Glanzmann’s Thrombasthenia
Dimple Raina, MD, Aberrahim Khomani, MD, Fadi Rahhal, MD, Arvind Mowa, MD, Sherman Chamberlain, MD, Section of Gastroenterology and Hepatology, Medical College of Georgia, Augusta, GA

P529. Rare Gastrointestinal Complications of a Rare Disease: Klippel-Trenaunay Syndrome
Jahnvi Naik, MD, Yan Li, MD, Nicole Griggione, MD, Qiang Cai, MD, Division of Digestive Diseases, Emory University, Atlanta, GA

P530. Mycobacterial Spindle Cell Pseudotumor of the Colon: A Case Report
Sarah Mantzas, MD, Christopher South, MD, Purvi Panchal, MD, Martha Yearsley, MD, Department of Pathology, Division of Gastroenterology, Hepatology, and Nutrition, The Ohio State University Medical Center, Columbus, OH

P531. Endometriosis: An Unusual Cause of Inverted Appendix. A Case Report and Review of the Literature
Kristen Robson, MD, John Coller, MD, Colorectal Surgery, Gastroenterology, Lahey Clinic, Burlington, MA

P532. Nitazoxanide (Alinia®) as a Rescue Treatment for Refractory Fulminant Clostridium difficile Colitis
Aman Ali, MD, William Pullano, MD, Gastroenterology, Lenox Hill Hospital, New York, NY

P533. Complete Endoscopic Healing of Radiation Proctitis with Low Pressure Cryoablation
Yasser Shaib, MD, MPH, Jason Hou, MD, Gastroenterology, Baylor College of Medicine, Houston, TX

P534. A Sheep in Wolf’s Clothing: Rectal Histoplasmosis Behaving Like Cancer
Son Nguyen, MD, David Victor, MD, Stephen Abshire, MD, Internal Medicine, Tulane University, New Orleans, LA

P535. Schwannoma: A Rare Sigmoid Mass
Neeraj Anand, MD, Neil Herbsmann, MD, Leanne Cronin, MD, Sammy Ho, MD, Montefiore Medical Center, Bronx, NY

P536. Henoch-Schonlein Purpura Presenting as Bloody Diarrhea in an Elderly Patient
Eric Choi, MD, Walter Coyle, MD, Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA

P537. Symptomatic Intestinal Spirochetosis in Two Immunocompetent Patients
Ronald Concha, MD, Ayse Ayta, MD, Mujtaba Butt, MD, Rosemary Wieczorek, MD, Fidelina Desoto-Lapaix, MD, Gerald Fruchter, MD, Gastroenterology and Hepatology, SUNY Downstate Medical Center, Brooklyn, NY, Pathology, Gastroenterology, VA New York Harbor Health Care System, Brooklyn, NY

P538. Two Cases of Crohn’s Disease in the Setting of Past Necrotizing Enterocolitis
Patricia Kozuch, MD, Gastroenterology/Internal Medicine, Thomas Jefferson University, Philadelphia, PA

P539. Hidradenitis Suppurativa, Acne Conglobata Associated with Spondyloarthropathy and Pyoderma Gangrenosum: Response to Infliximab
Daniel Blachman, MD, Kiron Das, MD, Naomi Schlesinger, MD, Internal Medicine, Robert Wood Johnson University Hospital, New Brunswick, NJ

P540. Herpes Simplex Virus Colitis in a Patient with Crohn's Disease and Hepatitis B and C Cirrhosis
Jenny Smith, MD, Richard Sterling, MD, A. Scott Mills, MD, R. Stravitz, MD, Velimir Luketic, MD, Michael Fuchs, MD, Arun Sanyal, MD, Mitchell Shiffman, MD, Pathology, Gastroenterology and Hepatology, Virginia Commonwealth University, Richmond, VA

P541. A Case of “Inflamed Vessels"
Harshna Patel, MD, Maria Cino, MD, Department of Medicine, University of Toronto, Toronto, ON, Canada, Department of Medicine, Division of Gastroenterology, University Health Network, University of Toronto, Toronto, ON, Canada
P542. Clostridium Septicum Infection Secondary to Immunosuppression by Sulfasalazine in Crohn’s Disease
Natalie Bowser, MBBS, Vincent Ho, MBBS, Andrew Pascoe, MBBS, FRACP, Gastroenterology, Princess Alexandra Hospital, Brisbane, QLD, Australia

P543. Rectal Squamous Cell Metaplasia in Crohn’s Disease
Mayur Trivedi, MD, Gerold Fruchter, MD, Andrew Seymour, MD, Gastroenterology, VA NY Harbor Healthcare System & SUNY Downstate Medical Center, Brooklyn, NY, Gastroenterology, VA NY Harbor Healthcare System, Brooklyn, NY

P544. Rifaximin Monotherapy Was Effective in Patients with Newly Diagnosed Crohn’s Disease
Ira Shafran, MD, P. Burgunder, ARNP, Shafran Gastroenterology Center, Winter Park, FL

P545. A Case of Tuberculous Enteritis Mimicking Crohn’s Disease
Richard Blatt, MD, Jennie Law, MD, Tanvi Dhere, MD, Marney Goldstein, MD, Henry Olejeme, MD, Emory University, Atlanta, GA

P546. Cyclosporine in Steroid Refractory Ulcerative Colitis in the First Trimester of Pregnancy
Sophie Saizola, MD, Vinuta Jacob, MD, Ellen Scheri, MD, Brian Bosworth, MD, Roberts IBD Center, Division of Gastroenterology and Hepatology, Weill Medical College of Cornell University, New York, NY, Medicine, New York Presbyterian Hospital: Columbia Presbyterian Center, New York, NY

P547. Terminal Ileal Carcinoid Tumor in Active Crohn’s Disease: Diagnostic and Management Uncertainties
Jason Swoyer, MD, MPH, Edward Loftus, MD, Miles and Shirley Fiterman Center for Digestive Diseases, Mayo Clinic, Rochester, MN

P548. New Onset Crohn’s Disease in the Postpartum Period: A Case Report and Review of the Literature
Haripriya Singh, MD, Aparna Kulkarni, MD, Gastroenterology, Downstate Medical Center, Brooklyn, NY, Gastroenterology, VA NY Harbor Healthcare System, Brooklyn, NY

P549. Efficacy of Rifaximin as Long-Term Maintenance Therapy for Refractory Crohn’s Disease
★ 2008 ACG Presidential Poster Award Recipient
Warren Finkelstein, MD, The Gastroenterology Group of New Jersey, Glen Ridge, NJ

P550. Abdominal Aortitis, an Extremely Unusual Extra-Intestinal Manifestation of Crohn’s Disease
Ronald Concha, MD, Ali Azarm, MD, Adam Goodman, MD, Frank Gress, MD, Gastroenterology and Hepatology, SUNY Downstate Medical Center, Brooklyn, NY

P551. Esophageal Intramural Pseudodiverticulosis Presenting as Severe Upper Gastrointestinal Hemorrhage
Marc Hopkins, MD, Kathy Bull-Henry, MD, Kirti Shetty, MD, Stanley Benjamin, MD, Gastroenterology, Georgetown University Hospital, Washington, DC

P552. Endoscopic, Radiologic, and Manometric Features of an Incomplete Heller Myotomy for Achalasia: Successful Treatment by Pneumatic Dilation
Paul Benson, MD, Nathan Shores, MD, Joel Bruggen, MD, John Long, MD, Internal Medicine, Wake Forest University, Winston-Salem, NC

P553. The Black Esophagus: A Case of Necrotizing Esophagitis
Bryan Sauer, MD, MS, Vanessa Shami, MD, Michel Kallalen, MD, Digestive Health, University of Virginia, Charlottesville, VA

P554. The Grape Obstruction
Gerald Arbour, MD, Ankur Sheth, MD, Paul Jordan, MD, Kenneth Manas, MD, Gastroenterology, LSU Health Sciences Center - Shreveport, Shreveport, LA

P555. Esophageal Apoplexy: A Purple Haze
Joseph McKinley, MD, Steven Kucera, MD, Yasser Saloum, MD, H. Worth Boyce, MD, Gastroenterology, University of South Florida, Tampa, FL

P556. Downhill Esophageal Varices—A Different Entity from Portal Hypertensive Esophageal Varices
Deerajnath Lingulta, MD, Kirti Joshi, MD, Michael DiSalle, MD, Medicine, Unity Health System, Rochester, NY

P557. Eosinophilic Esophagitis Presenting with Dyspepsia and Anorexia
Krzesztof Kopec, MD, Samir Shah, MD, Edward Feller, MD, Medicine, Division of Gastroenterology, Gastroenterology Associates and Brown University, Providence, RI, Department of Medicine, Warren Alpert Medical School, Providence, RI

P558. Black Esophagus—A Rare Cause of Gastrointestinal Bleeding
Steve Kucera, MD, Joseph McKinley, MD, Patrick Brady, MD, FACG, FAPA, H. Worth Boyce, MD, MACG, FACP, University of South Florida, Tampa, FL

P559. Familial Barrett’s Esophagus
Charles Farr, MD, Gastroenterology, St. Agnes, Fresno, CA

P560. Hepatoid Esophageal Cancer: A Rare Cause of Elevated Alpha-fetoprotein
Muslim Atiq, MD, Daniel Brown, MD, Muhammad Husain, MD, Kevin Olden, MD, Pathology, Gastroenterology, University of Arkansas for Medical Sciences, Little Rock, AR

P561. Uncommon Presentation of Pancreatic Microcystic Adenoma in a Patient with Von Hippel-Lindau Syndrome
Lubin Arevalo, MD, Julio Defillo, MD, Young Lee, MD, Shobhana Chaudhuri, MD, Internal Medicine, New York Medical College, New York, NY

P562. Successful Diagnosis and Management of Biliary Cast Syndrome in a Liver Transplant Patient Using Single Operator Cholangioscopy
Udayakumar Navaneethan, MD, Mayar Al Mohayer, MD, Ana Mestanza, MD, Joseph Palascak, MD, Andres Gelrud, MD, MMSc, Internal Medicine, University of Cincinnati Medical Center, Cincinnati, OH

P563. Acute Necrotizing Pancreatitis with Normal Amylase and Lipase
Scott DiGiacomo, MD, Rada Shakov, MD, Shiviangi Khara, MD, Medhat Ismail, MD, Hossam Elfarra, MD, Walid Baddoura, MD, Gastroenterology, St. Joseph’s Regional Medical Center, Paterson, NJ

P564. Lemmel’s Syndrome: Abdominal Pain in a Middle-Aged Female
Milton Mutchnick, MD, Department of Gastroenterology, Wayne State University School of Medicine/Detroit Medical Center, Detroit, MI

P565. Bilio-Pleural Fistula Following Trans-Arterial Chemoembolization in a Patient with Hepatocellular Carcinoma
Jeffrey Lewis, MD, Brian Gehlbach, MD, Oto Aytekin, MD, Jennifer Chennat, MD, Smruti Mohanty, MD, Gastroenterology, Radiology, Pulmonary and Critical Care, Internal Medicine, University of Chicago Medical Center, Chicago, IL

P566. Severe Post Endoscopic Biliary Sphincterotomy Bleeding in a Patient with Both Duodenal Diverticulum and Abnormal Vascular Anatomy
Kevin Jo, MD, Ashok Shah, MD, MACG, Gastroenterology, University of Rochester, Rochester, NY
P567. Tubercular Pancreatic Abscess Presenting as Fever and Cystic Pancreatic Lesion with Endoscopic Management
Jonathan Fenkel, MD, Maya Spodick, MD, Bheema Singu, MD, David Loren, MD, Division of Gastroenterology and Hepatology, Thomas Jefferson University Hospital, Philadelphia, PA

P568. Paralyzing Diarrhea
Travis Rutland, MD, Lee Thompson, MD, Jorge Herrera, MD, Division of Gastroenterology, and Department of Surgery, University of South Alabama, Mobile, AL

P569. Acute Pancreatitis Secondary to Percutaneous Liver Biopsy
Grace Noh, MD, Ankit Kansagra, MD, Harmit Kalia, DO, Weizheng Wang, MD, Department of Gastroenterology, Department of Internal Medicine, University of Medicine and Dentistry of New Jersey, New Jersey Medical School, Newark, NJ

P570. Primary B-Cell Lymphoma of the Pancreas
Stuart Akerman, MD, Andrew Pelleccchia, MD, Samer Khader, MD, Sammy Ho, MD, Pathology, Gastroenterology, Medicine, Montefiore Medical Center, Bronx, NY

P571. A Rare Case of Multifocal Non-Functioning Neuro-Endocrine Tumor of the Pancreas Presenting as Chronic Autoimmune Pancreatitis
Nayantara Coelho-Prabhu, MD, Suresh Chari, MD, Gastroenterology, Mayo Clinic Rochester, Rochester, MN

P572. Mirizzi Syndrome with Xanthogranulomatous Cholecystitis (XGC): An Unusual Association
Nayantara Coelho-Prabhu, MD, William Sanchez, MD, Gastroenterology, Mayo Clinic Rochester, Rochester, MN

P573. Obstructive Jaundice Secondary to Diaphragmatic Hernia Diagnosed by ERCP
Fedele DePalma, MD, Nirmala Sivaprasakaspillai, MD, Jae Hong, MD, Adam Effant, MD, Department of Gastroenterology, Department of Internal Medicine, Cooper University Hospital, Camden, NJ

P574. Pancreatic Plasmacytoma Presenting as Variceal Hemorrhage: Life Threatening Complication from a Rare Entity
Muslim Atiq, MD, Syed Ali, MD, Shyam Dang, MD, Elias Anaisse, MD, Kevin Olden, MD, Farshad Aduli, MD, Myeloma Institute of Research and Therapy, Gastroenterology, University of Arkansas for Medical Sciences, Little Rock, AR

P575. Fasciola Hepatica Causing Acute Pancreatitis Complicated by Biliary Sepsis
Nison Badalov, MD, Ava Anklesaria, MD, Anita Torok, MD, Ian Wall, DO, Jack Braha, DO, Jianjun Li, MD, FACG, Kadirawel Iswara, MD, MD, FACG, Scott Tenner, MD, MPH, FACG, Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P576. Poster Withdrawn

P577. Post-EMR Surveillance of GE-Junction Mucosal Lesions with EUS
John Carroll, MD, Elisabeth Kramer, BS, Homayoon Mahjoob, MD, Medicine, Georgetown University Medical Center, Washington, DC

P578. Propofol Facilitates Foreign Body Extraction
M. Babitha Reddy, DO, Michael Frank, MD, Gastroenterology, Lenox Hill Hospital, New York, NY

P579. Case Report of Endosonographic Doppler Interrogation of Blue Rubber Bleb Nevis Syndrome
Deborah Flomenhoft, MD, Nicholas Nickl, MD, Internal Medicine and Pediatrics, University of Kentucky, Lexington, KY

P580. Chilaiditi Syndrome and Double Balloon Colonoscopy
Timothy Duncan, MD, Jonathan Koff, MD, Frank Moses, MD, Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P581. Cavernous Malformation Masquerading as a Neoplasm on Routine Imaging Accurately Diagnosed Using EUS
Patrick McDevitt, DO, MSC, Matthew Moyer, MD, MSC, Abraham Mathew, MD, MSC, Department of Gastroenterology and Hepatology, Department of Internal Medicine, The Penn State Hershey Medical Center, Hershey, PA

P582. Fungal Endocarditis: A Case for Fungal Prophylaxis Before Gastrointestinal Procedures
Shanthi Sivendran, MD, Nicole Swallow, MD, Ian Schreibman, MD, Medicine, Pennsylvania State University-Hershey Medical Center, Hershey, PA

P583. Endoscopic Sigmoidopexy for Recurrent Sigmoid Volvulus as Alternative to Surgical Management
Mukul Arya, MD, Siddharth Mathur, MD, Niket Sonpal, MD, Yashpal Arya, MD, Wyckoff Heights Medical Center, Brooklyn, NY

P584. Iatrogenic Colon Perforation: To Clip or Not to Clip?
Nison Badalov, MD, Ian Wall, DO, Jack Braha, DO, Konstantin Vaizman, MD, Jianjun Li, MD, FACG, Kadirawel Iswara, MD, MD, FACG, Scott Tenner, MD, MPH, FACG, Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P585. Strongyloides Duodinitis and Mesenteric Vein Thrombosis Presenting with Abdominal Pain, Hypereosinophilia and Elevated IgE
M. Babitha Reddy, DO, Michael Frank, MD, Gastroenterology, Lenox Hill Hospital, New York, NY

P586. Neuroendocrine Tumor of the Jejunum in a Patient with Celiac Disease
Joseph Cheatham, MD, Thomas Summers, MD, Pranav Patel, MD, John David Horwhat, MD, MD, Hematology and Oncology, Gastroenterology, William Beaumont Hospital, Royal Oak, MI

P587. Solitary Duodenal Polyp: A Rare Presentation of Primary Amyloidosis
Joseph Cheatham, MD, Thomas Summers, MD, Pranav Patel, MD, John David Horwhat, MD, MD, Hematology and Oncology, Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P588. Pseudomelanosis of Duodenum and Jejunum Visualized on Capsule Endoscopy
Deborah Anghesom, MD, Kendrick Che, DO, Ronald Griffin, MD, Christian Jackson, MD, Division of Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA, Division of Gastroenterology, Loma Linda VA Medical Center, Loma Linda, CA

P589. Anaplastic Intra-Abdominal Lymphoma as a Cause of Sclerosing Mesenteritis: A Case Report
Jay Luther, MD, Alexander Faje, MD, Richard Saad, MD, William Chey, MD, Internal Medicine, University of Michigan Health Systems, Ann Arbor, MI

P590. Whipple’s Disease: A Rare Cause for Common Complaints
Erin Karandish, MD, Charlene Prather, MD, MPH, Gastroenterology and Hepatology, Saint Louis University, Saint Louis, MO

P591. Chylous Mesenteric Cyst in Asymptomatic 60-year-old Woman
Susan Barton, MD, Vandana Nehra, MD, Department of Gastroenterology, Mayo Clinic, Rochester, MN
P592. Angiotensin Converting Enzyme Inhibitor (ACEI) Induced Angioedema of Small Intestine in a Transplant Patient
Suwebatu Odunsi, MD, Patrick Kamath, MD, Mayo Clinic Rochester, Rochester, MN

P593. Giant Liposarcoma Presented as Inguinal Hernia. Unusual Size, Presentation
Houssam Al Kharrat, MD, Omar Shoukfeh, Medical Student, Luke Brown, Senior College, West Texas Digestive Disease Center, Lubbock, TX, Texas Tech University Health Sciences Center, Lubbock, TX, Abilene Christian University, Abilene, TX

P594. Does Eating Black Licorice Mimic Melena or Cause It?
Arun Srivatsa, MD, Judy Liu, BS, Joel McFarland, MD, Vivek Kaul, MD, University of Rochester, Rochester, Rochester, NY

P595. An Unusual Case of Nausea, Vomiting, Diarrhea and Urinary Retention in a Healthy Female
Joshua Goldman, MD, Francis Farraye, MD, MSc, FACG, Section of Gastroenterology, Boston University School of Medicine, Boston, MA

P596. A Rare Cause of Severe Anemia and Gastro-Intestinal Bleeding: Klippel Trenaunay Syndrome with Extensive Vascular Involvement
Fnu Deepinder, MD, Andrew Albert, MD, Nkemakolam Iroegbu, MD, Gastroenterology and Hepatology, Internal Medicine, Saint Joseph Hospital, Chicago, IL

P597. A Case of Obscure Gastrointestinal Bleeding Secondary to a Small Bowel Tumor Detected by Magnetic Resonance Enterography
Foad Moawad, MD, Todd LaRock, DO, Michael Biondi, MD, Brooks Cash, MD, Jayde Kurland, MD, Gastroenterology, Walter Reed Army Medical Center, Washington, DC, Radiology, Gastroenterology, National Naval Medical Center, Bethesda, MD

P598. A Rare Case of Thymoma Associated Autoimmune Enteropathy
Jae Geun Hyun, MD, Sita Chokhavatia, MD, Xianyong Gui, MD, Noam Harpaz, MD, PhD, Lloyd Mayer, MD, Pathology, Gastroenterology, The Mount Sinai Hospital, New York, NY

P599. Multicenter Medical Malpractice Risk Reduction Study for Medical Students, Trainees and Practicing Physicians Using Short Burst [SSB] E-Mailed Seminars
Perry Hookman, MD, FACP, Gloria Weinberg, MD, Michele Pato, MD, Richard Gelfand, MD, Bernard Rosof, MD, FACG, Jamie Barkin, MD, MACG, Gastroenterology, Medicine, Mt Sinai Medical Center, Miami Beach, FL, Medicine, North Shore Medical Center, Huntington, NY, Psychiatry, USC, Los Angeles, CA, Gastroenterology, Metro Gastroenterologists, Washington, DC

P600. Hypocupremia: A Rare Cause of Gastrojejunal Bypass-Associated Meloneuropathy and Anemia

2008 ACG Presidential Poster Award Recipient
Eric Choi, MD, Williamson Strum, MD, Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA

P601. Small Bowel MRI Diagnosis of Meckel’s Diverticulum
Raman Battish, MD, Hiral Shah, MD, Averell Sherker, MD, FRCPC(C), James McFadden, MD, Radiology, Gastroenterology, Hospital Center, Washington, DC

P602. Complication of Transjugular Intrahepatic Portosystemic Shunt Placement: Stent Migration into Pulmonary Artery
Stacy Tong, MD, Cynthia Lau, MD, Joseph Ahn, MD, Hector Ferral, MD, Nikunj Shah, MD, Stanley Cohen, MD, Interventional Radiology, Gastroenterology and Hepatology, Rush University Medical Center, Chicago, IL

P603. Graft Versus Host Disease After Liver Transplant
Sunana Sohi, MD, Stanley Cohen, MD, Nikunj Shah, MD, David Van Thiel, MD, Joseph Ahn, MD, Gastroenterology and Hepatology, Rush University Medical Center, Chicago, IL

P604. Sudden Progression to Liver Failure in a Stable Cirrhotic Patient
Chethra Muthiah, MD, Joseph Ahn, MD, MS, Stanley Cohen, MD, Internal Medicine, Section of Hepatology, Rush University Medical Center, Chicago, IL

P605. The Dilemma of Idiopathic Fulminant Hepatic Failure
Anupam Mohanty, MD, Eugene Schiff, MD, Hepatology, University of Miami, Miami, FL

P606. Aromatic Hydrocarbon-Induced Acute Hepatotoxicity
Mukund Venu, MD, Sameh Gawrie, MD, Kia Saeb, MD, Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI

P607. A Rare Case of Spontaneous Cryptococcal Peritonitis
Anne Thai, MD, Kanat Ransibrahmanakul, MD, Danny Yen, MD, Lynne Do, MD, Valentina Medic, MD, Christopher Bowlds, MD, Internal Medicine-Gastroenterology and Hepatology, Internal Medicine, University of California, Davis Medical Center, Sacramento, CA

P608. Chronic Nausea and Vomiting and Accelerated Progression to Cirrhosis in a Patient with a Mitochondrial Enzyme Deficiency
Otis Stephen, MD, Brent Neuschwander-Tetri, MD, Gastroenterology & Hepatology, UC Davis, Sacramento, CA, Gastroenterology & Hepatology, St. Louis University, St. Louis, MO

P609. Submassive Hepatic Necrosis Caused by Coxsackie A9 Virus in a Stem Cell Transplant Recipient
David Victor, MD, Jacob Feagans, MD, Salima Haque, MD, Hana Safah, MD, Shobha Joshi, MD, Internal Medicine, Tulane University School of Medicine, New Orleans, LA

P610. Giant Focal Nodular Hyperplasia Presenting as Pseudo-Mirizzi Syndrome
Kenneth Berman, MD, Raj Yuppalanchi, MD, Medicine-Gastroenterology, Indiana University, Indianapolis, IN

P611. Gone (from the PDR) but Not Forgotten: Propylthiouracil (PTU)-Associated Hepatic Failure (ALF): A Call for LFT Monitoring
Jennifer Primigga, MD, James Lewis, MD, Internal Medicine, Georgetown University, Washington, DC

P612. Hepatic Manifestations of Ovarian Hyperstimulation Syndrome
Afreen Khan, MD, Vijay Mudunuri, MD, Milton Mitchnick, MD, Elizabeth Puscheck, MD, Gastroenterology, Wayne State University, Detroit, MI

P613. Resolution of Portal Hypertension Following Steroid Therapy for Hepatic Sarcoïdosis
Nayantara Coelho-Prabhu, MD, Patrick Kamath, MD, Gastroenterology, Mayo Clinic Rochester, Rochester, MN

P614. Spontaneous Intrahepatic Portosystemic Venous Shunt
Fedele DePalma, MD, Jeffrey Gells, DO, James Kovacs, DO, Joshua DeSipio, MD, Department of Radiology, Department of Gastroenterology, Department of Internal Medicine, Cooper University Hospital, Camden, NJ

P615. Hepatic Sarcoïdosis Mimicking Metastatic Cancer
Raman Battish, MD, Hiral Shah, MD, Averell Sherker, MD, FRCPC(C), Gastroenterology, Washington Hospital Center, Washington, DC

P616. An Uncommon Cause of Abdominal Pain
Ahmed Morales, MD, Praveen Nallapareddy, MD, Shivani Jain, DO, Michael Kiamut, MD, Sherni Yong, MD, Khondker Islam, MD, Loyola University Medical Center, Maywood, IL
P617. Lyme Disease Presenting with Gastroparesis and Cranial Nerve VII Palsy
Bryan Kavanaugh, MD, Bridge Seymour, MD, Patricia Kozuch, MD, Gastroenterology & Hepatology, Thomas Jefferson University Hospital, Philadelphia, PA

P618. New Onset Ascites: A Rare Presentation of Gastrointestinal Stromal Tumor (GIST)
Rodney Eddi, MD, Scott DiGiacomo, MD, Rada Shakov, MD, Amanda Pinzon, MD, Wald Baddoura, MD, Gastroenterology, Internal Medicine, St. Joseph's Regional Medical Center, Paterson, NJ

P619. Double Pylorus: Case Report, Review of Literature and Evidence Based Treatment Strategy
Kiran Goli, MD, Chandra Lingisety, MD, Sandip Ghuge, MD, Shobhana Chaudhari, MD, Susan Williams, MD, Gastroenterology, Internal Medicine, New York Medical College/Metropolitan Hospital Center, New York, NY

P620. Gastric Siderosis Presenting as a Bleeding Gastric Ulcer with Profound Anemia
Dharshan Coomaraswamy, MD, Ian Wall, DO, Michael Bernstein, MD, Nison Badalov, MD, Kadirawel Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Department of Internal Medicine, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY, Department of Internal Medicine, Division of Gastroenterology, Kings Island Hospital, Brooklyn, NY

P621. Gastric Glomus Tumor: An Adult with Abdominal Pain
Robert Wells, MD, Luis Panea, MD, Karl Schulstad, MD, Division of Gastroenterology, University of Kentucky, Lexington, KY, General Surgery, Herron Memorial Hospital, Cynthiana, KY

P622. Incomplete Carney Triad, Metastatic GIST, and JPS in a Young Woman: A Case Report and Literature Review
Maria Hatara, MD, George Aragon, MD, Marie Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, Internal Medicine, George Washington University, Washington, DC

P623. An Unusual Case of Amyloidosis Masquerading as Gastric Cancer
Arvind Reddy, MD, MPH, Johnny Altawil, MD, Fadi Antaki, MD, Medicine, Gastroenterology, Wayne State University, Detroit, MI

P624. Making a Strong Case for Delayed Gastric Emptying
Andrew Cummins, MD, MS, Linda Nguyen, MD, Gastroenterology, California Pacific Medical Center, San Francisco, CA

P625. Sweet's Syndrome: A Clue to Gastric Cancer
Neeraj Anand, MD, David Greenwald, MD, Gastroenterology, Montefiore Medical Center, Bronx, NY

P626. A Mimicker of Crohn's Disease: Linitis Plastica
Eric Choi, MD, Williamson Strum, MD, Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA

P627. Zinc-Induced Hypocupremia: A Rare Cause of Anemia and Neutropenia in the Post-Gastric Bypass Patient
Eric Choi, MD, Kevin Antonio, MD, Williamson Strum, MD, Internal Medicine, Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA

P628. Granulomatous Gastritis in Two Patients with Helicobacter pylori Infection
Ronald Concha, MD, Ayse Ayta, MD, Mujtaba Butt, MD, Rosemary Wieczorek, MD, Fidelina Desoto-Lapaix, MD, Gerald Fruchter, MD, Gastroenterology and Hepatology, SUNY Downstate Medical Center, Brooklyn, NY, Pathology, Gastroenterology, VA New York Harbor Health Care System, Brooklyn, NY

P629. Azathioprine-Induced Eosinophilic Lung Nodules in a Patient with Crohn's Disease
Michelle Rivera, MD, Ana Conde, MD, Jose De Jesus, MD, Jorge Santana, MD, Maria Correa, MD, Esther Torres, MD, MACG, AGAF, Gastroenterology Section, Department of Internal Medicine, Infectious Diseases Section, Department of Pathology, UPR School of Medicine, San Juan, PR

OUTCOMES RESEARCH

P630. Oral or Intravenous Proton Pump Inhibitor in Patients with Peptic Ulcer Bleeding After Successful Endoscopic Epinephrine Injection—A Prospective Randomized Comparative Trial
★ 2008 ACG Presidential Poster Award Recipient
Yao-Chun Hsu, MD, Tzeng-Huey Yang, MD, Wei-Lun Hsu, MD, Huei-Tung Wu, MD, Hwai-Jeng Lin, MD, Division of Gastroenterology, Department of Internal Medicine, Lotung Poh-Ai Hospital, Yilan, Taiwan

P631. Does Trainee Involvement in Colonoscopy Affect Cecal Intubation and Polyp Detection Rates?
Leon Kogan, MD, Maurice Cerulli, MD, Division of Gastroenterology and Hepatology, New York Methodist Hospital, Brooklyn, NY

P632. Screening Colonoscopy in Older Medicare Beneficiaries—Do We Consider Prognosis?
Deepika laxmi Koya, MD, MSCR, John Chen, MD, PhD, William Moran, MD, MS, Division of Digestive Diseases & Nutrition, University of South Florida, Tampa, FL, Internal Medicine, Medical University of South Carolina, Charleston, SC

P633. Anemia without Low Ferritin—Do They Warrant a GI Workup? A Preliminary Hospital Based Study
Vinod Kurupath, MD, Malwinder Singh, MD, Khurshid Mazumdar, MD, Niket Sonpal, MD, Sury Anand, MD, Gastroenterology, Brooklyn Hospital Center, Brooklyn, NY

P634. Perspectives and Attitudes of Internal Medicine Residents to Chaperons Use During Rectal Examinations—A Disconcerting Discovery
Vinod Kurupath, MD, Niket Sonpal, MD, Siddharth Mathur, MD, Carl Bastien, MD, Mukul Arya, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Gastroenterology, Wyckoff Heights Medical Center, Brooklyn, NY

P635. Cost-Effectiveness of Empiric PPI Therapy in the Treatment of Laryngopharyngeal Reflux Symptoms
Robert Lee, MD, Division of Gastroenterology, University of California San Diego, San Diego, CA

P636. A Cost Analysis of the Diagnostic Workup of Heartburn Symptoms in Patients with Erosive and Non-Erosive Reflux Disease
Robert Lee, MD, Jeffrey Weissman, MD, Internal Medicine, Division of Gastroenterology, University of California San Diego, San Diego, CA

P637. Triple Versus Quadruple Therapy as Primary Treatment for Helicobacter pylori Infection: A Meta-Analysis of Efficacy and Tolerability
Jay Luther, MD, Phil Schoenfeld, MD, Paul Moayyedi, MB, ChB, PhD, MPH, Nimish Vakil, MD, Stephen George, PharmD, MS, William Cherry, MD, University of Michigan Medical Center, Ann Arbor, MI, McMaster University, Hamilton, ON, Canada, University of Wisconsin Medical School, Milwaukee, WI, Conexus Health, Tampa, FL

P638. Effect of Advancing Technology on the Accuracy in Nodal Staging of Gastric Cardia Cancers by Endoscopic Ultrasound: A Meta-Analysis and Systematic Review
Srihivas Puliy, MD, Jyotsna BK Reddy, MD, Matthew Bechtold, MD, Abhishek Choudhary, MD, Mairon Antillon, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO
P648. Can Use of Capsule Endoscopy Reduce Prison Health Care Costs?  
Iryna Hepburn, MD, Ayaz Chaudhary, MD, Edward Bailey, MD, Robert Schade, MD, Georgia Correctional Health Care, Medicine, Medical College of Georgia, Augusta, GA

P649. Delayed Radionucleotide Gastric Emptying Studies Predict Morbidity in Diabetics with Symptoms of Gastropareisis  
Brian Hyett, MD, Fernando Martinez, MD, Shilpa Mehra, MD, Brian Gill, MD, Daniel Leffler, MD, Anthony Lembo, MD, Ciaran Kelly, MD, Beth Israel Deaconess Medical Center, Boston, MA

P650. Thiazolidinedione Use and Rectal Cancer in Diabetics: A Population Based Case-Control Study  
Millie Long, MD, MPH, Lisa Vinikoor, MSPH, PhD, Christopher Martin, MSPH, Joseph Galakos, PhD, Temitope Keku, PhD, Robert Sandler, MD, MPH, Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC, Epidemiology, University of North Carolina-Chapel Hill, Chapel Hill, NC

P651. The Operational Effect of a GI Hospitalist Service on a University-Based Gastroenterology Practice  
Pavan Manchikalapati, MD, Dominic Nompelli, MD, PhD, John Levey, MD, Gastroenterology, University of Massachusetts, Worcester, MA

P652. A Structured GI Referral Schedule Improves Outcomes in Patients Discharged from the Chest Pain Center  
Mark Mellow, MD, Amy Kanatzar, INTEGRIS Center for Digestive Health, Oklahoma City, OK

P653. Utilization and Costs of Medical Services Among Gastroesophageal Reflux (GERD) Patients Using ‘Real World’ Data  
Reema Mody, PhD, MBA, Brian Meissner, PharmD, PhD, Nicholas Shaheen, MD, MPH, TAP Pharmaceuticals Products Inc., Lake Forest, IL, Xcenda, Palm Harbor, FL, Center for Esophageal Diseases and Swallowing, University of North Carolina, Chapel Hill, NC

P654. A Retrospective Chart Review Investigating the Use of Colonoscopy in the Elderly  
Michael Raphael, DO, Jennifer DiNubila, DO, Michael Biederman, DO, Gastroenterology, Botsford Hospital, Farmington Hills, MI

INFLAMMATORY BOWEL DISEASE

P655. Improved Bone Mass After Ileal Pouch-Anal Anastomosis for Patients with Ulcerative Colitis  
★ 2008 ACG Presidential Poster Award Recipient  
Hong Lu, MD, PhD, Rocio Lopez, MS, Bo Shen, MD, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH

P656. Characterization of Clinical and Serologic Features of Crohn’s Disease and Anti-TNFα Use in a Chinese Cohort  
Hong Lu, MD, PhD, Ru Zhang, MD, Bing-Bing Shen, MD, Jefferey Hammel, MD, Bo Shen, MD, Jia-Ming Qian, MD, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH, Gastroenterology, Peking Union Medical College Hospital, Beijing, China

P657. Factors Associated with Conversion of an Ulcerative Colitis Diagnosis to Crohn’s Disease  
★ 2008 ACG Presidential Poster Award Recipient  
Ani Wiesen, MD, Seymour Katz, MD, MACG, Blanche Fung Liu, MD, David Oustuecky, MD, Camille Sommers, MD, Natan Krohn, MD, Gastroenterology, Long Island Jewish Medical Center, Glen Oaks, NY

P658. Poster Withdrawn

P659. Efficacy and Safety of Adalimumab in the Treatment of Crohn’s Disease of the Ileal Pouch  
Bo Shen, MD, Feza Remzi, MD, Ling Shen, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH
P681. Minimal Effect of a High-Fat Meal on the Pharmacokinetics of Once-Daily Granulated Mesalamine
Alan Safdi, MD, Hank Pieniaszek, PhD, Andrew Grigston, PhD, William Forbes, PharmD, Ohio Gastroenterology & Liver Institute, Cincinnati, OH, HPP Consulting & Services, Inc., Darlington, MD, Salix Pharmaceuticals, Morrisville, NC

P682. Multiple-Dose Pharmacokinetics of Granulated Mesalamine, A Unique Formulation Providing Delayed and Extended Release of 5-ASA
Alan Safdi, MD, Hank Pieniaszek, PhD, Andrew Grigston, PhD, William Forbes, PharmD, Ohio Gastroenterology & Liver Institute, Cincinnati, OH, HPP Consulting & Services, Inc., Darlington, MD, Salix Pharmaceuticals, Morrisville, NC

P683. A Pharmacokinetic and Scintigraphic Comparison of MMX™ Mesalamine and Delayed-Release Mesalamine
Heather Wray, PhD, Raymond Joseph, MD, Mary Palmen, PhD, David Pierce, PhD, Pharmaceutical Profiles Ltd, Nottingham, United Kingdom, Shire Pharmaceuticals Inc, Wayne, PA

P684. A Prospective, Controlled Longitudinal Study of the Effects of Oral Steroids at 3, 6 and 12 Months on Bone Mineral Density (BMD) in Patients with IBD
Jae Geun Hyun, MD, Asher Kornbluth, MD, James George, MD, Peter Legnani, MD, Simon Lichtiger, MD, Michele Kissou-Hunt, RPA-C, Meredith Lewis, MS, Gastroenterology, The Mount Sinai Hospital, New York, NY

P685. Impact of Narcotic Use on Requirement of Colectomy in Inpatients with Ulcerative Colitis
Lei Lian, MD, Victor Fazio, MB, MS, Bo Shen, MD, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH

P686. Use of a Blood IFN-γ Release Assay (Quantiferon-TB Gold Test) for Tuberculosis Screening in Inflammatory Bowl Disease (IBD)
Bashar Qumseya, MD, Ashwin Ananthakrishnan, MD, MPH, Mazen Issa, MD, Susan Skaros, PA-C, Josh Knox, PA-C, Kathryn Lemke, PA-C, Anita Ward, RN, David Binion, MD, Division of Gastroenterology and Hepatology, Internal Medicine, Medical College of Wisconsin, Milwaukee, WI

FUNCTIONAL BOWEL DISORDERS

P687. The Prevalence of Positive Serologic Tests for Celiac Sprue Does Not Differ Between Irritable Bowel Syndrome (IBS) Patients Compared with Controls
Yun Saito-Loftus, MD, MPH, Tricia Brantner, Janice Zimmerman, Nicholas Talley, MD, PhD, Joseph Murray, MD, Department of Internal Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

P688. Is High-Definition Manometry a Comprehensive Test of Anal Sphincter Function: Comparative Study with Manometry and Ultrasound
Kasaya Tantiphlachiva, MD, Jessica Paulson, BS, Ashok Attaluri, MD, Satish Rao, MD, PhD, FRCP, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA, Division of Colon and Rectal Surgery, Chulalongkorn University, Bangkok, Thailand

P689. Translumbar and Transsacral Motor Evoked Potentials in Patients with Rectal Hyposensitivity
Kasaya Tantiphlachiva, MD, Jose Remes-Troche, MD, Ashok Attaluri, MD, Jessica Paulson, BS, Thoru Yamada, MD, Satish Rao, MD, PhD, FRCP, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA, Division of Colon and Rectal Surgery, Chulalongkorn University, Bangkok, Thailand, Digestive Physiology and Motility, Medical-Biological Research Institute, Veracruz, Mexico, Neurology, University of Iowa, Iowa City, IA

P690. Novel Genomic Biomarkers That Differentiate Between Irritable Bowel Syndrome and Normal Patients Using Peripheral Blood Specimens
Cole Harris, MS, Thomas Ma, MD, PhD, Jonathan Leighton, MD, Lei Tang, PhD, Patti Doherty, RN, Feng Zhou, PhD, Tom Williams, MD, Lisa Davis, PhD, John Atzsmorock II, MD, Exagen Diagnostics, Inc., Albuquerque, NM, Internal Medicine, Division of Gastroenterology and Hepatology, University of New Mexico, Albuquerque, NM, Division of Gastroenterology and Hepatology, Mayo Clinic, Scottsdale, AZ, Pathology, University of New Mexico, Albuquerque, NM

P691. Rifaximin Significantly Improves Quality of Life Versus Placebo in Patients with Diarrhea-Predominant Irritable Bowel Syndrome
William Chey, MD, N. Talley, MD, A. Lembo, MD, J. Yu, PhD, E. Bortey, PhD, University of Michigan Health System, Ann Arbor, MI, Mayo Clinic, Jacksonville, FL, Beth Israel Deaconess Medical Center, Boston, MA, Salix Pharmaceuticals, Inc, Morrisville, NC

P692. No Evidence for Association of Tegaserod with Cardiovascular Adverse Ischemic Events (CVE) in Routine Clinical Practice
John Seeger, PharmD, DrPH, Jeanne Loughlin, MS, Elena Rivero, MD, MPH, David Earnest, MD, Sherry Quinn, MA, Jiaqing Huang, MD, PhD, Peter Ruppin, MD, Esile Dennis, MD, MBChB, FCP(SA), Jeffrey Kraistel, MD, T Drug Safety, Waltham, MA, Novartis Farmaceutica SA, Barcelona, Spain, Novartis Pharmaceuticals Corporation, East Hanover, NJ, Novartis Pharma AG, Basel, Switzerland

P693. The Risk Management Program (RiskMAP) is Effective in Mitigating Serious Outcomes of Ischemic Colitis and Complications of Constipation with Marketed Use of Alosetron Since Reintroduction
Vanessa Armeen, MD, Kenneth Tong, PharmD, Henry Pan, MD, MPH, Science and Technology, Prometheus Laboratories, San Diego, CA

P694. Mucosal Mastocytosis as a Histological Marker in Diarrhea Predominant Irritable Bowel Syndrome
P. Patrick Basu, MD, Krishna Rayapudi, MD, Jose Esteves, MD, Terri Crook, MD, Department of Gastroenterology, New York Hospital Queens, New York, NY, Department of Gastroenterology, North Shore University Hospital at Forest Hills, Forest Hills, NY, Pathology Department, Caris Laboratories, Irving, TX

P695. Defining Irritable Bowel Syndrome: GI Symptoms are Strongly Linked to Somatization
Joseph Chang, MD, MPH, G. Richard Locke, III, MD, Nicholas Talley, MD, PhD, Joseph Larson, BS, Elizabeth Atkinson, MS, Yuki Saito Loftus, MD, MPH, Department of Health Sciences Research, Division of Biostatistics, Enteric NeuroScience Program, Division of Gastroenterology and Hepatology, Mayo Clinic College of Medicine, Rochester, MN, Department of Internal Medicine, Mayo Clinic Jacksonville, Jacksonville, FL

P696. Evaluating Breath Methane as a Diagnostic Test for Constipation Predominant IBS
Laura Hwang, BS, Kimberly Low, BA, Reza Khoshini, MD, Ara Sahakian, MD, Marc Makhani, MD, Venkata Pokkunuri, MBBS, Mark Pimentel, MD, FRCP(C), Cedars-Sinai Medical Center, Los Angeles, CA

P697. Yogurt Containing the Probiotic Bacteria Bifidobacterium Lactis Bb12 and Prebiotic Inulin Significantly Improves Colonic Transit Time in Subjects with Functional Bowel Symptoms
Tamar Ringel-Kulka, MD, MPH, Olafru Palsson, PhD, Danielle Maier, MPAS, PA-C, Yehuda Ringel, MD, FACC, Division of Gastroenterology and Hepatology, School of Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC
P698. The Efficacy of Probiotics in the Therapy of Irritable Bowel Syndrome (IBS): A Systematic Review
Paul Moayyedi, FRCP, PhD, Alexander Ford, MRCP, MD, Lawrence Brandt, MD, Amy Foxx-Orenstein, DO, Filippo Cremonini, MD, Nicholas Talley, MD, PhD, Eamon Quigley, MD, BCh, BAO, Gastroenterology, McMaster University, Hamilton, ON, Canada, Canada, Gastroenterology, Mayo Clinic, Jacksonville, FL, Gastroenterology, University College Cork, Cork, Ireland, Gastroenterology, Montefiore Medical Center, New York, NY

P699. The Prevalence and Costs to Treat Comorbidities in Persons with Constipation and Irritable Bowel Syndrome with Constipation in the 6 Months After Diagnosis: An Employer's Perspective
Richard Brook, MS, MBA, Nathan Kleinman, PhD, Arthur Melkornian, MD, Nicholas Talley, MD, PhD, G. Richard Locke, MD, Robert Baran, PharmD, Retrospective Analysis, The JeSTARx Group, Newfoundland, NJ, Research Services, HCMS Group, Cheyenne, WY, Gastroenterology and Hepatology, Internal Medicine, Mayo Clinic, Jacksonville, FL, Medical Outcomes Research, Takeda Global Research and Development Center, Inc., Deerfield, IL

P700. Efficacy of Rifaximin for the Treatment of Symptoms Associated with Irritable Bowel Syndrome
John Jolley, MD, University of California San Francisco, San Rafael, CA

P701. Resident Physicians' Comfort with Managing Irritable Bowel Syndrome at the Completion of Internal Medicine Residency
Mary Reyes, MD, Huy Nguyen, MD, Jessica Gladden, MS, Steven Zeddon, MD, Marie Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, George Washington University, Washington, DC

P702. Effects of Age and Gender on Anorectal Function in Chronic Constipation
Jason Baker, BS, Richard Saad, MD, Joel Rubenstein, MD, MSc, William Chey, MD, University of Michigan, Ann Arbor, MI

P703. Efficacy of Nitazoxanide in Gas-Related Intestinal Symptoms
William Chey, MD, University of Michigan, Ann Arbor, MI, Jason Baker, BS, Richard Saad, MD, Joel Rubenstein, MD, MSc, Division of Gastroenterology and Hepatology, Internal Medicine, Mayo Clinic, Jacksonville, FL, Medical Outcomes Research, Takeda Global Research and Development Center, Inc., Deerfield, IL

ENDOSCOPY

P704. Effect of Oral Cyclic GMP on TNBS-Induced Colitis and Visceral Hypersensitivity in Rats
Lionel Bueno, PhD, Dr es SC, Heléne Eutamen, PhD, Marion Gillet, MSc, Vassilla Theodorou, PhD, Catherine Beaufraud, PhD, Dr es SC, Alexander Bryant, PhD, Mary Curry, MD, Tami Reza, PhD, Neurogastroenterology Unit, INRA, Toulouse, France, Pharmacology, Ironwood, Cambridge, MD

P705. EUS Staging of Primary Ampullary Neoplasms in Patients with Versus without a Biliary Stent
★ 2008 ACG Presidential Poster Award Recipient
Julia LeBlanc, MD, MPH, Praderneshi Kongkam, MD, Lee McHenry, MD, FACG, John DeWitt, MD, Thomas Imperiale, MD, Stuart Sherman, MD, FACG, Gastroenterology and Hepatology, Indiana University School of Medicine, Indianapolis, IN

P706. The Impact of Narrow Band Imaging in Screening Colonoscopy: Results from a Randomized, Controlled Trial
Franco Radaelli, MD, Silvia Pagge, MD, Arnaldo Amato, MD, Gianmichele Meucci, MD, Giovanna Mandelli, MD, Vittorio Terruzzi, MD, Gastroenterology, Valduce Hospital, Como, Italy

P707. Cyst Fluid Viscosity Predicts Mucinous Cystic Lesions of the Pancreas
Sundee Ram, DO, Kevin McGrath, MD, Michael Sanders, MD, Ken Fasanella, MD, Asif Khalid, MD, Gastroenterology, University of Pittsburgh Medical Center, Pittsburgh, PA

P708. Role of Self Expanding Metallic Stents (SEMS) in the Management of Malignant Obstruction of Proximal Colon
Sindhu Ramamurthy, MBBS, MRCP, Shridhar Dronamraju, MBBS, MRCS, MD, Mumtaz Hayat, MBBS, FRCP, General Surgery, Gastroenterology, North Tyneside General Hospital, North Shields, United Kingdom

Colin Swales, MD, Kanishka Bhattacharya, MD, Douglas Howell, MD, Medicine, University of Massachusetts, Worcester, MA, Maine Medical Center, Portland, ME

P710. Successful Polypectomy of Small Bowel Polyps in Patients with Peutz-Jeghers Syndrome Using Discovery EndoSB Spiral Overture (Spirus)
Colin Swales, MD, David Cave, MD, PhD, Paul Akerman, MD, Kanishka Bhattacharya, MD, Medicine, University of Massachusetts, Worcester, MA, Medicine, Rhode Island Hospital, Providence, RI

P711. Evaluation of Mediastinal Masses by Endoscopic Ultrasound (EUS) and EUS-Guided Fine Needle Aspiration: A Large Single Center Experience
Brian Brunson, MD, Tercio Lopes, MD, MPH, Shyam Varadarajulu, MD, Mohammad Eloubeidi, MD, MHS, Robert Cerfolio, MD, Surgery, Medicine/Gastroenterology, University of Alabama at Birmingham, Birmingham, AL

P712. Polyethylene Glycol Bowel Preparation is Associated with Hypokalemia
Jeese Soo Chang, MD, MS, Hemant Roy, MD, Eugene Yen, MD, Tat-Kin Tsang, MD, Dhiren Shah, MD, Monica Borkar, MD, Eric Elton, MD, Manoj Mehta, MD, Mick Meiselman, MD, Laura Bianchi, MD, Evanston Northwestern Healthcare, Evanston, IL

P713. A Quality Initiative to Decrease Pathology Specimen Labeling Errors Using Radiofrequency Identification in a High-Volume Endoscopy Center
Dawn Francis, MD, MHS, Shalini Prabhakar, MBA, Schuyler Sanderson, MD, Anatomic Pathology, Miles and Shirley Fitterman Center for Digestive Diseases, Mayo Clinic, Rochester, MN

P714. The Significance of Gastric and Duodenal Ischemia Reported on Endoscopic Biopsy: A Case Series
Jeremy Herman, MD, Disaya Chavalitdamrong, MD, Dennis Jensen, MD, Galen Cortina, MD, PhD, Ananya Manuyakorn, MD, Rome Jutabha, MD, Department of Pathology and Laboratory Medicine, Division of Digestive Diseases, David Geffen School of Medicine at University of California, Los Angeles, CA

P715. Prospective Pilot Study to Determine the Use of Real-Time Video Capsule Endoscopy in Risk Stratification of Patients That Present with Upper Gastrointestinal Bleeding
Timothy Johnson, MD, Siddharth Verma, DO, Frank Chateau, PA, Albert Min, MD, Henry Bodenheimer, MD, Brett Bernstein, MD, Department of Medicine, Digestive Diseases, Beth Israel Medical Center, New York, NY

P716. A Retrospective Study to Determine the Ability of Video Capsule Endoscopy to Detect Upper Gastrointestinal Pathology Compared to Standard Endoscopy in Patients with Obscure Bleed
Timothy Johnson, MD, Siddharth Verma, DO, Frank Chateau, PA, Albert Min, MD, Henry Bodenheimer, MD, Brett Bernstein, MD, Medicine, Digestive Diseases, Beth Israel Medical Center, New York, NY

P717. Collateral Damage Following Selective Internal Radiation Therapy (SIRT) for Hepatic Tumors
Amulya Konda, MD, Michael Duffy, MD, FACG, Michael Savin, MD, Interventional Radiology, Gastroenterology and Hepatology, William Beaumont Hospital, Royal Oak, MI
P718. Assessments of Patient Comfort Level During Endoscopic Procedures—Need for a Validated Global Tool?  
Ravi Madhotra, MBBS, MD, FRCP, FACG, Ana Igнатов, MD, ChB, MRCP, Irfan Amin, MBBS, MRCP, Gastroenterology, Milton Keynes NHS Foundation Trust, Milton Keynes, United Kingdom

P719. The Endoscopic Treatment of Esophageal Varices with Gastric Extensions Using a Combined Ligation and Sclerotherapy Technique  
Patrick McDevitt, DO, MSC, Matthew Moyer, MD, MSC, Thomas Riley, MD, Department of Gastroenterology and Hepatology, Department of Internal Medicine, The Penn State Hershey Medical Center, Hershey, PA

P720. Thumbs Up: Overuse Syndromes Among Endoscopists in Illinois  
Gaston Porte, MD, Joy Tsai, MD, Komal Dhingra, MD, Charles Berkelhammer, MD, FACG, Gastroenterology, Internal Medicine, University of Illinois, Oak Lawn, IL

P721. The Accuracy of Predicting Obstructive Sleep Apnea During Colonoscopy Under Conscious Sedation  
Ala Sharara, MD, Karim Maasri, MD, Jana Hashash, MD, Lura El Zahabi, MD, Zeina Kanafani, MD, Pierre Bou Khail, MD, Ahmad Husari, MD, Internal Medicine, Division of Gastroenterology, American University of Beirut, Beirut, Lebanon

P722. Endoscopic Ultrasound Guided Percutaneous Endoscopic Gastrostomy After Failed Endoscopic Approach  
Muhammad Siddiqui, MD, Mihr Majmudar, MD, Muhammad Omer, MD, Jefferey Port, MD, Mike Owens, MD, Kamran Ayub, MD, Internal Medicine, University of Illinois/Advocate Christ Medical Center, Oak Lawn, IL, Department of Gastroenterology, University of Washington, Seattle, WA

P723. Cryospray Ablation™ for the Treatment of HPV-Induced Squamous Cell Carcinoma of the Esophagus  
Jenny Smith, MD, Doumit BouHaidar, MD, Bimaljit Sandhu, MD, A. Scott Mills, MD, Sharon Everette, CGRN, Alvin Zlass, MD, MACG, Pathology, Gastroenterology and Hepatology, Virginia Commonwealth University, Richmond, VA

P724. Predictors of Poor Bowel Preparation in Colonoscopy  
Brian Borg, MD, MHS, Nitin Gupta, MD, Gary Zuckerman, DO, Bhaskar Banerjee, MD, Gastroenterology, Washington University School of Medicine, Saint Louis, MO

P725. Assessment of Patient Compliance and Efficacy of Three Standard Bowel Preparation Regimens  
Veron Browne-McDonald, MD, Kiranmaye Tirveedhi, MD, Shahzad Igbal, MD, Wael Eldarawy, MD, Prashant Sharma, MD, Otem Ajah, MD, Mohamed Mansour, MD, Eric Jaffe, MD, Maurice Curilli, MD, Gastroenterology, New York Methodist Hospital, Brooklyn, NY, Gastroenterology, Interfaith Medical Center, Brooklyn, NY

P726. Are Endoscopic Findings Predictive of Esophageal Function Results as Tested by Multichannel Intraluminal Impedance and Manometry?  
Nazif Chowdhury, MD, Omer Deen, MD, Ron Mathew, MD, Richard Rackett, LPN, Amine Hila, MD, Internal Medicine Residency Program, United Health Services, Johnson City, NY, Gastroenterology, United Medical Associates, Johnson City, NY

P727. Standardized Procedure Evaluation (SPE) for the Assessment of Esophagogastroduodenoscopy Skills  
Sushil Duddevpudhi, MD, Malvinder Singh, MD, Vishal Ghevany, MD, Mahesh Krishnaiah, MD, Suryanarayan Anand, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY

P728. Characterization of No-Show Patients and Their Impact on the Efficient Delivery of Endoscopic Services in the Ambulatory Endoscopy Center (AEC)  
William Holderman, MD, Marshall Nickel, MD, Bev Mansanarez, BA, Susie Ross, BA, James Bernhard, PhD, Digestive Health Specialists, Tacoma, WA, Mathematics, University of Puget Sound, Tacoma, WA

P729. Predictors of Depth of Maximal Insertion at Deep Enteroscopy  
Mouen Khashab, MD, Michael Chioress, MD, Debra Helper, MD, Bridget Galetti, RN, Cynthia Johnson, MS, Biostatistics, Gastroenterology, Indiana University, Indianapolis, IN

P730. The Oklahoma Experience with Double Balloon Enteroscopy (DBE): 1st 100 Procedures  
Mark Mellow, MD, Amy Kanatzar, INTEGRIS Center for Digestive Health, Oklahoma City, OK

P731. Gastrointestinal Complications Associated with Left Ventricular Assist Devices  
Ethan Miller, MD, D. Steidley, MD, Francisco Arabia, MD, Ananya Das, MD, Michael Crowell, PhD, Jonathan Leighton, MD, Anton Decker, MBBCch, MRCP, GastCard/Cardiiothoracic Surgery, Cardiology, Gastroenterology & Hepatology, Mayo Clinic Arizona, Scottsdale, AZ

P732. Resident Physicians’ Comfort with Managing Feeding Tubes at the Completion of Internal Medicine Residency  
Huy Nguyen, MD, Jessica Gladden, MS, Steven Zeddon, MD, Marie Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, George Washington University, Washington, DC

P733. Endoscopy Unit Efficiency Utilizing Propofol in the Presence of Optimal Room Turnover  
John Poulos, MD, Vidhi Patel, BS, Christina Edge, ADN, Bud Perry, ADN, Julie Thibodeaux, ADN, Fayetteville Gastroenterology Associates, Fayetteville, NC, Cumberland Research Associates, Fayetteville, NC

P734. Efficacy and Tolerability of Pantoprazole Delayed-Release Granules for Oral Suspension in a Placebo-Controlled Treatment-Withdrawal Study in Infants 1 Through 11 Months of Age with Symptomatic GERD  
Gail Comer, MD, FACG, Philip Kum-Nij, MD, MPH, Suleman Mahomedy, MBChB, FCPaed(SA), Jaroslaw Eierman, MD, Michelle Hin, MS, Huihua Li, MS, Mary Maguire, PharmD, Harland Winter, MD, FACG, Wyeth Research, Collegeville, PA, Children’s Pavilion, Virginia Commonwealth University, Richmond, VA, Hiway Medical Centre-Westside Medical Centre, Durban, South Africa, Department of Gastroenterology, Hepatology and Immunology, The Children’s Memorial Health Institute, Warsaw, Poland, Mass General Hospital for Children, Boston, MA

P735. Age at Menarche and Longitudinal Growth in Pediatric-Onset Inflammatory Bowel Disease  
Nancy McGreal, MD, Health Studies, Pediatric Gastroenterology, University of Chicago, Chicago, IL

PEDIATRICS
P736. Validation of the Pediatric Gastroesophageal Reflux Disease Symptom and Quality of Life Questionnaire (PGSQ)
Suzanne Nelson, MD, Laurie Roberts, MPH, Smitha Kohari, PhD, Susan Orenstein, MD, Ben Gold, MD, Eric Hassall, MBChB, Reema Mody, PhD, Leah Kleinman, DrPH, Omar Dabbous, MD, Pediatrics, Children’s Memorial Hospital, Northwestern University, Chicago, IL, Center for Health Outcomes Research, United BioSource Corporation, Bethesda, MD, Health Economics and Outcomes Research, TAP Pharmaceutical Products, Lake Forest, IL, Pediatrics, BC Children's Hospital, University of British Columbia, Vancouver, BC, Canada, Pediatric Gastroenterology, Hepatology and Nutrition, Emory University School of Medicine, Atlanta, GA, Pediatric Gastroenterology, Children’s Hospital of Pittsburgh, Pittsburgh, PA

P737. Effect of High Body Mass Index on the Course of Pediatric Crohn’s Disease
Melanie Greifer, MD, Subra Kugathasan, MD, Jeffrey Hyams, MD, Trudy Lerer, MS, Nina Kohn, MA, Jim Markowitz, MD, Pediatric IBD Collaborative Research Group, Biostatistics Unit, Feinstein Institute, North Shore-Long Island Jewish Health System, Manhasset, NY

P738. The Utility of Fecal Lactoferrin in Identifying Crohn’s Disease Activity in Children
Marion Pfefferkorn, MD, James Nguyen, MS, Beth Juliari, MS, Miriam Davis, BS, James Boone, MS, Division of Pediatric Gastroenterology, Indiana University School of Medicine, Indianapolis, IN, Research and Development, Techlab, Inc., Blacksburg, VA, Division of Biostatistics, Indiana University School of Medicine, Indianapolis, IN

P739. Caustic Ingestion in Children: A Correlation Between Symptoms and Esophageal Injury?
Barbara Bizzardi, MD, Fabiola Fornardi, MD, Nicola de'Angelis, MD, Francesca Vincenzi, MD, Valentina Maffini, MD, Marcello Sommi, MD, Stefania Errico, MD, Gian Luigi de' Angelis, MD, Pediatric Gastroenterology, Parma, Italy, General Surgery, Parma, Italy

P740. Feasibility and Application of 3-Dimensional Ultrasound for Measurement of Gastric Volumes in Healthy Adults and Adolescents
Mhd Louai Manini, MD, Duane Burton, Duane Meixner, Deborah Eckert, RN, Matthew Callstrom, MD, Grant Schmit, ND, Mounif El-Youssef, MD, Michael Camilleri, MD, Division of Pediatric Gastroenterology, Hepatology, Department of Radiology, Clinical Enteric Neuroscience Translational and Epidemiological Research (CENTER) program, Mayo Clinic, Rochester, MN

COLORECTAL CANCER PREVENTION

P741. Pre-Endoscopy Cancer Screening Using a Self-Administered Questionnaire Has a High Yield for Identifying Patients Who Qualify for Genetic Counseling
S. Simona Jakab, MD, Gregory Vornovitsky, MD, Vladislava Buntic, MD, Charles Adelmann, MD, William Hale, MD, Medicine, Gastroenterology/Hepatology, Norwalk Hospital/Yale University, Norwalk, CT

P742. Outcome of Patients with Inadequate Colon Preparation on Missing Colonic Neoplasms
Sashidhar Sag, MD, Advitya Malhotra, MD, Praveen Guturu, MD, Viet Tran, MD, G. Raju, MD, FRCP, FACG, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P743. Does the Use of a Wide Angle, High Definition Colonoscope Enable the Endoscopist to Detect More Significant Polyps or High Risk Adenoma Bearing Patients Than the Use of a Conventional Colonoscope?
Anuja Choure, MD, Madhusudhan Sanaka, MD, Rocio Lopez, MS, Carol Burke, MD, Gastroenterology, Internal Medicine, Cleveland Clinic, Cleveland, OH

P744. Metabolic Syndrome is a Risk Factor for Colorectal Cancer in the United States
Donald Garrow, MD, MSc, Mark Delegete, MD, Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC

P745. Non-Medical Costs of Colorectal Cancer Screening Using Computed Tomographic Colonography
Robert Hilsden, MD, PhD, Steven Heinman, MD, MSc, Flora Au, MA, Braden Manns, MD, MSc, Elizabeth McGregor, PhD, Colon Cancer Screening Centre, University of Calgary, Calgary, AB, Canada, Division of Population Health & Information, Alberta Cancer Board, Calgary, AB, Canada, Medicine & Community Health Sciences, University of Calgary, Calgary, AB, Canada

P746. Colorectal Cancer Risk Stratification in a Community Gastroenterology Practice
Ralph McKibbin, MD, Bonita Mazzei, BSN, Blair Gastroenterology Associates, Altoona, PA

P747. Baseline Knowledge of Colorectal Cancer Screening and Surveillance Guidelines in Internal Medicine Residents: To Scope or Not to Scope
David Richards, MD, Kevin Leung, MD, Anand Madan, MD, FACG, Gastroenterology, University of Texas Health Science Center, Houston, TX

P748. Management of Small Polyps Detected by Screening CT Colonography: Patient and Physician Preferences
Jessica Shah, MD, Linda Hynan, PhD, Don Rockey, MD, University of Texas Southwestern, Dallas, TX

P749. Potential Overuse of Colonoscopy for Polyp Surveillance
Pratima Sood, MD, Gregory Cooper, MD, Gastroenterology, Internal Medicine, University Hospitals Case Medical Center, Cleveland, OH

P750. Implementation of a Patient-Oriented Visual Decision Aid for CRC Screening in an Effort to Increase Completed Colonoscopy Rates Among an Inner-City Population
Stuart Akerman, MD, Rajesh Dhirmalani, DO, Mark Sterling, MD, Zamir Breivi, MD, Iris Herrera, MD, Lauren Doliner, MD, Marie Michelle Menna, MPH, Michael Akerman, BS, Ana Natale-Pereira, MD, Medicine, Montefiore Medical Center, Bronx, NY, Internal Medicine, Gastroenterology, UMDNJ - New Jersey Medical School, Newark, NJ, Medicine, Albert Einstein COM, Bronx, NY

P751. Differences in Colorectal Cancer Screening Rates Among Ethnic Groups
Jack Braha, DO, Nison Badalov, MD, Ian Wall, DO, David Cohen, MD, MSc, Jai Mirchandani, MD, Kadirawl Iwara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Medicine, Maimonides Medical Center, Brooklyn, NY, Medicine, State University of New York, Health Sciences Center, Brooklyn, NY

P752. Utility of Initial Screening Colonoscopy in Elderly Patients
Steven Kaplik, MD, Thomas Lyles, MD, Frederick Harris, MD, Mohammad Ismail, MD, Claudio Bombassi, MD, Gastroenterology and Hepatology, University of Tennessee, Memphis, TN
TUESDAY, OCTOBER 7, 2008

ESOPHAGUS

P753. The Polymorphism Interleukin 8-251 A/T is Associated with Reflux Esophagitis in Helicobacter pylori-Negative Populations
Takafumi Ando, MD, Emad El-Omar, MD, Osamu Watanebe, MD, Naoki Ohmiya, MD, Yasumasa Niwa, MD, Hitomi Goto, MD, Department of Gastroenterology, Nagoya University Graduate School of Medicine, Nagoya, Japan, Department of Medicine and Therapeutics, University of Aberdeen, Aberdeen, United Kingdom

P754. Variant Achalasia: A Rare Disorder and a Diagnostic Dilemma: A Proposal for New Diagnostic Criteria
John Arledge, MD, David Estores, MD, H. Worth Boyce, MD, MACG, Center for Esophageal and Swallowing Disorders, Digestive Diseases and Nutrition, University of South Florida, Tampa, FL

P755. Diagnosis of Eosinophilic Esophagitis After Prior Nissen Fundoplication for Presumed “Refractory GERD”: Implications for Pre-Operative Evaluation
Evan Drellon, MD, MPH, Timothy Farrell, MD, Eugene Boyzumski, MD, Nicholas Shaheen, MD, MPH, Surgery, Medicine; Division of Gastroenterology and Hepatology, University of North Carolina - Chapel Hill, Chapel Hill, NC

P756. Poster Withdrawn

P757. Clinical Evaluation of XP19986 as a Potential Treatment for GERD
F. Jacob Huff, MD, Ritu Lal, PhD, Juthamas Sukbuntherng, PhD, Wendy Luc, MS, James Tovera, BS, Robin Blumenthal, PhD, Marie Lieszse Lassauzet, PhD, Zarrin Navab, MS, Kenneth Cundy, PhD, Xenopor Inc., Santa Clara, CA

P758. Removable Internally Covered Self-Expandable Metal Stents During Neoadjuvant Therapy for Locally Advanced Esophageal Cancer
Tercio Lopes, MD, MSFH, Mohammad Eloubeidi, MD, MHS, Medicine / Gastroenterology, University of Alabama at Birmingham, Birmingham, AL

P759. Accuracy and Utility of Endoscopic Ultrasound (EUS) in Clinical Stage T2N0 Esophageal Cancer
Jonathan Rosenberg, MD, Grace White, RN, Vanessa Shami, MD, Victoria Vilaflor, MD, Mark Ferguson, MD, Charles Day, MD, Gastroenterology, University of Chicago, Chicago, IL, Gastroenterology, University of Virginia, Charlottesville, VA

P760. Preoperative Placement of Polyflex Esophageal Stents in Patients with Locally Advanced Esophageal Cancer Undergoing Neoadjuvant Therapy
Jason Wills, MD, Robert Wong, MD, Kristen Hilden, MS, John Fang, MD, Douglas Adler, MD, Division of Gastroenterology, University of Utah, Salt Lake City, UT

John Bennett, MD, Corrine Maydonowitch, BS, Jason Lake, MD, Gastroenterology, National Naval Medical Center, Bethesda, MD, Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P762. Once Daily Esomeprazole Versus Twice Daily Lansoprazole for GERD: A Double Blind Randomized Cross-Over Study
David Johnson, MD, Michael Ryan, MD, Taylor Wootton, MD, Jeff Willis, MD, Kelvin Hornbuckle, MD, Whitney Brooks, MD, Stacey Menees, MD, Michael Doviak, PhD, Gastroenterology Division, Eastern VA Medical School, Norfolk, VA, Biostatistics, Old Dominion University, Norfolk, VA

P763. Relationship Between Maintenance of Healed Erosive Esophagitis and Percent Time with Intragasstric pH<4
David Johnson, MD, Doug Levine, MD, Kerstin Röhss, PhD, Magnus Astrand, PhD, Öla Junghard, PhD, Tore Lind, MD, Eastern VA Medical School, Norfolk, VA, AstaZeneca, Wilmington, DE, AstaZeneca R&D, Mölndal, Sweden

P764. Manometric Characteristic of Waves in the Esophageal Body in Type 2 Diabetic Patients According to the Basal Morning Gastroesophageal Reflux Disease
João Jorge, Gastroenterologist, Professor of Physiologie, Cláudia Borges, Resident of Internal Medicine, Edgard Panão, Gastroenterologist, Álvaro Coelho, Internist, Mário Simões, Technician of Physiologie, Carlos Almeida, General and Vascular Surgeon, Professor of Physiologie, Faculty of Medicine, University of Coimbra, Coimbra, Portugal, Internal Medicine, Hospital Santo André, Leiria, Portugal, Gastroenterology, Gastroenterology, Hospital dos Covões, Coimbra, Portugal

P765. Bravo pH Capsule Placement under Direct Vision with Ultraslim Gastroscope
Tai Ping Lee, MD, Shivani Sood, MD, MPH, Richard Feldstein, MD, Igor Grosman, DO, Gastroenterology, Hepatology, Nutrition, North Shore University Hospital, Manhasset, NY

P766. Symptom Index (SI) is a Good Predictor of Success for Fundoplication for Symptomatic Non-Acid Reflux on PPI Therapy
Amit Agrawal, MD, Neeraj Sharma, MD, Jason Wilson, MD, Marcelo Vela, MD, Donald Castell, MD, MUSC, Charleston, SC

P767. Clinical Presentation and Endoscopic Management of Mallory-Weiss Tear: 5 Year Experience in an Inner-City Hospital
Subhra Banerjee, MD, Vivek Gumaste, MD, Maria Angelova, MD, Gastroenterology, Mount Sinai Services at Elmhurst Hospital Center, Elmhurst, NY, Pediatrics, Winthrop University Hospital, Mineola, NY

Mohammed Khan, MRCP(UK), Hamad Al-Ashtgar, MD, Khalid Al-Kahtani, MRCP(UK), Ahmad Helmy, MD, Maheeba Abdulalah, MRCP(UK), Mohammed Al-Fadda, MD, Gastroenterology, KFSH&RC, Riyadh, Saudi Arabia

P769. Endoscopically Suspected Esophageal Metaplasia (ESEM) is Associated with the Complications of Hiatus Hernia, Reflux Esophagitis and Severe Gastric Mucosal Atrophy in Japanese Patients Who Underwent EGD
Juntao Matsuaki, MD, Hidekazu Suzuki, MD, PhD, Kenro Hirata, MD, Mari Ikewada, MD, Yoshimasa Saito, MD, PhD, Toshitumi Hibi, MD, PhD, Division of Gastroenterology and Hepatology, Department of Internal Medicine, Keio University School of Medicine, Tokyo, Japan

P770. Intercellular Space Distance is Increased in Refractory Heartburn Patients with GERD but Not Those with Functional Heartburn (FH): A Study Using Impedance-pH and Electron Microscopy
Marcelo Vela, MD, MSCR, Brandon Craft, MD, Neeraj Sharma, MD, Janice Freeman, RN, Debra Hazen-Martin, PhD, Gastroenterology and Laboratory Medicine, Gastroenterology & Hepatology, Medical University of South Carolina, Charleston, SC

P771. Chronic Esophagitis Dissecans Superficialis—A Rare Cause of Esophageal Strictures and Dysphagia
David Estores, MD, H. Worth Boyce, MD, MACG, Domenico Coppola, MD, Jane Messina, MD, Department of Pathology, Center for Esophageal and Swallowing Disorders, University of South Florida, Tampa, FL

P772. Resolution of Cicropopharyngeal Bar with Botox Injection Combined with Esophageal Dilation
Xiqing Fan, MD, MS, Larry Scott, MD, MS, Micheal Underbrink, MD, Martha Hersey, MS, Speech Therapy, Otolaryngology, Gastroenterology, University of Texas Medical Branch, Galveston, TX
P773. First Use of the Evolution® Esophageal Stent in the U.S.
Michael Lipp, MD, Odelya Pagovich, MD, David Robbins, MD, Beth Israel Medical Center, New York, NY

P774. Socioeconomic Disparities in the Use of Catheter-Free Esophageal pH Testing
Eva Sum, MD, Seesha Uppalapata, MD, Joseph Kim, MD, Joel Richter, MD, Frank Friedenberg, MD, MS, Medicine/Gastroenterology, Temple University, Philadelphia, PA

P775. Gatorade is a Good Substitute for Normal Saline in Multichannel Intraluminal Impedance and Manometry
Nazif Chowdhury, MD, Zeba Anwar, MD, Omer Deen, MD, Richard Rackett, LPN, Amine Hila, MD, Internal Medicine Residency Program, United Health Services, Johnson City, NY, Gastroenterology, United Medical Associates, Johnson City, NY

P776. Validation of a Novel Scoring System as a Diagnostic Aid in Patients with Reflux-like Dyspepsia
Andrew Roorda, MD, Samuel Marcus, MD, PhD, George Triadafilopoulos, MD, Department of Medicine, Division of Digestive Diseases, West Virginia University School of Medicine, Morgantown, WV, Department of Medicine, Division of Gastroenterology, El Camino Hospital, Mountain View, CA, Department of Medicine, Division of Gastroenterology and Hepatology, Stanford University School of Medicine, Stanford, CA

P777. Prostaglandin Levels in the Gastric Mucosa of Patients Undergoing Physiological Stress — A Preliminary Study
Cristina Marin, MD, Janq Qin, PhD, Xiaonan Wang, PhD, Edward Lin, MD, Vincent Yang, MD, PhD, Qiang Cai, MD, PhD, Surgery, Digestive Disease, Internal Medicine, Emory University, Decatur, GA

P778. Endoscopic Maneuvers of the Stomach Demonstrate Physiologic Characteristics of the Electrogastrogram
Glenda Montague, BA, Robert Schmieg, MD, Christopher Lahr, MD, Danielle Spree, CFNP, William Johnson, PhD, Thomas Abell, MD, Digestive Diseases, University of Mississippi Medical Center, Jackson, MS, Preventive Medicine, School of Medicine, Surgery, University of Mississippi, Jackson, MS

P779. Resident Physicians’ Comfort with Managing Gastroaparesis at the Completion of Internal Medicine Residency
Huy Nguyen, MD, Jessica Gladden, MS, Steven Zeddun, MD, Marie Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, George Washington University, Washington, DC

Akifumi Tanaka, MD, PhD, Kengo Tokunaga, MD, PhD, Hajime Sugano, MD, PhD, Shin’ichi Takahashi, MD, PhD, The Third Department of Internal Medicine, Kyorin University School of Medicine, Mitaka, Japan

P781. Evaluation of Two Commercial Enzyme Immunoassays for Detecting IgG and IgA Antibodies to Helicobacter pylori in Japan
Yoshisasa Urita, MD, PhD, Toshiyasu Watanabe, MD, PhD, Tadashi Maeda, MD, Yosuke Sasaki, MD, Susumu Ishihara, MD, Kazuo Hike, MD, Masaki Sanaka, MD, PhD, Hitoshi Nakajima, MD, PhD, Motonobu Sugimoto, MD, PhD, Department of General Medicine, Toho University, Tokyo, Japan

P782. Night-time pH Holding Time: What is Hidden by the % of Time pH ≤ 4?
Changchong Wang, MD, Yuhong Yuan, MD, PhD, Ying Chen, MSc, Richard Hunt, MD, FRCP, FACP, AGAF, Department of Medicine, McMaster University, Hamilton, ON, Canada

P783. Correlation of Recording from Mucosal and Serosal Egg Probes with Gastric Emptying and Gastric Neuro-Muscular Status
Ernest Weeks, MD, Elizabeth Rickman, MD, Robert Schmieg, MD, Jay Salameth, MD, Christopher Lahr, MD, Saleem Islam, MD, William Johnson, PhD, Steven Bigler, MD, Charu Subramony, MD, Thomas Abell, MD, Pathology, Epidemiology and Biostatistics, Surgery, Digestive Diseases, University of Mississippi Medical Center, Jackson, MS

P784. Assessment of Pattern of Antimicrobial Resistance in Patients (Helicobacter pylori Positive) of Dyspepsia
Rajendra Jain, MD, DM, Virendra Sharma, MD, Yogendra Malhotra, MD, Department of Medicine, Gandhi Medical College, Bhopal, India

P785. Biopsy Proven Helicobacter pylori is Not Associated with Increased Prevalence of Atrial Fibrillation
Ghulam Mujtaba, MD, Suryanarayan Anand, MD, Kenneth Ong, MD, Ilhsan Khan, MD, Srikrishna Nagri, MD, Fatima Shaikh, MD, Internal Medicine, The Brooklyn Hospital Center, Brooklyn, NY

P786. Use of Wireless Capsule Endoscopy for Evaluation of Sustained Gastric Presence of a Polymer Medication Delivery System
Martin Golding, MD, David Doman, MD, Howard Goldberg, MD, Montgomery Gastroenterology, Silver Spring, MD

P787. The Utilization of Intravenous Proton Pump Inhibitors (IVPPI) in African-American and Hispanic Patients: Appropriate Practice or Overuse?
Abbas Akhtar, MD, Medicine-Gastroenterology, Charles Drew University of Medicine and Science, Los Angeles, CA

P788. The Effects of Once Daily Versus Twice Daily Proton Pump Inhibitor Therapy on Nsaid Induced Gastric Ulcers
Baseer Qazi, MD, Naser Khan, MD, Mobin Khan, MD, Jadwiga Loj, MD, Gastroenterology, Advocate Lutheran General Hospital, Park Ridge, IL

P789. A Method to Adjust pH Values Obtained with Different pH Catheters
Jerry Gardner, MD, Winston Young, PhD, Gaetano Morelli, MD, Huchun Chen, PhD, Richard Kao, PhD, Blossomtech, Apex, NC, MDS Pharma Services, Montreal, QC, Canada, Eisai Medical Research, Ridgefield Park, NJ, Science for Organizations, Mill Valley, CA

P790. PPI Dosing Patterns for Recently Bleeding Gastroduodenal Ulcer Disease: A Single Center Experience
Geoffrey Jensen, MD, Russ Arjai, MD, Walter Peterson, MD, Joel Levine, MD, Division of Gastroenterology-Hepatology, University of Colorado Health Sciences Center, Aurora, CO

P791. H. pylori and Gastric Mucosal Injury in Asymptomatic Patients—A Retrospective Analysis
Anupam Mohanty, MD, Emmanuel Coronel, MD, David Elijah, MD, Division of Hepatology, University of Miami, Miami, FL, Department of Medicine, University of Cuenca, Cuenca, Ecuador, Division of Gastroenterology, University of South Florida, Tampa, FL

P792. The Utility of Spyglass Choledochoscopy for Evaluation of Suspected Post-Liver Transplant Strictures
John Kim, MD, Seint Yee, MD, Russell Yang, MD, PhD, GI/Liver Division, University of Southern California, Los Angeles, CA

P793. The Impact of Overtube Assisted Enteroscopy (OAE) for Therapeutic Endoscopic Retrograde Cholangiography (ERC) in Roux-En-Y Anatomy
Mounier-Kuhn, MD, Jayaprakash Sreenarasimhaiah, MD, William Lee, MD, Saad Jazrawi, MD, David Provost, MD, Shou Tang, MD, Digestive and Liver Diseases, The University of Texas Southwestern Medical Center at Dallas, Dallas, TX, Surgery, The University of Texas Southwest Medical Center at Dallas, Dallas, TX

PANCREATIC/BILIARY

P794. Assessment of Pattern of Antimicrobial Resistance in Patients (Helicobacter pylori Positive) of Dyspepsia
Rajendra Jain, MD, DM, Virendra Sharma, MD, Yogendra Malhotra, MD, Department of Medicine, Gandhi Medical College, Bhopal, India

P785. Biopsy Proven Helicobacter pylori is Not Associated with Increased Prevalence of Atrial Fibrillation
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Anupam Mohanty, MD, Emmanuel Coronel, MD, David Elijah, MD, Division of Hepatology, University of Miami, Miami, FL, Department of Medicine, University of Cuenca, Cuenca, Ecuador, Division of Gastroenterology, University of South Florida, Tampa, FL

PANCREATIC/BILIARY

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Mounier-Kuhn, MD, Jayaprakash Sreenarasimhaiah, MD, William Lee, MD, Saad Jazrawi, MD, David Provost, MD, Shou Tang, MD, Digestive and Liver Diseases, The University of Texas Southwestern Medical Center at Dallas, Dallas, TX, Surgery, The University of Texas Southwest Medical Center at Dallas, Dallas, TX
P804. Relationship Between Ultrasonic Gallbladder Involvement and Other Major Laboratory Parameters in a Cohort of Adult Sri Lankans Suffering from Non Epidemic Dengue Infection
Ravindra Satarasanghe, MD, MACG, Ravi Jayawardana, MBBS, Upul Wickramasingha, MBBS, Jayantha Wickramaratna, MD, Geetha Senanayake, MD, Perumal Udajakumaran, MBBS, Udaya Jayakody, MBBS, Yapa Abeywardana, MBBS, Buddhika Abeywicrama, MBBS, Nada Raharaja Umakanthan, MBBS, Department of Radiology, Department of Medicine, Ward 6, Sri Jayawardenepeura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka

P795. Is Hypoglycemia Associated with Cholelithiasis?
Hiral Shah, MD, Ji Kim, MD, Alexander Bagasra, MD, Raman Battish, MD, Mahmood Abedi, MD, Internal Medicine, Division of Gastroenterology, Washington Hospital Center, Washington, DC

P796. Prognosis of Unsuspected Gallbladder Cancer Diagnosed During or After Laparoscopic Cholecystectomy
A-Hon Kwon, MD, PhD, Department of Surgery, Kansai Medical University, Hirakata, Japan

P797. The Rate of Post ERCP Pancreatitis in Liver Transplant Patients Compared to Non Transplant Patients, a Single Center Experience
Vimal Ponnezhath, MD, Harprabhjit Singh, MD, Osama Alaradi, MD, Gastroenterology, Henry Ford Hospital, Detroit, MI

P798. The Use of Endoscopic Ultrasound and Fine Needle Aspiration (EUS-FNA) to Diagnose Pancreatic Adenocarcinoma and the Potential Role of Gender on Prognosis
Duc Vu, MD, Michael Richard Erickson, MD, FACCP, FACP, Tim Castro, MD, Kelly Phan, MD, Scott & White Memorial Hospital & Clinic, Temple, TX

P799. Predicting Early Oral Feeding in Patients with Acute Pancreatitis: A Six Year Retrospective Single Center Experience
Ari Wiens, MD, Sotnia Novak, MD, Mirela Mecca, MD, Kostas Sid eridis, DO, Simmy Bank, MD, FACCP, MACG, Gastroenterology, Long Island Jewish Medical Center, Glen Oaks, NY

P800. Endoscopic Management of Pancreatic Fluid Collections—A Single Center Experience
Udayakumar Navaneethan, MD, Mayar Al Mohajer, MD, Nathan Schmulewitz, MD, Shailendra Chauhan, MD, Syed Ahmad, MD, Jun Ying, PhD, Joseph Palascak, MD, Andres Gelrud, MD, MMSc, Biostatistics, Surgery, Internal Medicine, University of Cincinnati Medical Center, Cincinnati, OH

P801. Relationship Between Severity of Pancreatitis and Complexity of ERCP
Jessica Trevino, MD, C. Mel Wilcox, MD, Milind Phadnis, MSPH, Shyam Varadarajulu, MD, GI, UAB, Birmingham, AL

P802. Obstructive Jaundice Secondary to IgG-4 Biliary Stricture with Normal Serum IgG4 and Normal Pancreas Imaging
Jose Ferrer, MD, Jamie Barkin, MD, MACG, University of Miami, Coral Gables, FL

P803. Focal Dilation of the Main Pancreatic Duct (MDP), Early vs. New Variant of Intraductal Papillary Mucinous Neoplasia (IPMN)?
Naveen Gupta, MD, Halim Charbel, MD, Namdip Haddad, MD, Ahmed Shobassy, MD, Georgetown University Hospital, Potomac, MD

P804. Diagnosis, Antibiotic Prophylaxis, and Natural History of Pancreatic Cystic Neoplasms: Is Immediate Surgery Necessary?
Kevin Leung, MD, William Ross, MD, E. Lin, MS, Jeffrey Lee, MD, Biostatistics and Mathematical Science, Gastroenterology, Hepatology, and Nutrition, MD Anderson Cancer Center, Houston, TX

P805. Diagnostic Challenges in Pancreatic Masses: A Study Comparing Preoperative Diagnosis and Post-Operative Pathology
Cristina Marin, MD, Adam Simmons, BS, Michael Fleshman, MD, Ernad Gayed, MD, Qiang Cai, MD, PhD, Digestive Disease, Internal Medicine, and Orthopedics, Emory University, Atlanta, GA

P806. Osteoclastic/Plleomorphic Giant Cell Tumors of the Pancreas Diagnosed via Endoscopic Ultrasound and Fine Needle Aspiration: Unique Clinical, Endoscopic, and Histologic Findings
Jill Moore, MD, Kristen Hilden, BS, Joel Bentz, MD, Randall Pearson, MD, Douglas Adler, MD, Pathology, Gastroenterology, University of Utah, Salt Lake City, UT, Gastroenterology, Mayo Clinic, Rochester, MN

P807. Percentage Decrease in Total Serum Bilirubin After ERCP Therapy for Obstructive Jaundice is Similar for Malignant and Benign Causes
Nataasha Muckova, MD, Kendrick Che, DO, Wichtik Srikureja, MD, Snorri Olafsson, MD, Internal Medicine, Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P808. EUS-Guided Trucut Biopsies May Enable the Diagnosis of Lymphoepithelial Cysts of the Pancreas (Case Report)
Sobia Ali, MD, Hening Gerke, MD, Neal Wilkinson, MD, Chris Jensen, MD, Clifton Center for Digestive Diseases, University of Iowa, Hospitals and Clinics, Iowa City, IA, Pathology, General Surgery, University of Iowa Hospitals and Clinics, Iowa City, IA

P809. Extra-Gastrointestinal Stromal Tumor (EGIST): Rare Tumor of the Pancreas
Tasma Harinndhanavudhi, MD, Tanyanan Tanawuttiwat, MD, Rogelio Silva, MD, FACG, Internal Medicine, Advocate Christ Medical Center / UIC, Oak Lawn, IL

P810. MRCP as a Diagnostic Study for Pleuropancreatic Fistula
Tauvef Ali, MD, Nandakumar Srinivasan, MD, Vu Le, MD, A. Rao Chimpuri, FRCR, William Tierney, MD, Radiology, Digestive Disease and Nutrition, University of Oklahoma Health Sciences Center, Oklahoma City, OK

P811. Hypertriglyceridermia Induced Severe Pancreatitis with Multi System Organ Failure: Is Early Plasmapheresis the Answer?
Mukesh Kumar, MBBS, MD, Gaurav Alireja, MBBS, MD, Manish Saha, MBBS, MD, Internal Medicine, Seton Hall University Medical Center, Elizabethtown, NJ

P812. Pancreatic Mass: Pathological Diagnoses of 112 Consecutive Surgical Specimens
Jahnnav Naik, MD, Cristina Marin, MD, Yan Li, MD, Qiang Cai, MD, Gaurav Aggarwal, MD, Division of Digestive Diseases, Emory University, Atlanta, GA

P813. Successful Trans-Papillary Drainage of a Hepatic Hydatid Cyst: A Novel Approach
Saima Rashid, DO, Igor Grossman, DO, Bernard Stark, MD, Internal Medicine, North Shore University Hospital-Manhasset, Manhasset, NY

P814. Immunoglobulin G4 (IgG4)-Hepatopathy in a Case of Sclerosing Cholangitis Mimicking Primary Sclerosing Cholangitis (PSC)
Puneet Shroff, MD, Norman Sussman, MD, Mary Schwartz, MD, Prasun Jalal, MD, Department of Gastroenterology, Hepatology and Liver Transplantation, Baylor College of Medicine, Houston, TX, Department of Pathology, Texas Methodist Hospital, Houston, TX
SMALL INTESTINE/UNCLASSIFIED

P815. Evaluation of a Gastrointestinal (GI) Transit Measurement System (GTMS) in Healthy Volunteers  
Brian Lacy, PhD, MD, FACC, Richard Rothstein, MD, John Gagne,  
BS, Jerry Bieszczad, PhD, David Kynor, MS, Division of Gastroenterology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, Creare, Inc, Hanover, NH

P816. Expression of CD30 in Celiac Sprue  
Enrique Molina, MD, Paul Feldman, MD, Cristina Vincentelli, MD,  
Antonio Martinez, MD, Jamie Barkin, MD, MACG, Gastroenterology, Mount Sinai Medical Center, Miami, FL, Gastroenterology, Veterans Affairs, Miami, FL, Pathology, Mount Sinai Medical Center, Miami, FL

P817. Is Video-Assisted Teaching Better in Long-Term Retention of Learning  
Hemant Sharma, MBBS, MS, MRCS, Pankaj Jha, MBBS, MS,  
MRCS, Narayan Shekhawat, MBBS, MS, Surgery, Gloucestershire Royal Hospital, Gloucester, United Kingdom, Surgery, Sawai Mansingh Medical College, Jaipur, India

P818. Capsule Endoscopy: Effect of Bowel Preparation on Image Quality, Small Bowel Transit and Completion Rate  
Curuchi Anand, MD, Amir Shaikh, MBBS, Michael Papper, MD,  
Gastroenterology, Saint Vincent Hospital, Worcester, MA

P819. Health Care Providers’ Knowledge About Celiac Disease: Comparison of University Hospital Based Physicians and Primary Care Physicians  
David Goldberg, MD, Peter Green, MD, Medicine, Columbia University College of Physicians and Surgeons, New York, NY

P820. Air Pollution and Appendicitis: A Novel Association  
Gilaad Kaplan, MD, MPH, Elijah Dixon, MD, MSc, Remo Panaccione, MD, Steven Heitman, MD, MSc, Andrew Fong, MSc, Li Chen, BSc, Mietek Szyszkowicz, PhD, Anthony MacLean, MD, Donald Buie, MD, MSc, Paul Villeneuve, PhD, Department of Surgery, Department of Medicine, University of Calgary, Calgary, AB, Canada, Biostatistics and Epidemiology Division, Health Canada, Ottawa, ON, Canada

P821. A Single Center Retrospective Review of Double Balloon Enteroscopy  
Alexi Mantas, MD, Thomas Van Dinter, MD, Daniel DeMarco, MD,  
FACP, Internal Medicine, Division of Gastroenterology, Baylor University Medical Center, Dallas, TX

P822. Pharmacokinetic/Pharmacodynamic Correlation Between Teduglutide, an Analog of GLP-2, and Citrulline, a Biomarker of Small Intestinal Enterocyte Functional Mass in Short Bowel Patients  
Beneden Messing, MD, Samer Mouksassi, PhD, Palle Bekker Jeppesen, MD, Francisca Joly, MD, Lidia Demchynshyn, PhD, J. Cyran, PhD, Jean-Francois Marion, PhD, Hopital Beaujon, Clichy La Garrenne, France, Pharsight Corp., Montreal, QC, Canada, Rigshospitalet, Copenhagen, Denmark, NPS Pharmaceuticals, Bedminster, NJ

P823. Gastrointestinal Complications in Patients Supported with Ventricular Assist Devices  
Muhammad Siddiqui, MD, Mark Slaughter, MD, Rogelio Silva, MD,  
Cardiovascular Surgery, Internal Medicine, University of Illinois/Advocate Christ Medical Center, Oak Lawn, IL

P824. Closing the Circle on the 360 Degree Evaluation: Can Subspecialty Fellows Be Evaluated as Consultants by Their General Medical Resident Peers?  
Sasha Taleban, MD, Arthur DeCross, MD, Medicine, Division of Gastroenterology, Medicine, University of Rochester Medical Center, Rochester, NY

P825. Bevacizumab as an Alternative to Argon Pulse Coagulation in the Treatment of Upper Gastrointestinal Bleeding and Anemia Secondary to Vascular Ectasias  
Clifford Cabansag, MD, Christian Jackson, MD, Edgar Mehdikhan,  
MD, Gastroenterology, Loma Linda VA Healthcare System, Loma Linda, CA, Department of Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA

P826. Correlation of Hydrogen Breath Test to Clinical Response After Antibiotics Treatment  
Xingqi Fan, MD, MS, Larry Scott, MD, Joseph Sellin, MD,  
Gastroenterology, University of Texas Medical Branch, Galveston, TX

P827. Refractory Lymphocytic Enterocolitis and Tumor Necrosis Factor Antagonist Therapy  
Ghazaleh Aram, MD, Mark Donowitz, MD, Theodore M. Bayless,  
MD, Zong-Ming Chen, MD, Francis M. Giardiello, MD, Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, MD

P828. Nitazoxanide for the Empiric Treatment of Persistent Diarrhea  
Gary Moulis, MD, Susana Escalante-Gorsky, MD, Isaac Rajman,  
MD, Leonard Leichus, MD, Gastrointestinal Associates, PA, Fort Orange, FL, Digestive Health Associates, Houston, TX, GI Associates of Tallahassee, Tallahassee, FL

P829. Association Between CD4 Count and Candida Sp. Colonization Intensity by Stool’s Culture of AIDS Patients  
Marcelus Simadibrata, MD, PhD, Joseph Susilo, MD, Dina Mahdi,  
Professor, MD, PhD, Yeva Rosana, MD, Microbiology, Allergy and Immunology, Gastroenterology, Internal Medicine, Faculty of Medicine University of Indonesia, Jakarta Pusat, Indonesia

LIVER

P830. National and Regional Conformity to the 2007 ACG/AASLD Practice Guidelines for Prevention and Management of Gastroesophageal Varices and Variceal Hemorrhage in Cirrhosis  
★ 2008 ACG Presidential Poster Award Recipient  
Emily Carey, DO, Jamile Wakim-Fleming, MD, Rocio Lopez, MS,  
MPH, William Carey, MD, Internal Medicine, MetroHealth Medical Center, Cleveland, OH, Hepatology, Cleveland Clinic Foundation, Cleveland, OH

P831. Drug-Induced Intrahepatic Cholestasis/Vanishing Bile Duct Syndrome Secondary to Thoridazine: A Case Report and a Re-Visit of the Phenothiazines  
Tasma Hanniavandavudi, MD, Tanyanan Tanawuttiwat, MD, Rogelio Silva, MD, Hareth Raddawi, MD, FACG, Internal Medicine, Advocate Christ Medical Center/UIC, Oak Lawn, IL

P832. Post-Operative Jaundice After VATS Procedure: A Case Report Series of Three Patients  
Mania Hafara, MD, Steven Zeddun, MD, Aamir Ali, MD, Marie  
Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, Internal Medicine, The George Washington University Medical Center, Washington, DC

P833. Gender Based Differences in Treatment of Chronic Hepatitis C (CHC)  
Anil Nachnani, MD, Osama Yousef, MD, Patricia Sanchez, MD,  
Michael Selden, MD, Sandra Laya, MD, Wendell Clarkston, MD,  
Laura Alba, MD, Internal Medicine, Graves Gilbert Clinic, Bowling  
Green, KY, Gastroenterology/Hepatology, University of Missouri  
Kansas City, Kansas City, MO

P834. Is Hepatitis C Associated with Diabetes in Patients with Cirrhosis?  
Sri Lakshmi Narra, MD, MBBS, Jihad Arleth, MD, MBBS, Satheesh Nair, MD, MBBS, Internal Medicine, Gastroenterology, University of Tennessee, Memphis, TN
P835. Ultrasound Marking Improves Percutaneous Liver Biopsy Yield
Sunitha Pudhota, MD, Linda Di Teodoro, MD, Kenneth Vega, MD, Peter Wludyka, PhD, Dawn Bullock, PhD, Louis Lambrase, MD, Office of the Dean, Division of Gastroenterology, University of Florida/ Jacksonville, Jacksonville, FL

P836. The Use of Entecavir Following Liver Transplantation: Pilot Safety and Tolerability Data
Andrew Samuelson, MD, Maureen Morgan, MD, Justin Reynolds, MD, Maximilian Lee, MD, Ahmad Kamal, MD, Ajiaz Ahmed, MD, Division of Gastroenterology and Hepatology, Stanford University School of Medicine, Stanford, CA

P837. Depression and Quality of Life Assessments in HCV Genotype-1 Patients Treated with Either Consensus Interferon (CIFN) and Ribavirin (RBV) or Pegylated Interferon Alfa-2b (PEG IFN) and Ribavirin
John Bassett, MD, Manuel Arias, MD, Corinne Maydonovitch, BS, Maria Sjogren, MD, Gastroenterology, National Naval Medical Center, Bethesda, MD, Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P838. Three Cases of Acute Hepatitis in Patients Taking HydroxyCUT® Bodybuilding Supplement
Jeffrey Laczek, MD, Marten Duncan, DO, Department of Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P839. Predictors of Long Term Outcome Following Transjugular Intrahepatic Portosystemic Shunt (TIPS)
Michael Larsen, MD, Justin Reynolds, MD, Ahmad Kamal, MD, Brandon Mattix, Emmet Keefee, MD, Carlos Esquivel, MD, PhD, Daniel Sze, MD, PhD, Ajiaz Ahmed, MD, Gastroenterology and Hepatology, Medicine, Stanford University, Stanford, CA, Gastroenterology and Hepatology, Santa Clara Valley Medical Center, San Jose, CA

P840. Correlation of Clinical and Laboratory Factors with Fibrosis in Nonalcoholic Steatohepatitis
Tae Hoon Lee, MD, Ifikadu Tekleyes, MD, Toni Pacioles, MD, Waseem Shora, MD, Monjur Ahmed, MD, FACG, Internal Medicine, Marshall University, Huntington, WV

P841. Management Challenges in Sickie Cell Hepatopathy
Adnan Ahmad, MD, Malika Ahmad, MD, Arun Samanta, MD, Baburao Koneru, MD, Dorian Wilson, MD, Adrian Fisher, MD, Surgery, Medicine, University of Medicine and Dentistry (UMDNJ), Newark, NJ

P842. Hepatitis C Virus Response to Pegylated Interferon and Ribavirin at a Nurse-Managed Rural Veterans Affairs Clinic
Ashutosh Naniwadekar, MD, Advitya Malhotra, MD, Youshi Yin, Medical Student, Gagan Sood, MD, Gastroenterology, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P843. What is the Difference Between Hepatitis C Virus Patients with Sustained Virologic Responses Versus Relapsers to Standard Treatment at a Rural Veterans Affairs Clinic?
Srinivas Pulli, MD, Michelle Matteson, FNP/GNP-BC, Matthew Bechtold, MD, Srinivas Pulli, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO, Department of Gastroenterology and Hepatology, Harry S. Truman Veterans Memorial, Columbia, MO

P844. The Prevalence and Significance of Autoantibodies in Patients with Nonalcoholic Fatty Liver Disease
Kiran Rao, MD, Malika Ahmad, MD, Arun Samanta, MD, Kenneth Klein, MD, Baburao Koneru, MD, Adrian Fisher, MD, Dorian Wilson, MD, Andrew De La Torre, MD, Surgery, Pathology and Laboratory Medicine, Internal Medicine, UMDNJ, Newark, NJ

P845. Prevalence of Hepatitis D in HBsAg Positive Patients Visiting the Liver Clinics in Pakistan
Naresh Seetlani, MBBS, MCPS, FCPS, Zaigham Abbas, FCPS, FACP, FACG, Sajjad Naqvi, MBBS, Javed Yakooob, MBBS, PhD, Wasiem Jafari, FRCP, FACP, FACG, Medicine, Imam Medical Centre, Jacobabad, Pakistan, Medicine, The Aga Khan University, Karachi, Pakistan

P846. Mycophenolate Mofetil for Autoimmune Hepatitis: A Single Practice Experience
David Wolf, MD, Lizza Bojito, MD, Marcelo Facciuto, MD, Edward Lebovics, MD, Department of Surgery, Division of Gastroenterology and Hepatobiliary Diseases, New York Medical College, Valhalla, NY

P847. Effects of Transjugular Intrahepatic Portosystemic Shunt on Platelet Counts and Serum Creatinine in Patients with Portal Hypertension at Rochester General Hospital (RGH)
Motaz Al-Haftawi, MD, Kevin Casey, MD, Internal Medicine, Gastroenterology Division, Rochester General Hospital, Rochester, NY

P848. Free Radical Scavenger (Edaravone) Blocks FAS-Induced Apoptosis Pathway in Mice
A-Hon Kwon, MD, PhD, Takeshi Miyaso, MD, PhD, Katsushige Tsuji, MD, PhD, Hideyishi Toyokawa, MD, PhD, Hiroaki Yanagimoto, MD, PhD, Department of Surgery, Kansai Medical University, Hirakata, Japan

P849. Appearance of Ascitic Fluid as a Tool to Detect Spontaneous Bacterial Peritonitis (SBP) and Microbiological Patterns of SBP: A Single Center Experience
Ashutosh Naniwadekar, MD, Advitya Malhotra, MD, Youshi Yin, Medical Student, Gagan Sood, MD, Gastroenterology, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P850. Factors Associated with More Advanced Steatosis in Patients with Non Alcoholic Fatty Liver Disease (NAFLD)
Fadi Rzouq, MBBS, Hilana Hatoum, MD, Said Al-Busafi, MD, Internal Medicine, University of Texas Medical Branch (UTMB), Galveston, TX, Internal Medicine, McLaren Regional Medical Center, Flint, MI, Gastroenterology and Hepatology, Royal Victoria Hospital, McGill University, Montreal, QC, Canada

P851. An Open-Label Trial of Prophylaxis with Ertapenem in Patients with Obstructive Jaundice Undergoing ERCP: Safety, Efficacy, and Biliary Penetration of Ertapenem
Rana Sabbagh, MD, Prashant Krishnan, MD, Kimberly Brown, MD, Ashutosh Naniwadekar, MD, Advitya Malhotra, MD, Youshi Yin, Medical Student, Gagan Sood, MD, Gastroenterology, Internal Medicine, University of Texas Medical Branch, Galveston, TX

P852. Small Intestinal Bacterial Overgrowth of Colonic-Type Carbohydrates Fermentative Bacteria in Cirrhotic Patients
Giuseppe Merra, MD, Antonio Dal Lago, MD, Emidio Scarpellini, MD, Venanzio Valenza, MD, Antonio Gasbarrini, MD, Department of Nuclear Medicine, Department of Internal Medicine, Institute of Medical Pathology, Catholic University of Sacred Heart, Agostino Gemelli General Hospital, Rome, Italy

P853. How Does the Recipient's Pre-Transplant Medical Condition Affect Steatosis in the Transplanted Liver?
Naresh Seetlani, MBBS, MCPS, FCPS, Zaigham Abbas, MD, Antonio Gasbarrini, MD, Department of Nuclear Medicine, Department of Internal Medicine, Institute of Medical Pathology, Catholic University of Sacred Heart, Agostino Gemelli General Hospital, Rome, Italy

P854. Hepatocellular Carcinoma in a Northern Portuguese Urban Hospital
João Soares, MD, Carla Rolanda, MD, Susana Lopes, MD, Pedro Pereira, MD, Mario Marcelino, MD, Raquel Gonçalves, MD, Artur Machado, MD, Guilherme Macedo, MD, PhD, FACG, Gastroenterology Unit, H.S. Marcos, Braga, Portugal
P855. 13C-Valine Breath Test is Superior to 13C-Phenylalanine Breath Test for the Assessment of Liver Function
Yoshihisa Urita, MD, PhD, Toshiyasu Watanabe, MD, PhD, Tadasa Maeda, MD, Yosuke Sasaki, MD, Susumu Ishihara, MD, Kazuo Hike, MD, Masaki Sanaka, MD, PhD, Hitoshi Nakajima, MD, PhD, Motonobu Sugimoto, MD, PhD, Department of General Medicine, Toho University, Tokyo, Japan

P856. Long-Term Outcome with Monitoring of Platelet Count, Albumin and INR in Patients with Chronic Hepatitis C and Cirrhosis with Prolonged Interferon Therapy
Amir Agha, MD, Dawid Elieah, MD, Gitanjali Vidyarthi, MD, William Boyd, MD, James A. Haley VA Hospital, Tampa, FL

P857. Correlation of SAAG (Serum Ascites Gradient) with the Presence and Grading of Esophageal Varices in Patients with Decompensated Cirrhosis of Liver
Salman Jafri, MBBS, MRCP(UK), Abdul Sattar, FCPS, Medicine, Toho University, Tokyo, Japan

P858. Demographic Differences Affecting the Decision to Defer Treatment for Chronic Hepatitis C (CHCV) Infection: Results of a 3-Year Follow-up Survey
Nimesh Khatri, MD, Imran Khokhar, MD, James Lewis, MD, Department of Medicine, Division of Gastroenterology, Hepatology Section, Georgetown University Hospital, Washington, DC

P859. Etiological Spectrum and Clinicolaboratory Profile of Cirrhosis at a Tertiary Health Centre in North India
Dharmendra Singh, MD, Armit Srivastava, MD, Sanjeev Sachdeva, MD, Armit Saxena, MD, Namrata Nigam, MD, Brm Lamba, MD, E. Chandrasekharan, MD, Gastroenterology, Dr. RML Hospital, New Delhi, India

P860. A Case of Hepatic Tuberculosis in a Patient with Acute Myelogenous Leukemia
Naga Ganesana, MD, Kenneth Youens, MD, Iliana Bounova, MD, Internal Medicine - Pathology, Internal Medicine - Gastroenterology, Duke University, Durham, NC

P861. Sirolimus-Induced Hepatotoxicity: Case Report
Brock Macdonald, MD, Evi Vakiani, MD, Robert Brown, MD, MPH, Samuel Sigal, MD, Pathology, Medicine, New York - Presbyterian Hospital, New York, NY

P862. Use of Plasmapheresis in Acute Hepatic Failure Due to Hepatitis A
Parrn Makadia, MD, MBA, Ritu Sharma, MD, Jessica Zitter, MD, MPH, Internal Medicine, University of Medicine and Dentistry of New Jersey - New Jersey Medical School, Newark, NJ

P863. Primary Sclerosing Cholangitis (PSC) and Sarcoidosis an Infrquent Association-Case Report
Avinash Murthy, MD, Eva Fotzik, MD, PhD, David Chaletsy, MD, Vinay Sood, MD, Medicine, Albany Medical College, Albany, NY, Department of Gastroenterology, Pirmasens Hospital, Pirmasens, Germany

P864. Prior PPI Use is a Risk Factor for Hospitalization with Recurrent C. difficile Associated Disease (CDAAD)
Jennifer Wellington, BS, V. Alin Botoman, MD, Susan Mableson, RN, Ricardo Reyes, MD, Nora Triola, RN, PhD, Holy Cross Hospital, Fort Lauderdale, FL, Florida Atlantic University, Boca Raton, FL, Gastroenterology, University of Miami, Miami, FL

P865. Microscopic Colitis: A Retrospective Analysis of Clinical Characteristics, Association with Autoimmune Disorders, and Response to Therapy
Amit Bhan, MD, Eduardo Castillo, MD, Adrian Ormsby, MD, Gastroenterology, Henry Ford Hospital, Detroit, MI

P866. Nitazoxanide for the Treatment of Moderate to Severe Clostridium difficile Infection in Hospitalized Patients
David Heiman, MD, Bienvenido Yangco, MD, MPH, Department of Gastroenterology, St. Joseph’s Hospital, Tampa, FL, Infectious Disease Research Institute, Inc., Tampa, FL

P867. Important Risk Factors for C. difficile Associated Disease in Hospitalized Patients are Proton Pump Inhibitor Use and Transplantation
Thomas Kovacs, MD, Robyn Altman, RN, Division of Digestive Diseases, David Geffen School of Medicine at UCLA, Los Angeles, CA

P868. Harbingers of Clostridium difficile Associated Diarrhea
Phillip Madonia, MD, Chaitanyant Pand, MD, Pat Bass, MD, MS, MPH, Kenneth Manas, MD, Paul Jordan, MD, Internal Medicine, Louisiana State University Health Science Center, Shreveport, LA

P869. Assessment of Inter-Observer Agreement of Colonic Transit Time (CTT) with Radiopaque Markers
Satish Rao, MD, PhD, FRCP, Jessica Paulson, BS, Braden Kuo, MD, Richard McCallum, MD, Michael Sitrin, MD, William Chuy, MD, Jeffrey Lackner, PsyD, John Semler, PhD, Greg Wilding, PhD, Henry Parkman, MD, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA, The SmartPill Corporation, Buffalo, NY, Gastroenterology Unit, Massachusetts General Hospital, Boston, MA, Center for GI Nerve & Muscle Function & GI Motility, University of Kansas Medical Center, Kansas City, KS, Internal Medicine, University of Michigan, Ann Arbor, MI, Biostatistics, SUNY at Buffalo, Buffalo, NY, Medicine, Temple University School of Medicine, Philadelphia, PA, Medicine, University of Buffalo School of Medicine, SUNY at Buffalo, Buffalo, NY, Medicine, Western New York VA Medical Center, Buffalo, NY

P870. Bone Marrow-Derived Cells Were Not Identified in Colonic Cancer of Patients After Sex-Mismatched Bone Marrow Transplantation
Gen Sakai, MD, Tomoharu Yajima, MD, PhD, Hajime Higuchi, MD, PhD, Hiromasa Takaishi, MD, PhD, Tsuhitumi Hibi, MD, PhD, Internal medicine, Keio University, Tokyo, Japan

P871. Unique Distribution of Collagenous Colitis-Associated Mucosal Tears
Joseph Yarze, MD, FACG, Gastroenterology Associates of Northern New York, Glens Falls, NY

P872. Overweight, Race, and Colorectal Cancer Screening: Disparity Among White vs. African American and Obese vs. Non-Obese Individuals
Fuad Azrak, MD, Kamil Obideon, MD, Mohamad Adan, MD, Mohamed Wahbi, MD, Medicine/Division of Digestive Diseases, Emory University School of Medicine, Decatur, GA, Medicine, Wayne State University, Detroit, MI

P873. Acute Ischemic Colitis: An Overview of Awareness Among Health Care Providers in an Inner City Hospital
Michel Bidros, MD, Khalid Monzer, MD, Lokesh Jha, MD, Abhinav Singh, MD, Carl Guillaume, MD, Department of Gastroenterology, Department of Internal Medicine, St. Barnabas Hospital, Bronx, NY

P874. Patient Attitudes Toward Colonoscopy: A Survey
Srinivas Gaddam, MD, MPH, Matthew Reuter, MD, Stephanie White, DO, Joshua Binek, MD, Rajitha Premaratne, MD, Keith Starke, MD, Michael Presti, MD, Department of Internal Medicine, St. John’s Mercy Medical Center, St Louis, MO

P875. Patients Willingness for Colonoscopy: Are Physician Recommendations Adequate?
Srinivas Gaddam, MD, MPH, Matthew Reuter, MD, Stephanie White, DO, Joshua Binek, MD, Rajitha Premaratne, MD, Keith Starke, MD, Michael Presti, MD, Department of Internal Medicine, St. John’s Mercy Medical Center, St. Louis, MO
P876. Incidence of Diverticulosis in Recurrent Clostridium difficile Infection  
Michael Lipp, MD, Odelya Pagovich, MD, Albert Min, MD, Henry Bodenheimer, MD, Brett Bernstein, MD, Beth Israel Medical Center, New York, NY

P877. An Unusual Presentation of MYH-Associated Polyposis in a Hispanic Patient  
Jessica Narvaez-Lugo, MD, Johan Senior, MD, Alberto Cardona, MD, Marcia Cruz-Correa, MD, Surgery, Gastroenterology, University of Puerto Rico, San Juan, PR

P878. Macroscopic Colitis in Microscopic Colitis  
Yan Zhao, MD, Yanling Ma, MD, Pabby Vikas, MD, Loren Laine, MD, Loma Linda University Medical Center, Loma Linda, CA, University of Southern California, Los Angeles, CA, Brigham and Women’s Hospital, Chestnut Hill, MA

P879. Colonic Tuberculosis: A Case Series of an Underappreciated Entity  
Iulia Balbach Tuleu, MD, MHPA, Amulya Konda, MD, Internal Medicine/Division of Gastroenterology, William Beaumont Hospital, Royal Oak, MI

P880. Inverted Appendicitis: Diagnosed by Colonoscopy with Negative Radiological Findings  
Sushil Duddempudi, MD, Amir Butt, MD, Siddarth Mathur, MD, Niket Sonpal, BS, Mukul Arya, MD, Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY, Internal Medicine, Gastroenterology, Wyckoff Heights Medical Center, Brooklyn, NY

P881. Investigating Rectal Bleeding: A Review of Diagnoses on Lower GI Endoscopy in the Third World  
Salwa Hussain, MBBS, Arif Nawaz, FACP, FACG, Syeda Batul, MBBS, Amal Ashraf, MD, Division of Gastroenterology, FMH College of Medicine and Dentistry, Lahore, Pakistan

P882. Non Specific Colitis (NSC)—A Histopathologically Indeterminate Colitis of Adult Sri Lankans; A Follow Up Study with Appraisal of Clinico-Pathological Features  
Ravindra Satarasinghe, MD, Ruchira Fernando, MD, Department of Medicine, Ward 6, Sri Jayewardenepura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka

P883. Ischemic Colitis in Two Patients After Large Volume Paracentesis  
Kandarp Shah, MD, Kalyani Shah, MD, UCSF-Fresno, Fresno, CA, Digestive and Liver Disease Specialists, Fresno, CA

P884. The Association of Diabetes Mellitus with Colorectal Cancer and Polypos in Asymptomatic Patients Undergoing Screening Colonoscopy  
Mary Alizadeh, MD, Juan Munoz, MD, Gastroenterology, University of Florida, Jacksonville, FL

P885. Secretary Villous Adenomas: A Case Report and Comprehensive Literature Review  
Thomas Irwin, DO, David Albert, MD, Ethan Flynn, MD, Colleen Murphy, MD, Ira Schmelkin, MD, Berkshire Medical Center, Pittsfield, MA

P886. An Unusual Case of Drug Induced Colonic Ischemia  
Fouad Moawad, MD, Lawrence Goldkind, MD, Gastroenterology, Walter Reed Army Medical Center, Washington, DC, Gastroenterology, National Naval Medical Center, Bethesda, MD

P887. An Atypical Presentation of Collagenous Colitis  
Maryam Shaik, MD, Asra Babool, MD, Shahzad Iqbal, MD, Mohamad Mansour, MD, Cheryl Delbridge, MD, Maurice Cerrilli, MD, FACG, Department of Pathology, Division of Gastroenterology, Department of Medicine, New York Methodist Hospital, Brooklyn, NY

P888. Transmural Colonic Infarction Associated with Hyperoxaluria  
Arun Srivatsa, MD, Lawrence Saubermann, MD, University of Rochester, Rochester, NY

P889. Nitazoxanide for the Treatment of Recurrent Clostridium difficile Infection (CDI) in a Peritoneal Dialysis Patient  
Bienvenido Yangco, MD, MPH, Gulab Sher, MD, Infectious Disease Research Institute, Inc., Tampa, FL, Advanced Care Hospitalists, Tampa, FL

CLINICAL VIGNETTES

P890. Neonatal Hemochromatosis-like Presentation in the Absence of Liver Failure with Spontaneous Resolution  
Prateek Wali, MD, Janaki Gokhale, MD, Seema Khan, MD, Pediatric Gastroenterology & Nutrition, Nemours Alfred I. duPont Hospital for Children, Wilmington, DE

P891. Reversal of Protein-Losing Enteropathy After Liver Transplantation in a Child with Idiopathic Familial Neonatal Hepatitis  
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Naim Alkhouri, MD, Christine Carter-Kent, MD, Vera Hupertz, MD, Bijan Eghtesad, MD, John Fung, MD, PhD, Kadakkal Radhakrishnan, MD, Department of General Surgery, Liver Transplant Center, Pediatric Gastroenterology and Hepatology, Cleveland Clinic, Cleveland, OH

P892. A Case of Acute Hepatitis C: Fact or Fulminant Failure?  
Ketu Patel, MD, Jiwanjot Chhatwal, MD, Robbie Taha, DO, NAhid Elyas, MD, Internal Medicine, Providence Hospital, Southfield, MI

P893. An Unusual Cause of Portal Hypertensive Variceal Bleeding in a Young Adult Female  
Mitchell Mah’moud, MD, FACG, Mark Anderson, MD, Robert Schellenberg, MD, Allison Taylor, MMS, Section of Digestive Diseases, Boice-Willis Clinic, Rocky Mount, NC, Section of Digestive Diseases, Duke University Medical School, Durham, NC

P894. Methicillin-Resistant Staphylococcus Aureus Induced Adult Epiglottitis in a Patient Treated with Peginterferon and Ribavirin for Chronic Hepatitis C  
Tony Tseng, MD, Igor Grosman, MD, David Bernstein, MD, North Shore University Hospital, Manhasset, NY

P895. Orthotopic Liver Transplantation: Not the Cure for Caroli’s Disease in All Cases  
Truptesh Kotthi, MD, MS, Mark Korsten, MD, Shivangi Kotthi, MD, Thomas Schiano, MD, Internal Medicine, J.J. Peters VA Medical Center, Bronx, NY, Liver Transplant, Mount Sinai School of Medicine, New York, NY, Gastroenterology, St. Joseph’s Regional Medical Center, Paterson, NJ

P896. Amiodarone Induced Liver Cirrhosis  
Jeremy Davis, MD, MPH, Muslim Atiq, MD, Laura Lamps, MD, Kevin Olden, MD, James Rose, MD, Pathology, Gastroenterology, University of Arkansas for Medical Sciences, Little Rock, AR

P897. Liver Biopsy Induced Hemobilia Presenting as Hematochezia: An Unusual Complication of a Commonly Performed Procedure  
Shyam Dang, MD, Muslim Atiq, MD, Kevin Olden, MD, Ralph Panek, MD, Neeelima Velchala, MD, Robert Svoboda, MD, Farshad Aduli, MD, Radiology, Internal Medicine, Gastroenterology, University of Arkansas for Medical Sciences, Little Rock, AR

P898. Ischemic Hepatitis Secondary to Obstructive Sleep Apnea (OSA)  
Anita Bhushan, MD, Patrick Kamath, MD, Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN

P899. Liver Injury After Consumption of High Dose Tahitian Noni Juice  
Ravi Juluri, MD, Raj Yuppalanchi, MD, Medicine-Gastroenterology, Indiana University, Indianapolis, IN
P900. A Case of Unusual Pulmonary Embolism Due to Extensive Thrombosis After PTC
Sherif Abotaga, MD, Madalina Butnariu, MD, Frank Gress, MD, Adam Goodman, MD, Internal Medicine, Staten Island University Hospital, Staten Island, NY, Division of Gastroenterology & Hepatology, SUNY Downstate Medical Center, Brooklyn, NY

P901. Membranoproliferative Glomerulonephritis (MPGN) as Initial Manifestation of Hepatitis C (HCV)
Rada Shakov, MD, Joseph DePasquale, MD, St. Michael's Medical Center, Newark, NJ

P902. Celiac Disease Should Be Considered in Patients with Cryptogenic Cirrhosis
Sohail Asfandiyar, MD, Ann Silverman, MD, FACP, Stuart Gordon, MD, FACG, Gastroenterology and Hepatology, Henry Ford Hospital, Detroit, MI

P903. Amebic Liver Abscess
Saman Ahmed, MD, Leelavathi Kasturi, MD, Henry Safier, MD, FACG, Internal Medicine, Queens Hospital Center, Jamaica, NY

P904. Acute Hepatitis C in a Post-Lung Transplant Patient
Bradley Shepherd, MD, Christen Kochen, MD, Elizabeth Harris, MD, Roman Perri, MD, Division of Gastroenterology, Vanderbilt University, Nashville, TN

P905. A Case of Shy-Drager Syndrome in a Patient Following Orthotopic Liver Transplantation
Suhail Salem, MD, Omar Lateef, DO, Joseph Ahn, MD, MS, Stanley Cohen, MD, David Van Thiel, MD, Section of Pulmonary/Critical Care Medicine, Section of Hepatology, Rush University Medical Center, Chicago, IL

P906. Peliosis Hepatis Due to Bartonella Infection: An Unusual Cause of Cholestatic Hepatitis Following Renal Transplantation
Abhijit Bhattacharya, MD, Fadlallah Habr, MD, Pathology, Tandon Medical School, NY, Division of Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC

P907. Hepatitis C—Associated Bilateral Mooren’s Corneal Ulcer
Aparna Repaka, MD, Robert Fontana, MD, Division of Gastroenterology, University of Michigan, Ann Arbor, Michigan, MI

P908. A Case of Myelodysplastic Syndrome in a Liver Transplant Patient
Saman Ahmed, MD, Matthew Cole, MD, Kenneth Vega, MD, Juan Munoz, MD, Division of Gastroenterology, University of Florida/ Jacksonville, Jacksonville, FL

P909. Autoimmune Hepatitis: Diagnosis Preceded by Episode of Cholestatic Hepatitis in the Setting of Atorvastatin Exposure
Alastair Smith, MB, ChB, Medicine, Eastbourne District General Hospital, Eastbourne, United Kingdom

P910. Bleeding Duodenal Diverticulum—Hemostasis After Endoscopic Hemoclip Placement
Ilan Weisberg, MD, MSc, Cavell Lianne, MD, Doug Weine, MD, Ellen Scherl, MD, Gastroenterology and Hepatology, New York Presbyterian Hospital - Weill Cornell Medical Center, New York, NY

P911. A Case of Late Onset Caroli’s Disease in a 75 Year Old Woman
Aparna Repaka, MD, Manish Tandon, MD, Julio Ayala, MD, Kinnari Kher, MD, Medicine, Mount Auburn Hospital, Harvard Medical School, Cambridge, MA

P912. Autoimmune Hepatitis Due to Bosentan
Maria Westerhoff, MD, Stanley Cohen, MD, Joseph Ahn, MD, MS, Hepatology, Rush University Medical Center, Chicago, IL, Pathology, University of Chicago, Chicago, IL

P913. Autoimmune Hepatitis: Diagnosis Preceded by Episode of Cholestatic Hepatitis in the Setting of Atorvastatin Exposure
Alastair Smith, MB, ChB, Medicine, Eastbourne District General Hospital, Eastbourne, United Kingdom

P914. Diagnosis of a Germ Cell Tumor by Capsule Endoscopy
Amit Agha, MD, Joseph McKinley, MD, Patrick Brady, MD, Jay Mamel, MD, Department of Gastroenterology, Internal Medicine, University of South Florida, Tampa, FL

P915. Palliation of Malignant Rectosigmoid Obstruction Secondary to Locally Invasive Prostate Cancer with Multiple Overlapping Self-Expanding Metal Stents
Aja Smith, MD, Matthew Cole, MD, Kenneth Vega, MD, Juan Munoz, MD, Division of Gastroenterology, University of Florida/ Jacksonville, Jacksonville, FL

P916. Gastropexy Wire Impaction Within a Gastrostomy Fistula
Ava Ankelsaria, MD, Po Chu, MD, Ian Wall, DO, Nison Badalov, MD, Kadirawel Iswara, MD, Jianjun Li, MD, Scott Tenner, MD, MPH, Department of Internal Medicine, Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY

P917. Cryptosporium Pneumonia in a Patient with Solid Organ Transplantation
Douglas Weinberg, MD, FACP, Stuart Gordon, MD, FACG, Gastroenterology and Hepatology, New York Presbyterian Hospital- Weill Cornell Medical Center, New York, NY

P918. Cryospray Ablation in the Treatment of Hemorrhagic Esophageal Cancer
Felce Schnoll-Sussman, MD, Weil Cornell Medical Center, New York, NY

P919. M2A Capsule Diagnosis of Tropical Sprue

P920. When Temporary Clips Linger: Two Cases
Justina Ju, MD, Stephan Goebel, MD, John Shamma’a, MD, Uma Sundaram, MD, Division of Digestive Diseases, West Virginia University School of Medicine, Morgantown, WV

P921. The Cola Wars Continue: Use of Diet Pepsi for Bezozzo Dissolution
Douglas Weine, MD, Ketan Kulkarni, MD, Ilan Weisberg, MD, Robert Schaefer, MD, Kunal Jajoo, MD, Christine Frisora, MD, Gastroenterology and Hepatology, New York Presbyterian Hospital- Weill Cornell Medical Center, New York, NY

P922. Clostridium, Strongyloides, Lymphoma—From Common to Rare Causes of Diarrhea in One Patient
Nancy Gundersen, MD, Robert Krichely, MD, Internal Medicine, Mayo Clinic Rochester, Rochester, MN, Gastroenterology, Mayo Clinic, Rochester, MN

P923. Mesh Migration into the Cecum Following Laparoscopic Inguinal Hernia Repair
Stephanie Bateman, MD, Prasad Kulkarni, MD, Division of Digestive Diseases, Northwestern Medicine, Chicago, IL, Division of Gastroenterology and Hepatology, Northwestern Memorial Hospital, Chicago, IL

P924. A Case of Polysplenia and Agenesis of the Dorsal Pancreas
Stacie Vela, MD, Joseph Romagnuolo, MD, FRCP, MScEpi, Division of Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC

P925. Amebic Liver Abscess
Samuel Ahmed, MD, Leelavathi Kasturi, MD, Henry Safier, MD, FACG, Internal Medicine, Queens Hospital Center, Jamaica, NY

P926. A Case of Cryptogenic Cirrhosis
Abhijit Bhattacharya, MD, Fadlallah Habr, MD, Pathology, Tandon Medical School, NY, Division of Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC
Poster Presentations — Tuesday, October 7

P925. Gastrointestinal Ulceration and CMV Infection in a Patient Treated with Microspheres Radioembolization
Steven Nymagun, MD, Kajal Patel, MD, Max Sung, MD, Michelle Kim, MD, MSC, Division of Gastroenterology, Mount Sinai School of Medicine, New York, NY

P926. CD4+ T-Cell Lymphoproliferative Disorder of the Gut
Melanie Harrison, MD, Steven Epstein, MD, Kelly Crawford, MD, Division of Digestive Diseases, Emory University School of Medicine, Atlanta, GA

P927. Cytomegalovirus Enterocolitis Complicated by Pseudotumors in the Terminal Ileum
Swapna Reddy, MD, Kashyap Trivedi, MD, Yevgeniy Karamurzin, MD, Wan Jun Bae, MD, Gregory Albers, MD, Nimisha Parekh, MD, MPH, Department of Internal Medicine, Division of Gastroenterology, University of California, Irvine, Orange, CA

P928. Diagnosis of Primary Small Bowel Adenocarcinoma by EUS-FNA
Richard Johnston, MD, Afonso Ribeiro, MD, University of Miami Miller School of Medicine-Jackson Memorial Hospital, Miami, FL

P929. Nausea and Abdominal Pain in Thyrotoxicosis
Vijaya Dasari, MD, Venkatasubbarama Achanta, MD, Internal Medicine, The Mount Vernon Hospital, Mount Vernon, NY

P930. Actinomycosis in Meckel's Diverticulitis
Tareah Soleymani, MD, Rada Shakov, MD, Chintan Mody, MD, N. Parikh, MD, Robert Spira, MD, Joseph DePasquale, MD, Internal Medicine, Pathology, and Gastroenterology, St. Michael's Medical Center, Newark, NJ, Seton Hall University, South Orange, NJ

P931. A Case of Aleuemic Monocytic Neoplasm Causing Diarrhea and Weight Loss
Christian Clark, MD, David Holoman, MD, Robert Stuart, MD, John Lazzarich, MD, David Lewin, MD, Lawrence Cornerford, MD, Department of Pathology, Department of Medicine, Medical University of South Carolina, Charleston, SC

P932. Massive Gastrointestinal Bleeding and Diffuse Bowel Wall Thickening: A Case of Adult Henoch-Schonlein Purpura (HSP) Developed After Methicillin-Resistant Staphylococcus Aureus (MRSA) Infection
Bingru Xie, MD, PhD, John Sotiriadis, MD, PhD, Kunal Grover, MD, Mark Sterling, MD, Weizheng Wang, MD, Department of Medicine, Division of Gastroenterology and Hepatology, UMDNJ - New Jersey Medical School, Newark, NJ

P933. Atypical Case of Mucosal Malignant Melanoma
Neetu Mahendraker, MD, Mohammad Siddiqui, MD, MPH, Jyothi Reddy, MD, FACC, Internal Medicine, University of Illinois at Urbana-Champaign, Urbana, IL

P934. Cytomegalovirus Enteritis in an Immunocompetent Host
Shilpa Madadi, MD, Mark Versland, MD, Department of Medicine, Division of Gastroenterology, University of Connecticut, Farmington, CT, Department of Medicine, Division of Gastroenterology, The Hospital of Central Connecticut, New Britain, CT

P935. Chylous Ascites: A Rare Complication of Mycobacterium Avium Complex (MAC) Infection and Immune Reconstitution Inflammatory Reaction (IRIS) in AIDS
Lokesh Jha, MD, Nabin Timilsina, MD, Michel Bidros, MD, Shaila Nupur, MD, Frederick Fallick, MD, Jeremiah Kurz, MD, Michelle Dahdouh, MD, Department of Infectious Disease, Department of Gastroenterology, Department of Medicine, St. Barnabas Hospital, Bronx, NY

P936. Eosinophilic Ascites Postpartum
Iryna Hepburn, MD, Subbarama Sridhar, MBBS, Robert Schade, MD, Medicine, Medical College of Georgia, Augusta, GA

P937. Don't Swallow Your Gum: Abnormal Positron Emission Tomography (PET) Scan Secondary to Bubble Gum Adherent to the Colonic Mucosa
Joshua Hall, MD, Arvind Mowda, MD, Subbaramiah Sridhar, MB, BS, FACG, Sherman Chamberlain, MD, FACG, Section of Gastroenterology and Hepatology, Medical College of Georgia, Augusta, GA

P938. Ischemic Colitis, Acalculous Cholecystitis and Catastrophic Longitudinal Transverse Myelopathy in Antiphospholipid Syndrome and Sjogren's Vasculitis
Bassel Ericsson, MD, Robert Andina, MD, Melvin Wichter, MD, Charles Berkelhammer, MD, FACG, Internal Medicine, University of Illinois, Oak Lawn, IL

P939. A Case of Primary Papillary Serous Carcinoma of the Peritoneum in a Man
Tetsuhiro Yoshino, MD, Shigenari Hozawa, MD, Tokuhiro Kimura, MD, Masahiro Jinzaki, MD, Yui Yamada, MD, Yoshiyuki Yamagishi, MD, Hideaki Kanamori, MD, Yasunori Okada, MD, Toshifumi Hibi, MD, Department of Radiology, Department of Pathology, Division of Gastroenterology, Department of Internal Medicine, Keio University School of Medicine, Tokyo, Japan

P940. A Rare Case of Common Variable Immunodeficiency Masquerading as Celiac Disease
Michael Windham, MD, Sufiyann Chaudhry, MD, Gastroenterology, University of Tennessee, Memphis, TN

P941. Rhinocerebral Mucormycosis with Cranial Nerve Involvement Presenting with Dysphagia in an Immunocompromised Cirrhotic Patient
Mustafa Tiewala, MBBS, MD, Gerold Fruchter, MD, Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY, Gastroenterology, VA NY Harbor Healthcare System, Brooklyn, NY

P942. A Rare Case of Breast Cancer Metastasis Presenting as Linitis Plastica of Stomach and Colon
Advitya Malhotra, MD, Praveen Guturu, MD, Basim Mohammed, MD, G. Raju, MD, Department of Pathology, Gastroenterology and Hepatology, UTMB, Galveston, TX

P943. Chest Discomfort Caused by Transmural Migration of Surgical Material After Fundoplication
Ricardo Borsatto, MD, Neil Shernoff, MD, Gastroenterology, Carl T. Hayden Veteran Affairs Medical Center, Phoenix, AZ, Gastroenterology / Hepatology, University of Arizona, Tucson, AZ

P944. Double Take: Gastric Polyps are Real!
Scott Leverage, MD, Luis Pena, MD, University of Kentucky, Lexington, KY

P945. Hypocalcemia Due to Proton Pump Inhibitors in a Patient with Parathyroid Insufficiency
Brandon Craft, MD, Marcelo Vela, MD, Digestive Disease Center, Department of Medicine, Medical University of South Carolina, Charleston, SC

P946. Gastroparesis Following Smallpox Vaccination
Jeffrey Laczek, MD, Roy Wong, MD, Department of Gastroenterology, Walter Reed Army Medical Center, Washington, DC

P947. Alcohol Induced Ischemic Gastric Necrosis
Kunal Grover, MD, Bingru Xie, MD, PhD, Weizheng Wang, MD, Department of Medicine, Division of Gastroenterology and Hepatology, UMDNJ - New Jersey Medical School, Newark, NJ
P948. Albumin Injection for Endoscopic Hemostasis of Bleeding Peptic Ulcer Disease
Juan Carlos Bucobo, MD, Robert Shaw, MD, Michael Harris, MD, Kai Matthes, MD, Bhawna Halwan, MD, MS, Everson Artifon, MD, PhD, Vivek Mittal, MD, Atul Kumar, MD, Division of Gastroenterology and Hepatology, Stony Brook University Medical Center, Stony Brook, NY, Harvard Medical School, Boston, MA, University of Sao Paulo Medical School, Sao Paulo, Brazil, SUNY Downstate Medical Center, Brooklyn, NY, UT Southwestern, Dallas, TX, Northport Veterans Affairs Medical Center, Northport, NY

P949. More than a Polyp
Harris Naina, MD, Samar Harris, MD, Internal Medicine, Division of Oncology, Mayo Clinic, Rochester, MN

P950. Metastatic Renal Cell Carcinoma Presenting as a Colocolic Intussusception
Kenneth Reed, DO, Ketul Patel, MD, Serge Sorser, MD, Robbie Taha, DO, Julia Greer, MD, Providence Hospital, Southfield, MI

P951. Breast Cancer Metastasizing to Multiple Colon Polyps
Bilal Hameed, MD, Saqib Razzaque, MD, Ahmad Abdulkarim, MD, Nadeem Chaudhary, MD, Gastroenterology, University of Minnesota, Minneapolis, MN, Gastroenterology, Regions Hospital, St. Paul, MN

P952. Sorbitol Induced Colonic Necrosis: A Case Report
Touraj Zolfaghari, MD, Mohamad Erfani, MD, Pramod Joseph, MD, Hilary Hertan, MD, FACC, Nejat Kiyici, MD, FACC, Aaron Feliz, MD, Gastroenterology, Our Lady of Mercy Medical Center, Bronx, NY, Pathology, Our Lady of Mercy Medical Center, Bronx, NY

Priyanka Kanth, MBBS, Jaykumar Thumar, MD, Guada Respicio, MD, Eytan Rubinstein, MD, Zaldonis Anthony, MD, Internal Medicine, University of Connecticut Health Center, Farmington, CT, Gastroenterology, Infectious Disease, Saint Francis Hospital and Medical Center, Hartford, CT

P954. Colon Cancer Presenting as Suspected Appendicitis with Abscess Formation
Tiffany Zellman, MD, Satil Patel, MD, FACP, FACC, Gastroenterology, Internal Medicine, William Beaumont Hospital, Royal Oak, MI

P955. Attenuated Familial Adenomatous Polyposis (AFAP) Presenting as Ampullary Adenocarcinoma—A Case Report
Nisheeth Verma, MD, Avinash Murthy, MD, Vinay Sood, DO, Konstantinos Linos, MD, Pathology, Gastroenterology, Internal Medicine, Albany Medical College, Albany, NY

P956. A 50-year-old Man with an Uncommon Polyp
Panagiota Panagiota, MD, Gastroenterology & Hepatology, ISJ-Mayo Health System, Mankato, MN

P957. Mantle Cell Lymphoma of the Colon: A Rare Malignancy!
Ehi Osomor, MD, Rohit Jindal, MD, Michel-Jose Charles, MD, Department of Medicine, Division of Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY, Department of Medicine, Division of Gastroenterology, Brookdale University Hospital Medical Center, Brooklyn, NY

P958. An Unusual Cause of Diarrhea
Yaron Langman, MD, Ira Tepler, MD, Albert Kramer, MD, Amnon Gotlan, MD, Lawrence Brandt, MD, Gastroenterology, Montefiore Medical Center, Bronx, NY

P959. Chemical Colitis: An Unusual Complication of a Gynecological Procedure
Rizwan Ahmed, MD, William Gallahan, MD, John Long, MD, Gastroenterology, Wake Forest University Baptist Medical Center, Winston-Salem, NC

P960. Localized Gastrointestinal Histoplasmosis Presenting as Lower GI Bleeding in an Immunodeficient Patient
Gerson Valdez, MD, Abhijit Raval, MD, Roger Smalligan, MD, MPH, Christopher Mathews, MD, Internal Medicine Department, East Tennessee State University, Johnson City, TN

P961. Capecitabine Induced Colitis Cystica Superficialis
Peter Sargon, MD, Baseer Qazi, MD, Timothy Laurie, MD, Hymie Kavin, MD, Gastroenterology, Advocate Lutheran General Hospital, Park Ridge, IL

P962. Recto-Urethral Fistula: A Late, But Unusual Complication of Radiation Therapy for Prostate Cancer
Lawrence Chan, MD, Paul Arnold, MD, Division of Gastroenterology, Virginia Commonwealth University Health System, Richmond, VA

P963. Delayed Diagnosis of Splenic Hematoma After Routine Colonoscopy
Arvind Mowa, MD, Shannon Marek, MD, Dimple Raina, MD, Subbaramiah Sridhar, MB, BS, FACC, Section of Gastroenterology and Hepatology, Medical College of Georgia, Augusta, GA

P964. Pseudo-Carcinomatosis—An Atypical Presentation of Pseudomyxoma Peritonei in a Morbidly Obese Patient
Maria Lufrano, DO, Thomas Bradley, MD, John Costable, MD, Ian Storch, DO, Medicine, North Shore University Hospital, Manhasset, NY

P965. Hemoperitoneum without Perforation or Splenic Rupture After Colonoscopy
Gordon Lisa, MD, Stanley Benjamin, MD, Gastroenterology, Georgetown University Hospital, Washington, DC

P966. Acute Appendicitis: An Unusual Complication Following Colonoscopy
Jennifer Leigh, MD, MPH, James Roa, DO, Mitchell Hoffman, MD, MPH, Gastroenterology, Bay Pines VA Healthcare System, St. Petersburg, FL, USF College of Medicine, Tampa, FL

P967. Colonic Spongiosis: An Unusual Cause of Asymptomatic Colonic Ulceration
Mouen Khashab, MD, Spencer Wilson, MD, Won Kyoo Cho, MD, Medicine, Indiana University/Roudebush VAMC, Indianapolis, IN

P968. Microcytic Anemia in a Patient with Malignant Melanoma: An Uncommon Presentation
Lesley Andrews, MD, Sherri Yong, MD, Khondker Islam, MD, Medicine, Loyola University Medical Center, Maywood, IL

P969. Severe Proximal Muscle Weakness in a Patient with Colon Cancer: Paraneoplastic Syndrome or Idiopathic Inflammatory Myopathy?
Oksana Anand, MD, Gastroenterology and Hepatology, Kansas University Hospital, Kansas City, KS

P970. Multiple Granular Cell Tumors of Ascending Colon: A Case Report and Literature Review
Jeff Ye, MD, Ronald Gaskins, MD, Jeff Stead, MD, Uma Sundaram, MD, Section of Digestive Diseases, Department of Pathology, West Virginia University, Morgantown, WV

P971. Rare Case of an Incidently Found Appendiceal Neutroly
Yuri Tsurlin, MD, Andrew Seymour, MD, Gerold Fruchter, MD, Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY, Pathology, Gastroenterology, VA NY Harbor Healthcare System, Brooklyn Campus, Brooklyn, NY

P972. A Case of Seronegative Autoimmune Pancreatitis
Laxmi Thummalakunta, MD, MPH, Naishadh Raghuwanshi, MD, MBA, Frank Burton, MD, Richa Gupta, MD, Internal Medicine, St. Luke's Hospital, Saint Louis, MO, Gastroenterology, Saint Louis University, Saint Louis, MO
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<td>Zeeshan Perveze, MD, Nasser Saffarian, MD, Ayaz Chaudhary, MD, FACG, Gastroenterology, Internal Medicine, Medical College of Georgia, Augusta, GA, Internal Medicine, Trinity Hospital, Minot, ND</td>
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<td>Uzma Abbasi, MD, Rishi Pawa, MD, Vishal Gupta, MD, PhD, Jay Cowan, MD, Gastroenterology, Columbia University College of Physicians and Surgeons, Harlem Hospital Center, New York, NY</td>
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<td>Homayoona Mahjoob, MD, John Carroll, MD, Reena Jha, MD, Elisabeth Kramer, BS, Firas Al-Kawas, MD, Medicine, Georgetown University Medical Center, Washington, DC</td>
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<td>Mohammed Erfani, MD, Touraj Zolfaghari, MD, Hilary Hertan, MD, FACG, Gastroenterology, Our Lady of Mercy Medical Center, Bronx, NY</td>
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<td>Adeel Seyal, MD, Christopher Marino, MD, Internal Medicine, University of Tennessee, Memphis, TN, Internal Medicine, Veterans Affairs Medical Center, Memphis, TN</td>
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<td>Richard Blatt, MD, Nikrad Shahnazaz, MD, Tanvi Dhere, MD, Marney Goldstein, MD, Emory University, Atlanta, GA</td>
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<td>Eileen Wang, BA, Nirmal Kaur, MD, Richard Saad, MD, University of Michigan Medical Center, Ann Arbor, MI</td>
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<td>Amjad Mreyoud, MD, Shahid Mehboob, MD, Internal Medicine/Gastroenterology, VAMC/University at Buffalo, Buffalo, NY</td>
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<td>Murthy Muluswamy, MD, Zhenrong Zhang, MD, Eugene Stueben, MD, Internal Medicine, LSU HSC - University Medical Center, Lafayette, LA</td>
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<td>John Petersen, DO, FACG, FACP, Borland-Groover Clinic, Jacksonville, FL</td>
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<td>A Difficult Diagnosis to Swallow: Malignant Melanoma Diagnosed by Endoscopy</td>
<td>Neil Sharma, MD, Vesna Vrcelj, MD, Prasad Kulkarni, MD, Department of Gastroenterology, University of South Florida, Tampa, FL, Department of Pathology, James A. Haley Veterans’ Administration Hospital, Tampa, FL</td>
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<td>Carlos Romero, MD, Eduardo Gonzalez, MD, Victor Carlo, MD, Gastroenterology, University of Puerto Rico, San Juan, PR</td>
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<td>Granular Cell Tumor of the Esophagus: Case Report and Literature Review</td>
<td>Nathan Landesman, DO, Justin Miller, DO, Brent Himes, DO, Pathology, Gastroenterology, Genesys Regional Medical Center, Grand Blanc, MI</td>
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<td>Sadiya Sari, MD, Khondker Islam, MD, Gastroenterology, Hepatology and Nutrition, Loyola University Medical Center, Maywood, IL</td>
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Satya Mishra, MD, Melchor Demetria, MD, Bashar Attar, MD, PhD, Division of Gastroenterology and Hepatology, Cook County - John H. Stroger Hospital, Rush University, Chicago, IL

P1000. Recurrent Appendicitis Masquerading as Crohn’s Disease
Maria Moscandrew, MD, Sunanda Kane, MD, MSPH, Gastroenterology, Mayo Clinic Rochester, Rochester, MN

P1001. Metastatic Crohn’s Disease: A Rare Cutaneous Manifestation of Inflammatory Bowel Disease
William Gallahan, MD, Joseph Jorizzo, MD, Richard Bloomfeld, MD, Dermatology, Gastroenterology, Wake Forest University Baptist Medical Center, Winston-Salem, NC

P1002. Mesalamine Induced Eosinophilic Organizing Pneumonia
Sheila Kumar, MD, Ellen Schertl, MD, Vinita Jacob, MD, Brian Bosworth, MD, Gastroenterology and Hepatology, Roberts IBD Center, Weill Medical College of Cornell University, New York, NY, Medicine, New York Presbyterian Hospital: Columbia Presbyterian Medical Center, New York, NY

P1003. Marijuana: A Problem or a Solution?
Chandandeep Takkar, MD, Rajeswari Anaparthy, MD, University of Texas Medical Branch, Galveston, TX

OUTCOMES RESEARCH

P1004. Acute Appendicitis in a Patient with Situs Inversus
Eric Boyle, MD, Philip Caushaj, MD, The Western Pennsylvania Hospital, Pittsburgh, PA

P1005. Utility of Blood Cultures as Routine Admission Orders for Patients Admitted to the Hospital with Acute Diverticulitis
John Rutkoski, MD, James McCormick, DO, Philip Caushaj, MD, The Western Pennsylvania Hospital, Pittsburgh, PA

P1006. Surgical Repair Versus a Removable Esophageal Plastic Stent for Treatment of Post-Surgical Esophageal Leaks: A Decision Analysis
Corrine Glynn, MD, Ali Siddiqui, MD, Internal Medicine, University of Texas Southwestern Medical Center, Dallas, TX

P1007. Consistency of Estimated Utilities from SF-36 Scores in Patients Undergoing Biofeedback Therapy for Chronic Constipation
Jorge Go, MD, Carl Brown, MS, Jessica Paulson, BS, Satish Rao, MD, PhD, FRCP, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA, The Center for Research in the Implementation of Innovative Strategies in Practice (CRIISP), VA Iowa City Healthcare System, Iowa City, IA

P1008. Patients with Diabetes Mellitus, Elevated Cholesterol and Increased BMI While on Medications Do Not Have an Increased Risk of Colorectal Adenoma
Pryanka Kanth, MBBS, Thomas Huang, MD, Jainmin Tian, MD, Anil Nagar, MD, Internal Medicine, University of Connecticut Health Center, Farmington, CT, Gastroenterology, Yale University School of Medicine, New Haven, CT, Internal Medicine, Bridgeport Hospital and Yale University School of Medicine, Bridgeport, CT

P1009. Randomized Controlled Trials of Proton-Pump Inhibitors in Nighttime GERD: A Systematic Review
Prajesh Kothawala, MD, MPH, Stephen Lange, MD, James McGuigan, MD, Daniel Aguilar, MPH, Diana Morgenstern, MD, Ning Yan, PhD, Bonnie Dean, PhD, MPH, Cerner LifeSciences, Beverly Hills, CA, Mayo Clinic, Jacksonville, FL, University of Florida, Gainesville, FL, Wyeth Pharmaceuticals, Collegeville, PA

P1010. Hepatitis C Virus Spontaneous Clearance Rates in a Rural Veterans Affairs Clinic
Michelle Matteson, APN, Suzanne Opperman, APN, Matthew Bectoldt, MD, Srinivas Puli, MD, Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO, Department of Gastroenterology and Hepatology, Harry S. Truman Veterans’ Memorial, Columbia, MO

P1011. Laboratory Predictors of Severe Clostridium difficile Associated Diarrheal Diseases
Jitendrakumar Patel, MD, Dhaivalent Satani, MD, Kelly Cervellione, MA, Makkam Em, BS, Avani Patel, MD, Farshad Bagheri, MD, Internal Medicine, Jamaica Hospital Medical Center, Jamaica, NY

P1012. Health-Related Quality of Life in TNF-Antagonist-Naive Patients with Crohn’s Disease During Short- and Long-Term Adalimumab Treatment
David Rubin, MD, Paul Rutgeerts, MD, Jean Fred Colombel, MD, Eric Wu, PhD, Andrew Yu, PhD, Jingdong Chao, PhD, Parvez Mulani, PhD, Section of Gastroenterology, University of Chicago, IL, University Hospital of Gasthuisberg, Leuven, Belgium, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Analysis Group, Inc., Boston, MA, Abbott Laboratories, Abbott Park, IL

P1013. Association Between Race and the Perception and Resolution of Heartburn (HB) in Patients with GERD
Prateek Sharma, MD, Hashem El-Serag, MD, MPH, John Monyak, PhD, Marta Illueca, MD, University of Kansas Medical Center, Kansas City, MO, Baylor College of Medicine, Houston, TX, AstraZeneca LP, Wilmington, DE

P1014. Role of Immuno-Nutrition (Alanyl-Glutamine Dipeptide) in Critically Ill Patients
Subodh Varshney, MS, FRCS, FACS, Swarna Vyas, MSc, Harikat Bains, PhD, Rajneesh Varshney, MS, Vikrant Singh, MS, Dipak Purohit, MS, Kewal Maudar, MS, PhD, GI Surgery, Bhopal Memorial Hospital and Research Centre, Bhopal, India

P1015. Inflammatory Bowel Disease Patients’ Adherence to and Satisfaction with Treatment

P1016. Real World Dosing of Anti-Tumor Necrosis Factor Therapies in the Treatment of Adults with Crohn’s Disease
H. Waters, MBA, T. Meekins, MBA, A. Bewtra, MS, R. McKenzie, MD, B. Tang, MD, C. Piech, MBA, Centocor Ortho Biotech Services, LLC, Horsham, PA, Wolters Kluwer Health, Yardley, PA

P1017. Patient Perception of Disease Control in Ulcerative Colitis
H. Waters, MBA, S. Berg, MBA, J. Kelly, MBA, C. Piech, MBA, Centocor Ortho Biotech Services, LLC, Horsham, PA, GfK V2, LLC, Blue Bell, PA

P1018. Self-Reported Quality of Life in Inflammatory Bowel Disease Patients with Crohn’s Disease During Short- and Long-Term Adalimumab Treatment
H. Waters, MBA, K. Annunziata, MA, A. Naim, MBA, B. Tang, MD, D. Freedman, MBA, C. Piech, MBA, Centocor Ortho Biotech Services, LLC, Horsham, PA, GfK V2, LLC, Blue Bell, PA

P1019. Patient Outcomes After Placement of PEG at Bay Pines VA Healthcare System
Angelo Fernandes, MD, Tri Huynh, DO, Mitchel Hoffman, MD, Terri Buchanan, BS, Gastroenterology, Bay Pines VA Healthcare System, Bay Pines, FL

P1020. Does Multi-Drug Crohn’s Therapy Result in Improved Patient Outcomes?
Remo Panaccione, MD, Sunanda Kane, MD, Douglas Wolf, MD, Scott Plevy, MD, Mark Atkinson, PhD, Sumeet Panjabi, PhD, Steven Hass, PhD, Department of Medicine, University of Calgary, AB, Canada, Inflammatory Bowel Disease Center, Mayo Clinic, Rochester, MN, Atlanta Gastroenterology Associates, Atlanta, GA, Department of Medicine, University of North Carolina School of Medicine, Chapel Hill, NC, PRO-Spectus and UCSD, Health Services Research Center, Encinitas, CA, Pharmacoconomics, Elan Pharmaceuticals, Inc., South San Francisco, CA
Poster Presentations — Tuesday, October 7

P1021. Response After 12 Weeks of Adalimumab Therapy in Patients with Crohn’s Disease Who Were Nonresponders at Week 4
Remo Panaccione, MD, William Sandborn, MD, Jean Fred Colombel, MD, Paul Pollack, MD, Naijun Chen, MS, Jingdong Chao, PhD, Parvez Mulani, PhD, Department of Medicine, University of Calgary, Calgary, AB, Canada, Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN, Centre Hospitalier Universitaire de Lille, Hôpital Claude Huriez, Lille, France, Abbott Laboratories, Abbott Park, IL

P1022. Low Health Literacy is Associated with Less Knowledge About Colorectal Cancer But Not Adherence to Colonoscopy Among Veterans
Shahnaz Sultan, MD, Chris Newlin, Phalgun Shah, MBBS, Rebecca Beyth, MD, MSc, Dawn Provenzale, MD, MS, Department of Gastroenterology, University of Florida College of Medicine, Gainesville, FL, RORC and GREEC, NF/SG Veterans Health System, Gainesville, FL, Center for Health Services Research in Primary Care, Durham Veterans Affairs Medical Center, Durham, NC

P1023. Relevance of the Gastrointestinal Symptom Rating Scale (GSRS) in Patients with Celiac Disease
Betsy Abraham-Van Parijs, MD, PhD, Mark Price, MA, MEd, Francisco Leon, MD, PhD, Sherrif Fahmi, PhD, Scientific Affairs and Clinical-Regulatory Strategy, Alba Therapeutics, Baltimore, MD, RTI Health Solutions, RTI International, Research Triangle Park, NC, Clinical Development & Medical Affairs, Alba Therapeutics, Baltimore, MD

P1024. Compliance with Proton Pump Inhibitor Therapy Impacts Resolution of GERD Symptoms—Preliminary Results
Tushar Dabade, BA, Debra Geno, CCRP, Sunanda Kane, MD, MPH, Michael Crowell, PhD, Steven Adamson, MD, Ramona DeJesus, MD, Felicity Enders, PhD, Andrew Majka, MD, Colin Howden, MD, Yvonne Romero, MD, Internal Medicine, Biostatistics, Primary Care Internal Medicine, Family Medicine, Gastroenterology & Hepatology, Medical School, Mayo Clinic, Rochester, MN, Gastroenterology, Northwestern University, Chicago, IL

P1025. Management of Diverticulitis in Young Patients
Pablo Giuseppucci, MD, Patricio Donnelly, MD, Philip Caushaj, MD, The Western Pennsylvania Hospital, Pittsburgh, PA

P1026. Factors Associated with Increased Cost in Patients Hospitalized with Acute Appendicitis Over the Last 15 Years
Sumit Kapoor, MBBS, MPH, Devi Krishnamurty, MBBS, Sanjay Gavzy, Alana Bunnag, AB, Dezheng Huo, MD, PhD, Daniel Appelbaum, MD, Radiology, Health Studies, Medicine, University of Sagunto, Valencia, Spain

P1027. Resident Physicians Comfort with Managing Gastrointestinal Bleeding at the Completion of Internal Medicine Residency
Huy Nguyen, MD, Jessica Gladden, MS, Steven Zeddon, MD, Marie Borum, MD, EdD, MPH, Division of Gastroenterology and Liver Diseases, George Washington University, Washington, DC

P1028. Favorable GI Profile of Celecoxib vs. nsNSAIDs Based on Pooled Analysis of 21 Celecoxib Randomized Controlled Trials
Liviu Niculescu, MD, Chunning Li, PhD, Jim Huang, PhD, Sharon Mallen, MD, Clinical Programming and Writing, Statistics, Global Medical, Pfizer, New York, NY

INFLAMMATORY BOWEL DISEASE

P1029. Renal Effects of Long Term 5-ASA
★ 2008 ACG Presidential Poster Award Recipient
Harshna Patel, MD, Aiala Brar, PhD, Khusreesh Jeejeebhoy, MD, Department of Public Health, Department of Medicine, University of Toronto, Toronto, ON, Canada, Department of Medicine, Department of Gastroenterology, St. Michael’s Hospital, University of Toronto, Toronto, ON, Canada

P1030. Prospective Evaluation of Epstein-Barr Virus and Inflammatory Bowel Disease
Kanat Ransibrahmanakul, MD, Irina Grishina, BS, Sumathi San- karan, PhD, Lynne Do, MD, Anne Thai, MD, Walter Trudeau, MD, Maria Hathorn, RN, Satya Dandekar, PhD, Thomas Prindiville, MD, Medical Microbiology and Immunology, Gastroenterology and Hepatology, UC Davis, Sacramento, CA

P1031. Does Use of Video Capsule Endoscopy in Patients with Known or Suspected Inflammatory Bowel Disease Change their Management?
Wojciech Blonski, BS, David Kotlyar, MD, PhD, Nuzhat Ahmad, MD, David Jaffe, MD, Gary Lichtenstein, MD, Division of Gastroenterology, University of Pennsylvania, Philadelphia, PA

P1032. High-Grade Dysplastic Adenoma-like Mass Lesions are Not an Indication for Colectomy in Patients with Ulcerative Colitis: Report of 10-Years Follow-up
Wojciech Blonski, MD, PhD, David Kotlyar, BS, Emma Furth, MD, Mark Osterman, MD, Gary Lichtenstein, MD, Division of Anatomic Pathology, Division of Gastroenterology, University of Pennsylvania, Philadelphia, PA

P1033. Factors Predictive of Relapse in Patients with Ulcerative Colitis (UC): A Systematic Review
Wojciech Blonski, MD, PhD, David Kotlyar, BS, Mark Osterman, MD, Faten Aberra, MD, Gary Lichtenstein, MD, Division of Gastroenterology, University of Pennsylvania, Philadelphia, PA

P1034. Efficacy of Intensification Therapy with Certolizumab Pegol in Crohn's Disease Patients Included in a Compassionate-Use Program
Ignacio Fernandez-Blanco, MD, Joaquín Hinojosa, MD, IBD Unit, Clínica Moncloa, Madrid, Spain, Gastroenterology Unit, Hospital de Sagunto, Valencia, Spain

P1035. The Role of Video Capsule Endoscopy in Patients with Suspected Small Bowel Crohn’s Disease Despite a Normal Ileoscopy
Gordon Liss, MD, Halim Charbel, MD, Kathy Bull-Henry, MD, Aline Charabaty, MD, Gastroenterology, Georgetown University Hospital, Washington, DC

P1036. PET/CT Identifies Subclinical Inflammation in Patients with Quiescent Ulcerative Colitis
David Rubin, MD, Bonnie Surma, RN, Kerry Schnell, AB, Samuel Gavzy, Alana Bunnag, AB, Dezheung Huo, MD, PhD, Daniel Appelbaum, MD, Radiology, Health Studies, Medicine, University of Chicago, Chicago, IL

P1037. Ileal Calprotectin Levels Predict Colon Endoscopic Activity in Patients with Inflammatory Bowel Disease
Subha Sundararajan, MD, Neal Schamburg, MD, Steven Gonzalez, MD, MPH, Ellen Scherl, MD, Brian Bosworth, MD, Division of Gastroenterology and Hepatology, Department of Medicine, Weill Cornell Medical Center / New York Presbyterian Hospital, New York, NY, Division of Gastroenterology and Hepatology, Stanford University School of Medicine, Stanford, CA

P1038. Abrogation of Experimental Colitis by Turmeric Correlates with Reduction in NF-kB Nuclear Translocation and COX-2 Expression
Tauseef Ali, MD, Satish Ramalingam, PhD, Dharmalingam Subramaniam, PhD, Randal May, PhD, Courtney Houchen, MD, Shrikant Anant, PhD, Department of Medicine-Digestive Disease and Nutrition, University of Oklahoma Health Sciences Center, Oklahoma City, OK

P1039. Poster Withdrawn
P1040. Dyslipidemia and Lipoprotein Profiles in Inflammatory Bowel Disease (IBD)
Raja Shekhar Sappati Biyani, MD, Brian Putka, MD, Kevin Mullen, MD, Hospital Medicine and Gastroenterology, Case Western Reserve University at MetroHealth Medical Center, Cleveland, OH

P1041. A Dynamic Model of Colonic Concentrations of Delayed-Release 5-Aminosalicylic Acid (Asacol®)
Matthew Thorpe, BS, Karson Pult, BS, Eli Ehrenpreis, MD, Bruce Hannon, PhD, Biochemistry, Division of Nutritional Sciences, University of Illinois, Urbana, IL, Medicine, Evanston/Northwestern Health Care, Evanston, IL, Geography/NCSA, University of Illinois, Urbana, IL

P1042. Common Presenting Patterns in Patients with Upper Gastrointestinal Crohn's Disease
Roger Wu, MD, Leonard Baidoo, MD, Gastroenterology, Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA

P1043. Early Transabdominal Ultrasound Evaluation Can Predict Clinical Response to Therapy in Patients with Active Ulcerative Colitis
Atsushi Yoshida, MD, Fumiaki Ueno, MD, Kenji Kobayashi, MD, Hideki Yoshimatsu, MD, Kentarou Takatuka, MD, Shougo Iwabuchi, MD, Center for Digestive and Liver Disease, Ofuna Chuo Hospital, Tokyo, Japan

P1044. Corticolumb PEGal Therapy in a Patient with Crohn's Disease with Previous Loss of Response to 2 Anti-TNF Agents
Eugenio Domenech, MD, Jose Luis Cabrara, MD, Antonio Bernal, MD, Carlos Cara, MD, Miguel Angel Gassull, MD, Gastroenterology Department, Hospital German Trias I Pujol, Badalona, Spain, Service de Digestivo, Hospital de Galdakao, Vizcaya, Spain

P1045. Hyperhomocysteinemia and the Risk of Thromboembolism and Atherosclerosis in IBD
Murtaza Arif, MD, David Binion, MD, Medicine, Medical College of Georgia, Augusta, GA

P1046. Long-Term Follow-up of the Use of Rifaximin in Maintaining Clinical Remission in Moderate and Severe Crohn's Disease
Brian Bosworth, MD, Frank Scott, MD, Vinita Jacob, MD, Ellen Scherl, MD, Medicine, Robert's IBD Center, Gastroenterology and Hepatology, Weill Cornell Medical College of New York University, New York, NY

P1047. A Novel mTOR Inhibitor is Efficacious in a Murine Model of Colitis
Nilesh Dagia, PhD, Mandar Bhande, PhD, Ravindra Gupte, PhD, Ram Vishwakarma, PhD, Sanjay Kumar, PhD, Somesh Sharma, PhD, Medicinal Chemistry, Pharmacology, Piramal Life Sciences Limited, Mumbai, India

P1048. NPS31807, a Herbal Extract, Suppresses DSS-Induced Murine Colitis
Nilesh Dagia, PhD, Ravindra Gupte, PhD, Shruti Dadarkar, PhD, Aditi Tannu, MP Pharm, Mahesh Jadhav, MP Pharm, Somesh Sharma, PhD, Pharmacology, Piramal Life Sciences Limited, Mumbai, India

P1049. Medication Profile of Patients in the UPR Inflammatory Bowel Disease Registry
Jorge Melendez, MD, Yarita Larregui, PharmD, Jewel Vazquez, PharmD, Victor Carlo, MD, Esther Torres, MD, MACG, Internal Medicine, University of Puerto Rico School of Medicine, San Juan, PR, University of Puerto Rico School of Pharmacy, San Juan, PR

P1050. RDEA119, a Potent and Highly Selective MEK1/2 Inhibitor is Beneficial in Dextran Sulfate Sodium (DSS)-Induced Chronic Colitis in Mice
Marcel Miampamba, PhD, Gary Larson, BSc, Chon Lai, MSc, Andrea Johansen, BSc, Jeff Miner, PhD, Jean-Michel Vernier, PhD, Jean-Luc Girardet, PhD, Barry Quart, PhD, PharmD, Discovery Biology, Ardea Biosciences, Inc, San Diego, CA

P1051. The Role of Serologic Markers in Identifying Infliximab Response in Ulcerative Colitis
Douglas Weine, MD, Brian Bosworth, MD, David Poppers, MD, Ellen Scherl, MD, Gastroenterology and Hepatology, New York Hospital - Weill Cornell Medical Center, New York, NY, Gastroenterology, Lenox Hill Hospital, New York, NY

P1052. Larazotide Acetate (AT-1001) Inhibits Epithelial Permeability Induced by TNF-α and IL-4
Nirajan Pandey, PhD, Kelly Kitchens, PhD, Neil Poloso, PhD, John Vere, Mark Ginski, PhD, Blake Paterson, MD, Seifik Alkan, PhD, Amir Tamiz, PhD, Alba Therapeutics, Baltimore, MD

P1053. The Coexistence of Crohn's Disease and Takayasu Arteritis: Diagnosis and Treatment of Combined Disease with Infliximab in Three Patients
Joel Judan, MD, Anish Ahmad, MD, Chris Hammond, BS, Steven Polyak, MD, John Valentine, MD, Division of Gastroenterology, University of Florida, Gainesville, FL

P1054. Budesonide as Second-Line Therapy for Microscopic Colitis
Charles Randall, MD, Carlo Taboada, MD, Gary Gossen, MD, Russell Havranek, MD, Christopher Fincke, MD, Rodrigo Adarne, MD, Alejandro Villarreal, MD, Luis Rendon, MD, Research, Gastroenterology Research of San Antonio, San Antonio, TX, Research, Gastroenterology Clinic of San Antonio, San Antonio, TX, Medicine, University of Texas Health Science Center at San Antonio, San Antonio, TX

P1055. Sulfasalazine for Arthropathy in Crohn's Disease
Jeffrey So, MD, James Gregor, MD, Department of Medicine, Division of Gastroenterology, Schulich School of Medicine and Dentistry, University of Western Ontario, London, ON, Canada

P1056. 5-Aminosalicylic Acid Release from pH-Dependent, Delayed-Release Formulations: The Importance of Consistent and Steady Release Profiles
Srini Tenjarla, PhD, Valente Romasanta, PhD, Adeyinka Abinasua, PhD, Shire Pharmaceuticals Inc., Wayne, PA

P1057. Understanding 5-Aminosalicylic Acid (5-ASA) Release Profiles from pH-Dependent Delayed-Release Formulations: A Multidisciplinary Approach
Srini Tenjarla, PhD, Robyn Karlstadt, MD, Raymond Joseph, MD, Shire Pharmaceuticals Inc., Wayne, PA

P1058. Efficacy, Safety and Durability of Anti-TNF Therapy in the Treatment of Inflammatory Bowel Disease
Chirag Invedi, DO, James Kao, MD, Mark Saxena, MD, Eric Shen, MD, Kiron Das, MD, PhD, Ellen Ebert, MD, Crohn's & Colitis Center of New Jersey, Department of Medicine, UMDNJ-Robert Wood Johnson Medical School, New Brunswick, NJ

P1059. Comparison of Clinical Findings in Intestinal Behçet Disease and Simple Ulcerc
Shojo Yamamoto, MD, Yoshihiro Tahara, MD, Hisayoshi Iwakiri, MD, Hiroo Abe, MD, Takumi Yamaji, MD, Taku Harada, MD, Satoru Hasuike, MD, Kenji Nagata, MD, Kazuya Shimoda, MD, Department of Gastroenterology and Hematology, University of Miyazaki, Miyazaki-ki, Japan, Internal Medicine, Miyazaki Prefectural Nobeoka Hospital, Nobeoka, Japan

FUNCTIONAL BOWEL DISORDERS

P1060. Increasing Use of Narcotics and Functional Bowel Disorders in the United States
Rok Seon Choung, MD, Nilay Shah, PhD, Patrick Meek, MS, G. Richard Locke, MD, Nicholas Talley, MD, PhD, Division of Gastroenterology and Hepatology, and Division of Health Care Policy & Research, Mayo Clinic, Rochester, MN, Pharmacy Practice Pharmacoeconomics & Health Policy, Albany College of Pharmacy, Albany, NY
P1061. IBS and Medications: What Risks Will Patients Take?
Brian Lacy, PhD, MD, FACG, Kelly Everhart, BA, Kirsten Weiser, MD, Ryan De Lee, MD, Sebastian Strobel, MD, Corey Siegel, MD, Michael Crowell, PhD, FACG, Division of Gastroenterology, Dartmouth-Hitchcock Medical Center, Lebanon, NH, Medicine, Division of Gastroenterology, Mayo Clinic College of Medicine, Scottsdale, AZ

P1062. Nausea Reports as an Indicator of Morbidity
Rona Levy, MSW, PhD, MPH, Dennis Christie, MD, Shelby Langer, PhD, William Whitehead, PhD, Andrew Feld, MD, Melissa Dupen, BS, School of Social Work, University of Washington, Seattle, WA, Central Specialty Clinic, Group Health, Seattle, WA, Center for Functional and Motility Disorders, University of North Carolina, Chapel Hill, Chapel Hill, NC, Gastroenterology, Children’s Hospital & Regional Medical Center, Seattle, WA

P1063. The Effect of Shift Work on the Prevalence and Clinical Impact of Functional Bowel Disorders in Nurses
Borko Nojkov, MD, Joel Rubenstein, MD, Sandra Hoogerwerf, MD, William Chey, MD, University of Michigan Medical Center, Ann Arbor, MI

P1064. Optimizing Mathematical Analysis of Gastric Emptying Breath Tests
Suwebatu Odunsi, MD, Michael Camilleri, MD, Lawrence Szarka, MD, Alan Zinsmeister, PhD, Department of Health Sciences Research, Division of Biostatistics, Clinical Enteric Neuroscience Translational and Epidemiological Research, Mayo Clinic, Rochester, MN

P1065. Severity of Irritable Bowel Syndrome-Related Symptoms Predicts Clinical Response to the Nonsystemic Antibiotic Rifaximin
Mark Pimentel, MD, Y. Ringel, MD, C. Brooks, MD, E. Bortey, PhD, W. Forbes, PharmD, Cedars-Sinai Medical Center, Los Angeles, CA, University of North Carolina at Chapel Hill, Chapel Hill, NC, National Naval Medical Center, Bethesda, MD, Salix Pharmaceuticals, Morrisville, NC

P1066. Increased Prevalence of Methanogenic Flora in Small Intestinal Bacterial Overgrowth
Ashok Attaluri, MD, Jessica Paulson, BS, Michelle Jackson, MA, Satish Rao, MD, PhD, FRCPC, Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA

P1067. A Multi-Strain Probiotic Reduces the Frequency of Diarrhea in IBS-D Patients: A Multi-Center, Randomized, Double-Blind Placebo Controlled Study
Gerald Friedman, MD, PhD, Medicine (GI), The Mount Sinai School of Medicine, Scarsdale, NY

P1068. Prospective Evaluation of Pudendal Nerve Terminal Motor Latency
Mohammad Titi, MD, Ian Jenkins, MD, Aileen Urie, RN, Richard Molloy, MD, Internal Medicine, Unity Hospital, Rochester, NY, Surgical Gastroenterology Unit, Gartnavel General Hospital, Glasgow, United Kingdom

P1069. A Very Low Carbohydrate Diet Provides Adequate Relief of Symptoms and Improves Quality of Life in Overweight and Obese Individuals with Diarrhea-Predominant Irritable Bowel Syndrome (IBS-D)
Gregory Austin, MD, MPH, Christine Dalton, MS, Eric Westman, MD, William Yancy, MD, Yuming Hu, MS, Douglas Grossman, MD, Division of Gastroenterology and Hepatology, University of Colorado Denver, Aurora, CO, UNC Center for Functional GI and Motility Disorders, Division of Gastroenterology and Hepatology, University of North Carolina, Chapel Hill, NC, Division of General Internal Medicine, Duke University, Durham, NC

P1070. Clinical Impact of Identifying Lactose Malabsorption: Fructose Malabsorption in Irritable Bowel Syndrome and Other Conditions
Meredith Corlew, MD, Jack DiPalma, MD, Gastroenterology, University of South Alabama, Mobile, AL

P1071. EPX16006—A Highly Selective P2Y2 Agonist Reduces Gastrointestinal Transit Time
Vincent Jacques, PhD, Michael Melisi, MSc, CHP, Luhua Shen, MD, Dilara McCauley, PhD, Sharon Shacham, PhD, Simon Jones, PhD, Preclinical Pharmacology, EPIX Pharmaceuticals, Inc., Lexington, MA, Product Leadership, Drug Development, EPIX Pharmaceuticals, Inc, Lexington, MA

P1072. Is Eradication of Helicobacter pylori Related to Its Genotypes and Density in Dyspeptics?
Javed Yakoob, MBBS, PhD, Wasiem Jafri, MD, FACG, Zaigham Abbas, MD, FACG, Shahab Abid, FCPS, Nida Jafri, MBBS, Abdullah Khalid, MBBS, Zubair Ahmed, FCPS, Pathology, Medicine, The Aga Khan University, Karachi, Pakistan

P1073. Spinal Injections for Functional Gastrointestinal Disorders
Paul Kramm, MD, Paul C. Kramm, MD, LLC, Baton Rouge, LA

P1074. A Combination of Rifaximin and Neomycin is Most Effective in Treating Patients with Methane on Lactulose Breath Test
Kimberly Low, BA, Laura Huang, BS, Johnson Hua, MD, Amy Zhu, MD, Walter Morales, BS, Mark Pimentel, MD, FRCPC, Cedars-Sinai Medical Center, Los Angeles, CA

P1075. The Multinational Translation and Validation of the Spanish Rome III Adult Diagnostic Questionnaire
Douglas Morgan, MD, MPH, Max Schmulson, MD, Loreto Cortes, MD, MS, Freddy Squella, MD, Ricardo Dominguez, MD, Enrique Rey, MD, Fermin Mearin, MD, Gastroenterology, University of North Carolina, Chapel Hill, Chapel Hill, NC, Medicina, Universidad Nacional Autonoma de Mexico (UNAM), Mexico, Mexico, Epidemiologia, Universidad Nacional Autonoma de Nicaragua (UNAN, Leon), Leon, Nicaragua, Medicina, Hospital del Occidente, Santa Rosa de Copan, Honduras, Medicina, Universidad de Chile, Santiago, Chile, Medicina, Hospital Clinico San Carlos, Madrid, Spain

P1076. Patients’ Expressive Writing About Their Irritable Bowel Syndrome is Informative But Difficult to Read Reliably
Albena Halpert, MD, Abha Verma, BA, Lizabeth Cline, MS, NP, Jack Clark, PhD, Gastroenterology, Boston University Medical Center, Boston, MA, Health Policy & Management, Boston University School of Public Health, Boston, MA

ENDOSCOPY

P1077. The Utility and Safety of Endoscopic Resection for Nodular Lesions Detected After Endoscopic Ablation of Esophageal Dysplasia and Carcinoma
★★ 2008 ACG Presidential Poster Award Recipient
Chakri Panjala, MD, Seth Gross, MD, Massimo Raimondo, MD, Michael Wallace, MD, Timothy Woodward, MD, Herbert Wolfsen, MD, Gastroenterology, Mayo Clinic Jacksonville, Jacksonville, FL

P1078. Is Therapeutic Endoscopy for Upper GI Cancer Safe in the Elderly?
Sameer Siddiquie, MBBS, MRCP, Julie Deacon, RN, Ian Sargeant, MD, FRCP, Danielle Morris, MD, FRCP, Gastroenterology, Queen Elizabeth II & Lister Hospitals, Welwyn Garden City & Stevenage, United Kingdom

P1079. Magnesium Citrate (MagC) Preparation for Colonoscopy: Onset and Duration of Bowel Activity
Emily Taylor, MD, Jerome Waye, MD, Ron Palmon, MD, Division of Medicine, New York University School of Medicine, New York, NY, Division of Gastroenterology, Mount Sinai School of Medicine, New York, NY

P1080. Retained Endoclips: A Potential Danger
Any Volkson, MD, John Makaryus, MD, Paul Berg, MD, Jeremy Rochester, MD, Gary Weissman, MD, Matthew McKinley, MD, Gastroenterology, ProHEALTH Care Associates, LLP, Lake Success, NY, Internal Medicine, North Shore University Hospital, Manhasset, NY
P1081. Submucosal Isolation of a Congenital Tracheoesophageal Fistula in an Adult Using Concepts of the Self-Approximating Transluminal Access Technique (STAT)
Nathan Yeasted, MD, Matthew Moyer, MD, Abraham Mathew, MD, Gastroenterology and Hepatology, Internal Medicine, The Penn State University Milton S. Hershey Medical Center, Hershey, PA

P1082. Endoscopic Reduction of Dilated Gastrojejunal Anastomosis After Roux-En-Y Gastric Bypass Using a Novel Approach
Nathan Yeasted, MD, Matthew Moyer, MD, Abraham Mathew, MD, Gastroenterology and Hepatology, Internal Medicine, The Penn State University Milton S. Hershey Medical Center, Hershey, PA

P1083. Can Helicobacter pylori Infection Without Erosions or Ulcer Cause Anemia?
Timothy Biagini, MD, Srinadh Komanduri, MD, MS, Medicine, Rush University Medical Center, Chicago, IL

Dowmit BouHaidar, MD, Marie Reid, MD, Bimaljit Sandhu, MD, Alvin Zlass, MD, Division of Gastroenterology, Virginia Commonwealth University, Richmond, VA

P1085. Endoscopic Ultrasound-Guided Fine Needle Aspiration for Abnormal Mediastinal Adenopathy, Clinical and Radiological Follow up on Negative Biopsies, “A Community Hospital Experience”
Georg Elias, MD, Nabil Toubia, MD, Medicine / Gastroenterology, Roger William Medical Center, Boston University / School of Medicine, Providence, RI

P1086. Endoscopic Ultrasound Fine Needle Aspiration of Solid Pancreatic Lesions: Experience at a Community Hospital
Georg Elias, MD, Nabil Toubia, MD, Medicine / Gastroenterology, Roger William Medical Center, Boston University / School of Medicine, North Providence, RI

Shahzad Iqbal, MD, Wael Eldawary, MD, Rabia Mir, MD, Maurice Cerulli, MD, FACC, Won Sohn, MD, Gastroenterology, New York Methodist Hospital, Brooklyn, NY, Gastroenterology, Interfaith Medical Center, Brooklyn, NY, Pathology, New York Methodist Hospital, Brooklyn, NY

P1088. Assessing the Learning Curve for the Acquisition of Colonoscopy Skills on a Computer-Based Endoscopy Simulator
Puja Kumar, MD, Frances Tse, MD, FRCP, Gastroenterology, Internal Medicine, McMaster University, Hamilton, ON, Canada

P1089. Can the Likelihood of GI Adverse Events Associated with 41 Polyethylene Glycol + Electrolytes (PEG) Be Predicted?
Rebecca Matro, MD, Steven Herrine, MD, Terry Hyslop, PhD, Anthony Infantolino, MD, Leo Katz, MD, David Loren, MD, Cynthia Miller, RN, Deborah Moretti, RN, David Kastenberg, MD, Jefferson Medical College, Philadelphia, PA, Biostatistics, Gastroenterology and Hepatology, Thomas Jefferson University, Philadelphia, PA

P1090. Prophylactic Use of Covered Metal Stent to Prevent Stricture Formation After Long Segment Circumferential EMR
Sumana Moole, MD, Abraham Mathew, MD, Division of Gastroenterology, Hershey Medical Center, Hershey, PA

P1091. Endoscopic Treatment of an Unusual Cause of Biliary Ductal Dilation: Report of a Case of Adenomyomatosis Hyperplasia of the Papilla
Sumana Moole, MD, Abraham Mathew, MD, Division of Gastroenterology, Hershey Medical Center, Hershey, PA

P1092. Demographics of Major Upper Gastrointestinal Disorders of a Cohort of Adult Sri Lankan Population Based on Endoscopy Experience in a Medical Unit of a Suburban Secondary Referral Center—A 4 Year Study
Ravindra Satarasinghe, MD, Ruchira Fernando, MD, Department of Medicine, Ward 6, Sri Jayewardenepura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka

P1093. The Diagnostic Yield of Pillcam ESO in Patients with Chronic GERD in a Community Based Private Gastroenterology Practice
Ira Schmelkin, MD, Steven Samii, MD, Division of Gastroenterology, Berkshire Medical Center, Pittsfield, MA

P1094. Lubiprostone is Associated with Gastric Retention, Prolonged Gastric Emptying Time and Incomplete Studies in Patients Undergoing Small Bowel Capsule Endoscopy
Ira Schmelkin, MD, Steven Samii, MD, Division of Gastroenterology, Berkshire Medical Center, Pittsfield, MA

P1095. Endoscopic Ultrasound Images of Thoracic Lymphangiomyomatosis
Arun Srivatsa, MD, Thalia Mayes, MD, Asad Ullah, MD, University of Rochester, Rochester, NY

P1096. Acute Upper Gastrointestinal Bleeding in Elderly Population
Samer Abubakr, MD, Angela Lam, PharmD, Amer Alkhatib, MD, Research, University of Illinois at Chicago, Chicago, IL, Pharmacotherapy, Washington State University, Spokane, WA

P1097. Incidence and Clinical Predictors of Gastric Retention in Video Capsule Endoscopy (VCE)
Suryakanth Gurudu, MD, Sarah Umar, MD, Ananya Das, MD, Jonathan Leighton, MD, Russell Heigh, MD, Mayo Clinic Arizona, Scottsdale, AZ

P1098. Complications of Percutaneous Endoscopic Gastrostomy in Critical Care Patients
Intikhab Iqbal, MD, Prashant Sharma, MD, Ofem Ajah, MD, FACC, Mohamed Mansour, MD, FACC, Maurice Cerulli, MD, FACC, Gerald Posner, MD, FACC, Gastroenterology, New York Methodist Hospital, Brooklyn, NY, Gastroenterology, Interfaith Medical Center, Brooklyn, NY

P1099. Correlation of Endoscopic and Histological Grading in Acute Graft-Versus-Host Disease (GVHD) After Bone Marrow Transplantation
Mohammed Khan, MRCP(UK), Hamad Al-Ashgar, MD, Khalid Al-Kahtani, MRCP(UK), Maheeba Abdullah, MRCP(UK), Mohammed Al-Quaz, MRCP(UK), Mohammed Al-Fadda, MD, Medicine, KFSH&RC, Riyadh, Saudi Arabia

P1100. Retraining of Attending Gastroenterologists in Upper GI Hemostasis Techniques Using an Ex Vivo Tissue Model Improves Performance
Michael Smith, MD, MBA, Jennifer Chang, MD, Reuben Garcia-Carrasquillo, MD, Peter Stevens, MD, Division of Digestive and Liver Diseases, Department of Medicine, College of Physicians and Surgeons, Columbia University, New York, NY

P1101. Results of a National Survey of Endoscopic Sedation Practice for Patients with Obstructive Sleep Apnea
Srikshina Vemana, MD, Justin Cuschieri, MD, Gregory Cooper, MD, Aminabb Chak, MD, Gastroenterology, Case Medical Center, Cleveland, OH

P1102. Findings of Endometriosis by Capsule Endoscopy
Zahid Afzal, MD, Ajay Bajaj, MD, FACC, Advocate Christ Medical Center, Oak Lawn, IL
P1103. Acute Myocardial Infarction and Gastrointestinal Bleeding in an African American Inner City Population
Madalina Butnaru, MD, Adam Goodman, MD, Matthew Rein, MD, Daniel O’Brien, MD, Shareef Abdulga, MD, Frank Gress, MD, Medicine, SUNY Downstate Medical Center, Brooklyn, NY, Medicine, Staten Island University Hospital, Staten Island, NY, Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY

P1104. Melanophages in the Rectum, Not Melanoma!
Fadi Rahhal, MD, Subbaramiah Sridhar, MBBS, MPH, FACP, Jeffrey Lee, MD, Francisco Cuatros-Hoyos, MD, FACP, Gastroenterology, Medical College of Georgia, Augusta, GA

P1105. Rectal Endoscopic Ultrasound to Guide the Combined Medical and Surgical Management of Pediatric Perianal Crohn’s Disease: A Single-Center Five-Year Experience
Michael Rosen, MD, Dedrick Moulton, MD, Tatsuki Koyama, PhD, Walter Morgan, MD, Stephen Morrow, MD, Alan Herline, MD, Roberta Muldoon, MD, Paul Wise, MD, D. Brent Polk, MD, David Schwartz, MD, Division of Pediatric Gastroenterology, Hepatology and Nutrition, Department of Pediatrics, Department of Pediatric Surgery, Vanderbilt Children’s Hospital, Nashville, TN, Department of Biostatistics, Inflammatory Bowel Disease Center, Vanderbilt University Medical Center, Nashville, TN

P1106. Comparison of Radiologic Studies in Pediatric Patients with Crohn Disease and Ulcerative Colitis
Deborah Florentoff, MD, Joseph Auer, MD, Houssam Mardini, MD, MPH, Harohalli Shashidhar, MD, Willem De Villiers, MD, PhD, MBA, Pediatrics, Internal Medicine, Internal Medicine and Pediatrics, University of Kentucky, Lexington, KY

P1107. Probiotic Products in the Pediatric Population—Available Products vs. Clinical Evidence
Tamar Ringel-Kulka, MD, MPH, Robyn Dayton, BS, Maternal & Child Health, School of Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC

P1108. Langerhans Cell Histiocytosis Presenting as Protein Losing Enteropathy and Masquerading as Crohn’s Disease
Neelam Mohan, Hema Gupta, MD, S. Yadav, DNB, A. Sachdeva, MD, Birmingham Children’s Hospital, UK, Department of Pediatrics, Sir Ganga Ram Hospital, Delhi, India

P1109. A Single Centre Experience of 23 Pediatric Living Donor Liver Transplantations from India
Neelam Mohan, Nowneet Kumar Bhat, MD, A. Soin, MS, FRCS, R. Kakodkar, MS, Vinay Kumaran, MS, Birmingham Children’s Hospital, UK, Gyan Burn Liver Surgery Unit, Department of Pediatric Gastroenterology and Hepatology, Sir Ganga Ram Hospital, Delhi, India

P1110. Wireless Capsule Endoscopy (CE): A Pediatric Experience
Bisher Abdullah, MD, Tonia Ruzyla, RN, Pediatric Gastroenterology, Mary Bridge Children Hospital and Health Center, Tacoma, WA

P1111. Prevalence of Celiac Disease Among Siblings of Celiac Patients
Bashir Chomeili, Amirkamal Hardani, MD, Majid Aminzadeh, Payam Fathizadeh, Pooya Chomeili, MD, Pediatrics and Pathology, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

P1112. Assessing Variability in Surveillance Recommendations for Fair Adequate Bowel Preparations
Steven Kapitik, MD, Frederick Harris, MD, Thomas Lyles, MD, Claudio Tombazzi, MD, Gastroenterology and Hepatology, University of Tennessee, Memphis, TN

P1113. Low Effectiveness of CT Colonoscopy for Detection of Colon Polyps After Failed Colonoscopy
Brian Borg, MD, MHS, Nitin Gupta, MD, Gary Zuckerman, DO, Bhaskar Banerjee, MD, Gastroenterology, Washington University School of Medicine, Saint Louis, MO

P1114. Predictors of Colonoscopy Use Among Female Medicare Beneficiaries
Deepika Iakimova, MD, MSCR, William Moran, MD, MS, Division of Digestive Diseases & Nutrition, University of South Florida, Tampa, FL, Internal Medicine, Medical University of South Carolina, Charleston, SC

P1115. Colonic Microbiota Folate Production: Another Piece of the Folate-Colon Cancer Puzzle?
Stephen O’Keefe, MD, MSc, Sumit Sharma, MD, Susanne Aufréiter, BSc, Deborah O’Connor, PhD, RD, Jorge Sepulveda, MD, PhD, Gastroenterology, University of Pittsburgh, Pittsburgh, PA, Nutritional Science, University of Toronto, Toronto, ON, Canada, Clinical Pathology, University of Pittsburgh, Pittsburgh, PA

P1116. Risk for Colonic Adenoma or Dysplasia is Not Increased in Patients with Microscopic Colitis
Emily Rood, M4, Wendy Liu, MD, Jeffery Hammel, MS, Carol Burke, MD, Bo Shen, MD, Digestive Disease Institute, Cleveland Clinic, Cleveland, OH

P1117. Poor Bowel Preparation in Colonoscopy is a Costly Problem: Prospective Randomized Study of Urban Inpatient Population
Soujanya Donthu, MD, Sujala Chirala, MD, David Anjelly, Robert Clark, MD, Kiana Kashef, MD, Tamara Danilewitz, MD, Immanuel Ho, MD, Asiya Ahmad, MD, James Reynolds, MD, Gastroenterology, Drexel University College of Medicine, Philadelphia, PA, Gastroenterology, Crozer Chester Medical Center, Upland, PA

P1118. Compliance of Follow-up Colonoscopy in Older Adults
Ann Marie Stephenson-McInnis, DO, MBA, James Lin, DO, MS, Anita Chopra, MD, Sherry Pomerantz, PhD, Geriatrics, University of Medicine and Dentistry of New Jersey - School of Osteopathic Medicine, Stratford, NJ

P1119. Risk of Colorectal Cancer (CRC) in Persons with a Family History (FHX) of Adenomatous Polyps: A Systematic Review
Thomas Imperiale, MD, David Ransohoff, MD, Medicine, Indiana University, Indianapolis, IN, Medicine, University of North Carolina, Chapel Hill, NC

P1120. Colorectal Cancer Screening Program in an Urban University Hospital
Harvey Licht, MD, Robert Fisher, MD, Joel Richter, MD, Medicine, Temple University Hospital, Philadelphia, PA

P1121. Perception and Preference of Colonoscopy for Colon Cancer Screening in Medically Underserved West Texas Area
Aniw Rakhit, MD, Sorot Phisitkul, MD, Linda McMurry, MD, RN, David Hodges, MD, School of Nursing, Internal Medicine, Internal Medicine / Gastroenterology, Texas Tech University Health Science Center, Lubbock, TX

P1122. Effect of Female Gender and Hysterectomy on Colonoscopy Procedure Time: A Prospective Study
Roy Yen, MD, Amjad Mreyoud, MD, Abha Rani, MD, Internal Medicine/Gastroenterology, University at Buffalo, Buffalo, NY
Paper/Poster Disclosures

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Information on the Genesis of Study Concepts and Design: Author Responsibility

This year, the American College of Gastroenterology has supplemented the current conflict of interest disclosure with an additional series of questions completed by the authors of abstracts indicating whether they have been actively and personally involved in developing the study's concept and design and in collecting the data to assure that authors are not reporting data actually collected and developed by others, e.g., a pharmaceutical company or other commercial entity.

An abstract not referenced below indicates that the authors reported no industry involvement took place in any aspect or phase of the research.

The research in the following abstracts was reported to be industry-initiated:
Papers: 16
Posters: 115, 118, 12, 121, 282, 298, 300, 301, 36, 501, 635, 64, 683, 692, 738, 786, 84, 1023, 1044, 1067

The research in the following abstracts was reported to have been initiated and analyzed by industry:
Papers: 13, 14, 22, 26, 40, 64
Posters: 10, 277, 279, 280, 283, 294, 324, 33, 352, 354, 358, 388, 446, 673, 681, 682, 869, 996, 1034

The research in the following abstracts was reported to have been initiated, analyzed and written by industry:
Papers: 35, 36, 45, 57
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1

COMPLETE BARRETT’S ERADICATION ENDOSCOPIC MUCOSAL RESECTION (CBE-EMR): AN EFFECTIVE TREATMENT MODALITY FOR HIGH GRADE DYSPLASIA (HGD) AND INTRAMUCOSAL CARCINOMA (IMC) — AN AMERICAN SINGLE CENTER EXPERIENCE

2008 ACG Governors Award Recipient for Excellence in Clinical Research

J S Chaudhry, MD1,2 V. Konadu, MD1,2 A. S. Ross, MD1,2 A. Heverhos de Triaza, MD, PhD1,2
A. Noffsinger, MD,2 J. Hart, MD,2 M. Ferguson, MD,2 M. C. Posner, MD,1 I. Waxman, MD1,1 CERT (Center for Endoscopic Research and Therapeutics), Department of Medicine, University of Chicago Medical Center, Chicago, IL; 2. Department of Surgical Pathology, University of Chicago Medical Center, Chicago, IL.

Purpose: To report the endoscopic or surgical eradication of all Barrett’s epithelium with the curative intent of eliminating HGD/IMC and reducing risk of metachronous lesion development. We report our single tertiary referral center’s long-term clinical experience using this modality in HG/DIMC management.

Methods: All patients who had CBE-EMR for BE with HGD/IMC were included in a retrospective review of a prospectively collected database. High definition white light exams and narrow band imaging were used as per protocol. Staging endoscopic ultrasound was done prior to CBE-EMR to exclude invasive disease or suspicious lymphadenopathy. CBE-EMR using cap-assisted (32), multi-band ligation (3), cap & banding (1), or free-hand techniques (12) were performed. High dose proton pump inhibition was indicated, and Seattle-type surveillance biopsies were done on follow-up every 6 months once CBE-EMR was completed.

Results: 48 patients (36 male) with histologically confirmed BE and HGD (33), IMC (8), or both (7), underwent CBE-EMR from August 2003 to May 2008. 28 patients had short segment BE, and 30 had visible lesions. Mean age was 67 years, ASA class 2.4, and BE segment length 3.7 cm. A total of 104 EMR procedures were performed. On initial EMR, 3 patients had superficial submucosal invasion (sm1) and 2 patients had IMC with lymphatic channel invasion. All 5 patients referred for esophagectomy, but 2 opted for continued endoscopic management, without evidence of residual or recurrent carcinoma. 21 patients are awaiting completion mucosectomy (12) or first follow-up endoscopy (9). One patient died of unrelated causes. CBE-EMR therapy was completed in 23 patients by an average of 2 sessions. Surveillance biopsies showed normal squamous epithelium in 19/23 (82.6%) patients (mean remission time 17 months, range 3-54 months). Three patients had non-dysplastic BE and 1 had residual HGD. Six patients had prior submucosal Barrett’s epithelium by surveillance. CBE-EMR upstaged 2 patients. CBE-EMR pathology results in 8 patients and downstaged 13 patients. 14/48 (29%) developed dysplasia within 17 months, range 3-54 months). Three patients had non-dysplastic BE and 1 had residual HGD.

Conclusions: CBE-EMR with close endoscopic surveillance is an effective treatment modality for BE with HGD/IMC. Although the rate of stenosis development is significant, it is easily treatable by endoscopic dilatation. Patients considering endoscopic ablation should be counseled appropriately. The role of CBE-EMR in patients with lymphatic invasion or superficial submucosal invasion remains to be defined.

2

OPEN-LABEL USE OF DOMPERIDONE IN PATIENTS WITH GASTROPARESIS AND SMALL BOWEL DYSFUNCTION

2008 ACG/Auxiliary Award

J. M. Wu, MD, A. Woolley, J. Evrornann, RN, C. Rountree, PA, S. P. Harrell, MD, PhD, Division of Gastroenterology/Hepatology, University of Louisville, Louisville, KY.

Purpose: Domperidone has been shown to be effective in treating gastroparesis, but it is not approved in the U.S. However, FDA recognized some patients with refractory gastroparesis or GI motility disorder may benefit from domperidone. Aim of Study: To review our clinical experience with domperidone through the FDA Investigational New Drug (IND) program.

Methods: Indications for domperidone were symptoms of gastroparesis or small bowel dysfunction refractory to conventional therapy. To enroll into the study, patients must have at least one of following: abnormal gastric scintigraphy, food bezoars during EGD, or abnormal antroduodenal/small bowel manometry. Patients with ECG QTc interval >450 msec for men and >470 msec for women were excluded. Demographics, presentation (vomiting, dyspepsia, or reflux), and etiologies were reviewed. Dose of domperidone was increased if necessary. Maximal allowable dose was 30 mg qac and qhs. Treatment outcome was classified as responder (symptoms improved/resolved) or non-responder (symptoms same/worse). Side effects data were collected prospectively. Analysis of variance and SPSS software was utilized.

Results: 305 subjects (81% females, mean age 51 years) signed informed consent during a 32-month period. 26% of subjects had domperidone before. 33%, 46%, and 21% of subjects presented with vomiting, dyspepsia, and reflux-predominant symptoms, respectively. Etiologies were idiopathic (48%), diabetic (21%), post-surgical (21%), and miscellaneous (10%). In the 192 subjects who started domperidone, mean follow-up of 11 months was obtained. 124 subjects (65%) were responders (see table). Except for age, there were no differences in gender, symptom presentation, and etiologies between responders and non-responders of domperidone. Only 10 subjects (5%) were able to stop domperidone without recurrence, and 28% were able to lower the dose. 22% of subjects reported side effects (11% breast symptoms, 7% CNS symptoms similar to metoclopramide, and 5% diarrhea). Only 2 subjects (0.7%) reported chest pain and palpitations. None had a cardiovascular complication. Domperidone was stopped in 13% of subjects for no symptom improvement and in 6% for side effects.

Conclusion: 1) Domperidone was effective in two-thirds of patients in our open-label program through the FDA IND program. However, one-third of patients were able to lower the dose or stop domperidone. 3) Presentation and etiology did not predict efficacy, but responders were older than non-responders.

3

FAMILY HISTORY OF CHRONIC PANCREATITIS IS ASSOCIATED WITH AN INCREASED RISK FOR DEVELOPING CHRONIC PANCREATITIS

2008 ACG Governors Award Recipient for Excellence in Clinical Research

R. Brand MD1, R. Hayes, MD,2 M. Anderson, MD,3 P. A. Banks, MD,4 M. Bishop, MD,1,1 B. Seif, MD,5 M. Goldberg, MD,1 D. DiSario, MD,1 D. Yaday, MD,1 1. Internal Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA; 2. Internal Medicine, Medical University of South Carolina, Charleston, SC; 3. Internal Medicine, A. Alfred Taubman Health Care Center, Ann Arbor, MI; 4. Internal Medicine, Brigham & Women’s Hospital, Boston, MA; 5. Internal Medicine, Mayo Clinic Jacksonville, Jacksonville, FL; 6. Internal Medicine, Wake Forest University Baptist Medical Center, Winston-Salem, NC; 7. Internal Medicine, Indiana University Hospital, Indianapolis, IN; 8. Internal Medicine, Evanston North Western Health Care, Evanston, IL; 9. Internal Medicine, University Utah, Salt Lake City, UT.

Purpose: Over the past 10 years there has been a growing recognition that hereditary factors are involved in the susceptibility to chronic pancreatitis (CP); however, the overall percentage of chronic pancreatitis that can be attributed as familial (defined as >2 or more first-degree relatives (FDR) with CP) is unknown. The aims of this study were to determine the proportion of CP patients with a family history (FH) of CP and the risk of CP development in FDR of probands referred to secondary and tertiary referral centers.

Methods: The FH of CP from 540 CP patients (proband) and 504 unrelated controls prospectively recruited in the North American Pancreatitis Study-2 (NAPS2) dataset from 20 US centers was analyzed. CP in the proband was defined by imaging or histology. FH in family members and controls was solely based on history obtained from the probands. To attempt control for any recruitment bias, patients identified at enrollment to potentially have a genetic etiology for their CP by the patient or investigator were both excluded and included to calculate a minimum/maximum odds ratio and 95% CI.

Results: See Table for breakdown of study population. Compared to controls, a CP patient was 2.3 (1.4-6.7) more likely to have at least one FDR with a history of CP. The risk for developing CP in a FDR of a CP versus a control patient was 2.5 (1.0-4.3) to 4.5 (2.5-8.2).

Conclusion: 1) To the best of our knowledge this is the first report estimating the genetic contribution to chronic pancreatitis development. About 5-10% of cases in this large prospective cohort (2254 vs 32540) could be considered familial. 2) There is approximately a 2.5 to 4.5-fold risk for a family member of a chronic pancreatitis patient to develop chronic pancreatitis. 3) Results from this study provide strong justification for identifying those genetic factors responsible for chronic pancreatitis development and emphasizes the importance of family history as a risk factor for chronic pancreatitis.

Study Population

<table>
<thead>
<tr>
<th>FH Yes</th>
<th>FH No</th>
<th>Total number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>22/52</td>
<td>391/488</td>
<td>413/540</td>
</tr>
<tr>
<td>27/61</td>
<td>2004/5661</td>
<td>2031/7322</td>
</tr>
</tbody>
</table>

Control

| 12 | 492 | 504 |

FDR of control

| 13 | 3534 | 3547 |
COMPLICATIONS ASSOCIATED WITH DOUBLE BALLOON ENTEROSCOPY: THE U.S. EXPERIENCE

2008 ACG Governors Award Recipient for Excellence in Clinical Research

L. Gerston, MD, MS1, M. Chiorian, MD,2 J. Tokar, MD,3 A. Decker, MD,4 D. Cavey, MD,3 D. S. Boulanger, MD,5 D. Meshkin, MD,6 O. Haluszka, MD,6 J. A. Leighton, MD,6 A. Ziaei, MD,4 J. Gastroenterology, Stanford University, Stanford, CA; 2. Gastroenterology, University of Indiana, Indianapolis, IN; 3. Gastroenterology, Fox Chase Cancer Center, Philadelphia, PA; 4. Gastroenterology, Mayo Clinic Scottsdale, Scottsdale, AZ; 5. Gastroenterology, Massachusetts General Hospital, Boston, MA; 6. Gastroenterology, Medical College of Virginia, Richmond, VA. 7. Gastroenterology, Boston University Medical Center, Boston, MA.

Purpose: Double Balloon Enteroscopy (DBE) was introduced into the U.S. in 2004. Potential complications include perforation, pancreatitis, and gastrointestinal bleeding. Published complication rates have ranged from 1.7% (Mensink 2007) to 4% (Mehdizadeh, 2006). Perforations have been more likely to occur in patients with inflammatory bowel disease, and post-DBE examinations with stricture dilation, argon plasma coagulation (APC) therapy, or polyectomy, particularly of large polyps > 3 cm (May, 2007). Prevalence and risk factors for complications have not been described in a U.S. population undergoing DBE.

Methods: We conducted a retrospective study of DBE complications in 9 experienced U.S. centers who had performed at least 50 DBE procedures. Major complications included perforation, pancreatitis, or gastrointestinal hemorrhage requiring hospitalization. We obtained detailed information for each complication including patient history, maneuvers performed during the DBE, and presence of prior intestinal surgery.

Results: We collected data from 2254 DBE examinations performed between 2004-2008. The dataset included 1572 anterograde DBE (including 28 DBE with ERCP), and 682 retrograde DBE cases (3 were per-stomal DBEs). Complete data regarding diagnostic and therapeutic maneuvers and presence of altered surgical anatomy was present for 587 (38%) of the procedures and is shown in Table 1. There were a total of 20 (0.5%) major complications including perforation in 11 (0.5%), pancreatitis in 5 (0.2%), and bleeding in 3 (0.2%). In addition, one patient with Meckel's diverticulum and urachal remnant developed aecal volvulus post-oral DBE. 1/5 cases of perforations occurred post-retrograde DBE. Cases with perforation are described in Table 2. Perforations occurred in 3/1572 (0.2%) oral exams and 8/682 (1.2%) rectal DBE cases 8 (73%) perforations occurred during diagnostic DBE exams. 4/5 rectal DBE perforations occurred in patients with prior ileoanal or ileocolonic anastomoses. In the subset of patients with available data regarding altered surgical anatomy, perforations occurred in 6/73 (8%) patients.

Conclusion: The complication rate associated with DBE is approximately 10-fold higher than that associated with diagnostic colonoscopy. The perforation rate was elevated in patients with prior ileoanal anastomosis undergoing diagnostic retrograde DBE examinations.

Table 1. Details of Diagnostic and Therapeutic DBE Exams

<table>
<thead>
<tr>
<th>DBE Exam (N=857)</th>
<th>Tattoo</th>
<th>Biopsy</th>
<th>APC</th>
<th>Polyectomy</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic (N=800, 94%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antegrade (N=507)</td>
<td>126 (25%)</td>
<td>52 (10%)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Retrograde (N=370)</td>
<td>47 (22%)</td>
<td>22 (13%)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Therapeutic (N=98, 11%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antegrade (N=260)</td>
<td>88 (34%)</td>
<td>5 (2%)</td>
<td>180 (69%)</td>
<td>29 (11%)</td>
<td>21 (8%)</td>
</tr>
<tr>
<td>Retrograde (N=46)</td>
<td>10 (22%)</td>
<td>1 (2%)</td>
<td>13 (28%)</td>
<td>11 (24%)</td>
<td>4 (9%)</td>
</tr>
</tbody>
</table>

* includes stricture dilation, stent placement, clipping, and capsule retrieval

Table 2. DBE Examinations with Perforations

<table>
<thead>
<tr>
<th>Antegrade DBE</th>
<th>Therapeutic DBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Uceration at cholecystic anastomosis, Roux-en Y anayanny</td>
<td>Snsare polyectomy of large jejunal xanthoma</td>
</tr>
<tr>
<td>Diagnostic Asymptomatic pneumoperitoneum post-biopsy of metastatic breast CA</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Cronh's ulceration at ileocolonic anastomosis</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Peri-stomal perforation 1 week post-exploratory laparotomy with fresh biotomosis</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Ileal anastomosis; distal ileal perforation 7 days post-DBE</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Ileoanastomosis; perforation at prior jejunal enterotomy site</td>
<td></td>
</tr>
<tr>
<td>Diagnostic Rectosigmoid perforation in 83 year old female</td>
<td></td>
</tr>
<tr>
<td>Therapeutic Polyectomy of 6 cm ileal carcinoma</td>
<td></td>
</tr>
</tbody>
</table>

MISS RATES OF FINDINGS ON COLONOSCOPY AFTER COMPUTED TOMOGRAPHIC COLONOGRAPHY (CTC): CORRELATION WITH POLYP HISTOLOGY

2008 ACG/Olympus Award

R. D. Acosta, MD,1 M. S. Riddle, MD,1 G. R. Verapapam, MD,1 E. May, MD,2 B. Cash, MD,3 Gastroenterology, National Naval Medical Center, Bethesda, MD; 2. Gastroenterology, Walter Reed Army Medical Center, Washington, DC; 3. Infectious Disease Division, Naval Medical Research Center, Silver Spring, MD; 4. Internal Medicine, National Naval Medical Center, Bethesda, MD.

Purpose: Two of the prominent controversies surrounding CTC for colorectal cancer (CRC) screening center around diminutive polyps and missed polyps. Because of the decrements in CTC accuracy for polyps < 6 mm, CTC interpreters do not routinely comment on such polyps. Additionally, historically cited accuracy of CTC is considered on a per patient basis rather than on a per polyp basis.

Methods: Participants are asymptomatic, average-risk patients referred for colorectal screening as part of a 3000 person on-going study of CTC as a screening modality. We have previously shown that CTC can identify polyps ≥6 mm or larger as accurately as colonoscopy (Cash et al. Gastroenterology 2007) on a per patient basis. This analysis examines the findings for all patients undergoing CTC and colonoscopy on a per-polyp basis.

Results: Among 967 patients enrolled in the study, 170 have undergone CTC and subsequent colonoscopy for any cause. The mean age of patients is 56 years; 52% female; 82% Caucasian. 348 polyps were seen on colonoscopy; 205 (59%) ≤ 6 mm, 90 (25%) ≤ 6-9 mm, and 53 (15%) ≥ 10 mm. 167 (48%) of these polyps were adenomas, of which 76/167 (46%) were reported on CTC. There were 222 polyps that were seen on colonoscopy after a normal CTC; 87 (39%) were hyperplastic; 84 (38%) were adenomas, and 7 (3%) were advanced adenomas. CTC missed 2 advanced adenomas < 10 mm, for a miss rate of 2/212 (0.9%), and 7 advanced adenomas for all polyps, 7/222 (3.2%). No colorectal cancers were missed by CTC. Among polyps missed by CTC in the ≤ 6 mm category, 67 (38%) were hyperplastic and 69 (39%) were adenomas. Among missed adenomas in the 6-9 mm category 15 (42%) were hyperplastic and 17 (47%) were adenomas. In the 10 mm missed poly category 5 (50%) were hyperplastic and 5 (50%) were adenomas (p=0.05 for all comparisons). The CTC miss rate for polyps ≥10 mm was 4.5%.

Conclusion: When calculated on a patient-per-polyp basis, CTC at our institution is equivalent for colorectal screening for the detection of adenomas. CTC continues to show promise and gain momentum as a viable CRC screening modality. Per-polyp analysis shows that CTC misses are inversely associated with polyp size. We show a CTC miss rate for polyps ≥10 mm comparable to previous reports for tandem colonoscopy. We also show a higher proportion of adenomas among polyps ≤ 6 mm than previously reported. This data underscores the complementary relationship between CTC and colonoscopy and strengthens the case for removal of all polyps, regardless of size.

SMOKING AND COLORECTAL NEOPLASIA: WOMEN REQUIRE LESS TOBACCO EXPOSURE FOR SIMILAR INCREASED RISK AS COMPARED TO MEN

2008 ACG/Naomi Nakan Research Award

J. C. Anderson, MD,1 Z. A. Alpern, MD,2 J. Gastroenterology, University of Connecticut, Farmington, CT; 2. Gastroenterology, Sheepshead Bay, New York.

Purpose: While it has been shown that smoking is associated with a 2 fold risk for important colorectal neoplasia in screening populations (Lieberman et al JAMA 2003; Anderson et al AJG 2003), less is known about the exposure quantity needed. Furthermore, there is little data regarding the gender difference for the tobacco dose. Our hypothesis was that women demonstrate this 2 fold increase in risk from smoking with a lower pack year exposure than men.

Methods: The study included 2707 patients (average age 57.3) were screened from 11/99 to 7/06. For the analysis, the patient was removed. The OR=2.15; 95% CI 1.4-4.0. Conclusions: This 2 fold increase in risk from smoking with a lower pack year exposure than men.
Results: Baseline characteristics were similar for gender, age, duration of CD, disease behavior, prior infliximab exposure, and prior surgical resection. There were more active smokers in the infliximab group (55% v. 77%; p<0.01) and more active smokers on immunomodulators (36.4 v. 53.8%; p=0.44). At the end of 1 yr, 9 of 10 pts (90%) in the infliximab group were in endoscopic remission compared with 2 of 13 pts (15.4%) in the placebo group (p=0.0006). There were significantly more pts in the infliximab treated group who had complete absence of CD on colonoscopy (0 ulcers and 0) compared to those receiving placebo (80% v. 77%; p for trend<0.0009). Similarly, fewer pts in the infliximab group compared with placebo had severe endoscopic recurrence (0 ulcers or 1 ulcers in the ileum) (10% v. 30%; p for trend<0.002).

The proportion of pts in clinical remission was similar between the infliximab and placebo groups (66.7% v. 53.8%, p=0.67), however, clinical recurrence was lower in the infliximab group (10% v. 38.5%, p=0.05). Histological recurrence was greater in the placebo group: more placebo pts had neutrophil infiltration (84.6% v. 30%, p=0.01) and higher adjusted mean histological activity scores (6.0 v. 1.9, p=0.01).

Conclusion: Infliximab for the first year after ileal resection surgery significantly decreases endoscopic, histologic, and clinical Crohn’s disease recurrence.

Disclosure - Dr. Regueiro - Consultant: Centocor, Speakers Bureau: Centocor, Grant support: Centocor

This research was supported by an industry grant from Study was funded in part by an unrestricted research grant from Centocor.

PAPERS MONDAY
10  ACCURACY OF EUS, ENDBI PUS, AND COMBINED EUS/EBUS FOR LUNG CANCER EVALUATION IN PATIENTS WITH A NEGATIVE CT OF THE MEDIASTINUM

L. H. Saml, MD,1 N. Cubero de Frutos, MD,1 K. R. Gill, MD,1 S. A. Gross, MD,1 J. Pascual, MD,1 M. Raimondo, MD,1 E. Woodward, MD,1 J. Crook, PhD,1 J. A. Oled, MD,1 M. B. Wallace, MD, MPH,1 J. Gastroenterology, Mayo Clinic, Jacksonville, FL; 2. Pulmonology, Mayo Clinic, Jacksonville, FL; 3. Cardiac, Mayo Clinic, Jacksonville, FL.

Purpose: The presence of mediastinal lymph nodes (MLNs) metastasis in patients with suspected lung cancer is a critical determinant of therapy and prognosis. Combined Endoscopic Ultrasound (EUS) and Endobronchial Ultrasound (EBUS) with fine needle aspiration (FNA) has recently been shown to be highly accurate in evaluating MLNs in patients suspected of having lung cancer [Wallace et al. JAMA, 2008]. EUS detects approximately 61% of any malignant metastases in CT negative patients [Wallace et al. Ann Thor Surg 2004] but has low negative predictive value, thus requiring further mediastinoscopy if EUS is negative. The diagnostic value of combined EUS/EBUS with FNA has not been well studied in patients who have no enlarged MLNs on CT scan of the chest.

Methods: Prospective, double blind trial comparing EUS and EBUS FNA of patients with suspected lung cancer. EUS was performed by a gastroenterologist, and EBUS by a pulmonologist, in a back to back manner, each blinded to the other results. The subset of patients without enlarged (≥1 cm) lymph nodes in the mediastinum was included in this analysis. Accuracy for each procedure and the combination was compared to the reference standard which included any pathology proven (by FNA or surgery) malignant or nodes by surgery or by at least 6 months clinical/CT follow up.

Results: A total of 225 patients underwent EUS and EBUS evaluation for possible lung cancer. 136 patients had their chest CT scan available for review. A total of 77 patients had a CT scan that was negative for pathological appearing MLNs (short axis <10 mm). Among the 77 CT negative patients eligible to have MLN tumor involvement by the reference standard (FNA or surgery), the estimated sensitivities of EUS-FNA, EBUS-FNA, and EUS plus EBUS were 62% (95% CI; 46% to 86%), 93% (95% CI; 89% to 96%), and 98% (95% CI; 96% to 100%). The negative predictive values were 94% (95% CI; 92% to 98%) for EUS-FNA, 95% (95% CI; 94% to 98%) for EBUS-FNA, and 95% (95% CI; 94% to 98%) for EUS plus EBUS.

Conclusion: In patients with suspected lung cancer, who have no MLNs on CT scan of the chest, the combination of EUS-FNA and EBUS-FNA is modestly sensitive but provides a high negative predictive value in this low prevalence population.

11  EFFICACY OF THE PROBIOTIC VSL#3 IN CHILDREN WITH IRITRITIVE BOWEL SYNDROME: AN INTERNATIONAL, RANDOMIZED, PLACEBO-CONTROLLED, DOUBLE-BLIND, CROSS-OVER TRIAL

S. Gnannatuli, MD,1 A. Chiardo, MD,2 V. Lahlalestra, MD,3 G. Gopalan, MD,4 C. Romanos, MD,1 R. Berra Canani, MD,1 1. Pediatric Gastroenterology, University of Messina, Messina, Italy; 2. Pediatric Gastroenterology, University of Messina, Messina, Italy; 3. Pediatric Gastroenterology, University of Rome "La Sapienza", Rome, Italy; 4. CRNS, New Delhi, India; 5. Endoscopy Unit, University of Messina, Messina, Italy; 6. Department of Pediatrics, University of "Federico II", Naples, Italy.

Purpose: Irritable bowel syndrome (IBS) is an extremely common problem. Unfortunately, scanty data exists on the safety and effectiveness of any treatment, especially in children. We aimed at investigating the effect of VSL#3 on improving symptoms and quality of life in children and teenagers affected by IBS, defined according to the Rome II criteria.

Methods: The study was a randomized, double-blinded, placebo-controlled, cross-over multi-center trial, conducted after the approval of all local ethical committees in 7 pediatric gastroenterology divisions located in USA, Italy and India. Patients of 4 to 18 years of age meeting criteria for IBS (abnormal scores in the probiotics VSL#3 for improving symptoms and quality of life in children and teenagers affected by IBS, defined according to the Rome II criteria.

Results: A total of 59 children completed the study, mean age 12.5 yrs (5-18), 24 females. VSL#3 resulted in a statistically significant improvement in the primary endpoint (SGAR) as well as in all 3 of secondary endpoints. SGAR: VSL#3: from 4.0 at baseline to 2.3 after 6 weeks, p<0.001; placebo: from 4.0 at baseline to 3.3, NS. Change in score after 6 weeks on VSL#3 vs change in score after 6 weeks on placebo: p<0.05. Abdominal pain/discomfort: VSL#3: 2.6 at baseline to 1.2 after 6 weeks, p<0.001; placebo: from 2.1 to 1.6, NS. Change in score after 6 weeks on VSL#3 vs change in score after 6 weeks on placebo: p=0.05. Abdominal bloating/gas/distension: VSL#3: from 2.9 to 1.1 after 6 weeks, p<0.001; placebo: 2.2 to 1.5, p<0.05. Change in score after 6 weeks on VSL#3 vs change in score after 6 weeks on placebo: p<0.001. For the last parameter, stool pattern: both VSL#3 and placebo were significantly effective: 2.8 ± 0.3 vs 2.2 ± 0.3 for placebo; p<0.001; difference in effectiveness between VSL#3 and placebo: NS. No untoward side effect was recorded in any of the patients.

Conclusion: In conclusion, VSL#3 proved to be safe and effective in ameliorating quality of life (as judged by the SGAR index) and most symptoms of children affected by IBS.
**HERBAL EXTRACT HPML-004 IN ACTIVE ULCERATIVE COLITIS: A RANDOMIZED COMPARISON WITH SUSTAINED RELEASE MESALAMINE**

The effect of herbal extract HPML-004 on active ulcerative colitis was compared to sustained release mesalamine in a randomized trial.

**Purpose:** To determine if HPML-004, an herbal extract, is effective in treating active ulcerative colitis.

**Methods:** A randomized, double-blind, active comparator trial was conducted in patients with active ulcerative colitis.

**Results:** The herbal extract HPML-004 was found to be as effective as sustained release mesalamine in treating active ulcerative colitis.

**Conclusion:** HPML-004 is an effective treatment for active ulcerative colitis.

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**THE EFFECT OF CHRONIC PANCREATITIS ON EMPLOYMENT: RESULTS OF A MULTICENTER STUDY**

The impact of chronic pancreatitis on employment status was assessed in a multicenter study.

**Purpose:** To evaluate the effect of chronic pancreatitis on employment.

**Methods:** A multicenter study was conducted at various institutions across the United States.

**Results:** Chronic pancreatitis had a significant impact on employment status.

**Conclusion:** Chronic pancreatitis significantly affects employment status.

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**IMMUNOMODULATORS ARE ASSOCIATED WITH AVOIDANCE OF FIRST SURGERY AMONG PATIENTS WITH NON-PENETRATING NON-STRICTURING CROHN'S DISEASE**

Immunomodulators were found to be associated with avoidance of first surgery in patients with non-penetrating non-stricturing Crohn's disease.

**Purpose:** To investigate the role of immunomodulators in preventing first surgery in Crohn's disease.

**Methods:** A retrospective analysis of patients with Crohn's disease was conducted.

**Results:** Patients using immunomodulators were less likely to require first surgery.

**Conclusion:** Immunomodulators are associated with avoiding first surgery in Crohn's disease.

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**FACTORS ASSOCIATED WITH AVOIDING FIRST SURGERY**

Factors influencing the avoidance of first surgery in Crohn's disease were analyzed.

**Purpose:** To identify factors associated with avoiding first surgery.

**Methods:** A cohort study was conducted.

**Results:** Age, disease activity, and smoking status were associated with avoiding first surgery.

**Conclusion:** Specific factors influence the avoidance of first surgery in Crohn's disease.

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**SURGERY GROUP VS MEDICATION GROUP**

The comparison between surgery and medication groups was conducted to assess the effectiveness of each.

**Purpose:** To compare surgery and medication groups in terms of effectiveness.

**Methods:** A comparative study was conducted.

**Results:** The surgery group had better outcomes than the medication group.

**Conclusion:** Surgery is more effective than medication in certain cases.

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**SMOKING HISTORY AND FAMILY HISTORY OF IBD**

The role of smoking history and family history of IBD in surgery avoidance was analyzed.

**Purpose:** To assess the influence of smoking history and family history of IBD on surgery avoidance.

**Methods:** A cohort study was conducted.

**Results:** Smoking history and family history of IBD did not influence surgery avoidance.

**Conclusion:** Smoking history and family history of IBD do not affect surgery avoidance.

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**PAPER ABSTRACTS – Monday, October 6**

**THE EFFECT OF CHRONIC PANCREATITIS ON EMPLOYMENT: RESULTS OF A MULTICENTER STUDY**

T. Gardner, MD, T. A. Kennedy, BS, A. Gelrud, MD, M. A. Mohajer, MD, M. A. Mohajer, MD, P. A. Banks, MD, Brigham and Women's Hospital, Boston, MA; Gastroenterology, Mayo Clinic, Rochester, MN; 3. Gastroenterology, Mayo Clinic Rochester, MN; 4. Gastroenterology and Hepatology, University of Cincinnati, Cincinnati, OH; 5. Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN

**Purpose:** To evaluate the effect of chronic pancreatitis on employment status.

**Methods:** A multicenter study was conducted.

**Results:** Chronic pancreatitis significantly affected employment status.

**Conclusion:** Chronic pancreatitis has a significant impact on employment.

---

**IMMUNOMODULATORS ARE ASSOCIATED WITH AVOIDANCE OF FIRST SURGERY AMONG PATIENTS WITH NON-PENETRATING NON-STRICTURING CROHN'S DISEASE**

M. Pecio, MD, PhD, I. Zubiaurre, MD, M. Y. A. Ullan, PhD, R. J. C. Uengemi, MD, D. J. Shelton, ARNP, Gastroenterology, Mayo Clinic, Jacksonville, FL

**Purpose:** To assess the role of immunomodulators in preventing first surgery.

**Methods:** A retrospective study was conducted.

**Results:** Patients using immunomodulators were less likely to require first surgery.

**Conclusion:** Immunomodulators are associated with avoiding first surgery in Crohn's disease.

---

**HUMAN IMMUNODEFICIENCY VIRUS INFECTION AND RISK OF CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS**

M. A. Salzberg, MD, Centocor Inc.; M. Krotchen, MD,3 P. A. Banks, MD,2 S. S. Vege, MD,4 B. Lacy, MD1. 1. Gastroenterology, Mayo Clinic, Rochester, MN; 2. The University of Cincinnati, Cincinnati, OH; 3. Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN; 4. Gastroenterology, Mayo Clinic, Rochester, MN

**Purpose:** To review the evidence of cancer risk in patients with HIV.

**Methods:** A systematic review and meta-analysis was conducted.

**Results:** There was a significant increased risk of cancer in patients with HIV.

**Conclusion:** HIV infection is associated with an increased risk of cancer.

---

**SMOKING HISTORY AND FAMILY HISTORY OF IBD**

M. Pecio, MD, PhD, I. Zubiaurre, MD, M. Y. A. Ullan, PhD, R. J. C. Uengemi, MD, D. J. Shelton, ARNP, Gastroenterology, Mayo Clinic, Jacksonville, FL

**Purpose:** To assess the role of smoking history and family history of IBD in surgery avoidance.

**Methods:** A prospective study was conducted.

**Results:** Smoking history and family history of IBD did not influence surgery avoidance.

**Conclusion:** Smoking history and family history of IBD do not affect surgery avoidance.

Purpose: Introduction: Autoimmune pancreatitis (AIP) is suggested clinically by biliopancreaticobiliary imaging, such as MRCP or CT scan. Pathologically, AIP is characterized by lymphoplasmacytic infiltration of the pancreas. Elevated serum immunoglobulins, specifically IgG subtype 4, is considered a diagnostic marker for AIP, although the test characteristics have not been extensively evaluated across populations. Elevated serum IgG4 was present in 71% (15/21) in the Mayo Clinic series and in 64% (7/11) in the US study. Based on our clinical observations, we have not found serum IgG4 to be helpful in identifying patients who meet the criteria for diagnosis of AIP (Japan and Mayo HISORt criteria). The purpose of this study is to analyze our cohort of patients treated for autoimmune pancreatitis at Indiana University (IU) and compare patient characteristics to published data.

Methods: A retrospective search of the prospective IU ERCP/EUS database from 1998-2008 was performed. Demographics, radiographic imaging, serology (total IgG serum, IgG4 serum, ANA, and histology (EUS-FNA, EUS core biopsy, surgical pathology, IgG4 tissue staining) were analyzed. Serum IgG4 was deemed elevated >140 mg/dL. Response to steroid was defined as resolution of symptoms and/or improvement in pancreaticolymphangiography or CT imaging.

Results: Results: (see table). Twenty (n=20) patients were identified as having AIP based on the Japanese (n=10) or the Mayo HERP criteria (n=10). Elevated serum IgG4 was seen in 21/20 (13%) patients. Eleven of 12 patients (92%) given steroid therapy showed either improvement (n=6) or complete resolution (n=5) of symptoms and/or imaging. Diagnostic histology for AIP was obtained from 6/8 EUS core biopsies (75%), one ampullary biopsy, and 7/7 surgical specimens. IgG4 tissue staining was performed on 7 patients specimens and positive in only 2 (29%). EUS-FNA was suggestive of AIP in 2/10 (20%) of patients.

Conclusion: Conclusion: In our IU experience, serum IgG4 levels are rarely elevated and therefore are not a useful marker for AIP. EUS core biopsy may be diagnostic in patients with suspected AIP. In nearly all patients with suspected AIP based on current criteria, steroid therapy may resolve radiographic abnormalities and improve symptoms irrespective of the serum IgG4 levels. Further studies are warranted to evaluate the diagnostic accuracy of serum IgG4 as a marker for AIP in the western population.

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<td>100</td>
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<td>38% (8/21)</td>
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<tr>
<td>elevated IgG4</td>
<td>13% (2/15)</td>
<td>64% (10/16)</td>
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<tr>
<td>response to steroids</td>
<td>92% (11/12)</td>
<td>100% (11/11)</td>
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</table>


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THE ROLE OF EUS-ASSISTED BILIARY DRAINAGE AFTER FAILED ERCP
Y. Kim, MD, K. Gupta, MD, M. Phal, M. Melleray, M. Ri, Li, T. Koney, M. A. Chaud, M.D, K. Salder, M.D, M. Freeman, M.D, J. Internal Medicine, Gachon Gil Medical Center of Gachon Medical School, Incheon, South Korea. 2. Internal Medicine, University of Minnesota, Minneapolis, MN Center, Internal Medicine.

Purpose: To evaluate technical success and outcomes of EUS-assisted biliary drainage after ERCP attempts at a tertiary center have failed.

Methods: Patients included all those with failed ERCP for distal biliary obstruction at a tertiary center over 9 years, in whom repeat ERCP was felt unlikely to succeed. EUS-assisted biliary drainage was performed under general anesthesia with fluoroscopy, and categorized into 2 methods: 1) EUS rendezvous for transpapillary access followed by ERCP and 2) direct EUS guided transmural biliary drainage. If ampulla was accessible at initial ERCP EUS rendezvous was attempted first. In cases of inaccessible ampulla and inoperable malignancy, direct EUS guided transmural drainage was performed. 1) For rendezvous, EUS-assisted transduodenal (n=12) or transhepatic (n=1) bile duct puncture was performed via a diagnostic linear EUS scope with a 19 or 22 gauge needle; a guidewire was advanced through papilla by fluoroscopy; the guidewire was placed, and ERCP performed immediately afterward with or without sphincterotomy. 2) Direct EUS-guided biliary drainage was performed through a transduodenal approach, the fascia tract dilated, and metallic stents placed. If bile duct access failed by all methods, patients were immediately converted to PTC.

Results: EUS-BD was attempted in 15 patients (mean age 68, male 12/28, 3.CBD diameter 4-20 mm). EUS rendezvous was attempted in 13 cases, and direct EUS guided transmural biliary drainage in 2. Results for initial ERCPR failure included tumor duct obstruction (n=3), bile duct stricture (n=8), duodenal stenosis (n=2), intraductal papilla (n=1), or other anatomic anomalies (n=4). EUS-assisted biliary drainage was performed at the same session as initial ERCPR attempt in 12/15 patients and in 10/15 patients with drainage successfully completed in 12/15 (80%). Failures occurred in 3 attempted rendezvous cases because of inability to traverse biliary structure (n=2) or dissection of a choledochocutaneous fistula with guidewire (n=1), all were successfully drained via PTC. Stents placed were metal-ic and in plastic in 3. Complications occurred in 21/15 patients (13.3%). EUS rendezvous procedures after difficult ERCPR attempt in papillary stenosis, and 1 bacteremia after PTC, with no perforations. Mean hospital stay was 5.4 (3-33) days, mostly for preexisting medical problems.

1. C. Buchler, MD, J. DiMagno, MD, S. Lipchik, MD, A. Friedland, MD, J. M. DeWitt, MD, S. Sherman, MD, N. Zyromski, MD, K. Lillienre, MD, T. J. Howard, MD, L. M. Henry, MD, 1. Medicine, Indiana University, Indianapolis, IN; 2. Pathology, Indiana University, Indianapolis, IN; 3. Surgery, Indiana University, Indianapolis, IN; 4. Radiology, Indiana University, Indianapolis, IN.

Conclusion: In our IU experience, serum IgG4 levels are rarely elevated and therefore are not a useful marker for AIP. EUS core biopsy may be diagnostic in patients with suspected AIP. In nearly all patients with suspected AIP based on current criteria, steroid therapy may resolve radiographic abnormalities and improve symptoms irrespective of the serum IgG4 levels. Further studies are warranted to evaluate the diagnostic accuracy of serum IgG4 as a marker for AIP in the western population.
Predicators of recurrent carcinoma following endoscopic resection of T1a cancers in BE

<table>
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<th>Variable</th>
<th>Recurrent carcinoma (n=15)</th>
<th>No recurrence (n=120)</th>
<th>p value</th>
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<tr>
<td>Age (mean)</td>
<td>70.5</td>
<td>70.5</td>
<td>0.99</td>
</tr>
<tr>
<td>Male Gender (%)</td>
<td>80</td>
<td>87</td>
<td>0.52</td>
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<tr>
<td>Tumor size (cm)</td>
<td>1.3</td>
<td>1.31</td>
<td>0.96</td>
</tr>
<tr>
<td>BE segment length (cm)</td>
<td>7.3</td>
<td>5.0</td>
<td>0.05</td>
</tr>
<tr>
<td>Incident Cancer (%)</td>
<td>50</td>
<td>28</td>
<td>0.009</td>
</tr>
<tr>
<td># of Rx sessions to achieve remission</td>
<td>4.5</td>
<td>2.3</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>PDT (%)</td>
<td>50</td>
<td>58</td>
<td>0.55</td>
</tr>
</tbody>
</table>

23 GASTROESOPHAGEAL REFUX DURING SLEEP – SLEEPLESS NIGHTS ARE COMMON

E. M. Allen, MD, 1 R. Fass, MD, 1 J. M. Cautley, MD, 2 M. Powers, BS, 2 A. Gasiorowska, MD, 2 J. Malagon, BS, 2 B. Moty, Student, 1 M. Willis, RN 1 2 Gastroenterology, Neuroendocrine Clinical Research Group, Southern Arizona VA Health Care System, Tucson, AZ 2 Gastroenterology, University of Arizona Health Sciences Center, Tucson, AZ.

Purpose: To assess sleep arousals and its relationship with reflux events and symptoms using a novel technique that objectively determines sleep period during pH testing in GERD patients that are not confounded to a sleep lab.

Methods: 18 patients (M/F – 13/5, mean age 57.1±16.60 yrs, age range 27-87) with heartburn at least 3 times a week were included in this study. All patients were evaluated by the demographics and symptom checklist questionnaires. Patients were not receiving anti-reflux treatment. Subsequently patients underwent pH testing concomitantly with actigraphy. The latter is a watch-like device worn on the no dominant wrist and records motions with accelerometers that are stored digitally within the device. The actigraph is a validated technique that can determine sleep and awake periods. Novel software that simultaneously integrates actigraphy and pH raw data matched by time was utilized to determine patients' sleep and arousals and their relationship to acid reflux events. The computer pH data output incorporates the old supine and upright analysis and the new sleep and awake analysis for all pH parameters.

Results: The traditional supine period was clearly divided to supine-asleep (mean 543.3±13.60) and supine-awake (62.9±7.63) periods. Based on the traditional supine data, there was no evidence of arousals during sleep. However, by using the integrative software, 77.8% of the subjects had at least one arousal during sleep. The total mean number of arousals was 2.4±1.7. The mean duration of sleep arousal was 20.9±17.8 minutes. The mean percent of sleep arousals associated with acid reflux events was 45.2±17.3. Of those arousals associated with an acid reflux event the mean number of acid reflux events per arousal was 2.7±2.0. The mean duration of an acid reflux event during sleep arousal was 2.3±4.0 minutes. The percent of acid reflux events associated with symptoms was 28.1±45.19. The mean duration of acid related reflux event that was associated with symptom was 0.91±0.92 min.

Conclusion: Almost half of the arousals during sleep of GERD patients are due to acid reflux events. Most of these arousals are not associated with GERD related symptoms. This research was supported by an industry grant from GenVec Inc.
A NEW THERAPY FOR EOSINOPHILIC ESOPHAGITIS IN ADULTS: EFFICACY OF Budesonide – Rincinol Gel for 6 Weeks in Patients with Dysphagia


Purpose: Topical steroid treatment such as aerosolized fluticasone has been demonstrated to be an effective treatment of Esophageal Eosinophilic (EE) but may have oral side effects. We hypothesized that delivery of a budesonide gel specifically formulated to increase the contact time of the gel to the esophageal mucosa will result in a greater reduction in clinical symptoms of dysphagia and less oral side effects.

Methods: An oral gel combining budesonide with the mucosal adherent preparation Rincinol (BRG) was compounded. Patients with abnormal Mayo dysphagia questionnaires underwent EGD with biopsies. 16 patients with greater than 15 eos/HPF and solid food dysphagia were enrolled in the study and treated with BRG. Patients were instructed to take BRG 3mg/10cc BID. If patients noted marked improvement at one week, they were switched to once daily BRG for 6 weeks otherwise they were continued on BID BRG for a total of 6 weeks. Dysphagia symptoms and BRG side effects over the last two weeks of treatment were assessed by personal interview. Symptoms were evaluated on a scale of dysphagia resolution: <25%, 25-49%, 50-74%, 75-99% or complete resolution. Those patients, who had previously utilized topical fluticasone for EE, were asked to compare BRG vs topical fluticasone with respect to treatment effect and tolerance.

Results: See table 1 regarding the baseline clinical characteristics of our EE patients. After 6 weeks of BRG therapy, all patients reported at least a 75% improvement in dysphagia symptomatology. 56% (9/16) of patients reported complete dysphagia resolution and 44% (7/16) reported a 75-99% reduction in dysphagia symptoms. Patients who transitioned from BID to once daily BRG noted no increase in dysphagia symptomatology. There was no significant difference in treatment response observed between the dosing regimens (Table 2). With respect to side effects, 13% (2/16) reported hoarseness and 6% (1/10) unpleasant taste. No oral candidiasis was observed with BRG therapy. Of the patients who had previously received fluticasone for treatment of EE, 38% (6/16) felt BRG was more effective, 62% (5/8) had no preference and none preferred fluticasone. When asked about tolerance, 50% (8/16) patients reported no differences equally, whereas 25% (2/8) favored fluticasone and 25% (2/8) favored budesonide.

Conclusion: BRG effectively relieved symptoms of dysphagia in patients with esophageal eosinophilia with minimal side effects in this study. BRG may also be effective in treating EE patients who have previously failed fluticasone therapy. Further studies should be performed to validate these findings.

Table 1: Baseline Characteristics of Study Patients

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Symptoms</th>
<th>Endoscopic Findings</th>
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<th>Prior Therapies</th>
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<td>Food Impaction</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
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<tr>
<td></td>
<td>Heartburn</td>
<td>44% (7/16)</td>
<td>75% (12/16)</td>
<td>29% (4/14)</td>
</tr>
<tr>
<td></td>
<td>Regurgitation</td>
<td>9% (1/16)</td>
<td>51% (5/16)</td>
<td>71% (10/14)</td>
</tr>
<tr>
<td></td>
<td>Asthma</td>
<td>19% (3/16)</td>
<td>34% (5/14)</td>
<td>29% (4/14)</td>
</tr>
<tr>
<td></td>
<td>Seasonal Allergies</td>
<td>50% (8/16)</td>
<td>50% (8/16)</td>
<td>50% (8/16)</td>
</tr>
</tbody>
</table>

Table 2: BRG Dosing Regimen and Patient Reported Treatment Effect

75 - 99% Improvement in Dysphagia

50 - 74% Improvement in Dysphagia

50% (5/11) 55% (6/11)

40% (2/5) 60% (3/5)

BID BRG

ONCE-DAILY 1.5-G GRANULATED MESALAMINE EFFECTIVELY MAINTAINS REMISSION IN PATIENTS WITH ULCERATIVE COLITIS WHO SWITCH FROM DIFFERENT 5-ASA FORMULATIONS

G. Lieberman, PhD, J. W. Sands, MD, N. J. Talley, MD, A. Shaw, PhD, J. Yuan, PhD, E. Borzy, PhD. W. Forbes, PharmD. 1. University of Pennsylvania School of Medicine, Philadelphia, PA; 2. Salix Pharmaceuticals, Morrisville, NC.

Purpose: Patients with remittent ulcerative colitis (UC) fail or switch 5-aminosalicylic acid (5-ASA) therapy for a number of reasons, including lack of efficacy and nonadherence. Granulated mesalamine is a novel formulation that provides both delayed and extended release of mesalamine directly to the terminal ileum and colon for once-daily (q.d.) dosing. For the first time, granulated mesalamine has been evaluated for maintenance of remission in patients with UC currently in remission who switched to granulated mesalamine 1.5 g q.d. from other 5-ASA products. Effective maintenance of UC remission along with convenient q.d. dosing may improve patient adherence, making granulated mesalamine an attractive maintenance therapy for remission of UC.

Results: In our cohort of 306 CD patients, clinical characteristics were: A1, 11.4%; A2, 56.2%; A3, 24.2%; L1, 45.1%; L2, 32.0%; L3, 18.4%; L4, 0.3%; L1 + L4, 2.3%; L2 + L4, 0.3%; L3 + L4, 1.3%; B1, 81.4%; B2, 4.6% and B3, 14.0%. The cumulative risk of either B2 or B3 was 11.8% at day 0, 18.6% at 90 days, 22% at 1 year, 33.7% at 5 years, 38.7% at 10 years, 50.8% at 20 years, and 54.4% at 30 years after diagnosis. Among 249 patients with B1 disease at diagnosis, a change in behavior occurred in 66 patients. At 1, 5, 10, 20 and 30 years, the cumulative probabilities of patients with B1 developing either B2 or B3 were 4.1%, 18.5, 24.7, 39.3 and 43.9%; developing B2 were 2.5%, 8.0, 11.0, 17.6% and 17.5%; and developing B3 were 1.7%, 11.4, 15.4, 26.6 and 31.9%, respectively. Change in behavior (either B2 or B3) led to resective bowel surgery within 6 months of the event in 47 patients. Risk factor associated with change in behavior are shown in Table 1.

Conclusion: In this population-based cohort of CD, almost 19% of patients had already experienced a penetrating or strictureing complication within the first 90 days of diagnosis, and fully half of all patients had experienced a complication by year 20. Factors associated with progression to penetrating or strictureing events were the presence of ileal involvement and perianal disease (borderline significance).

Table 2: BRG Dosing Regimen and Patient Reported Treatment Effect

75 - 99% Improvement in Dysphagia

50 - 74% Improvement in Dysphagia

50% (5/11) 55% (6/11)

40% (2/5) 60% (3/5)

BID BRG
Analysis of Factors Associated with Change in Behavior

<table>
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<td>Comorbidities</td>
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</tbody>
</table>

Results: Of the 273 patients enrolled in the study, 148 patients were felt to have definite Crohn’s disease at the completion of their evaluation. The CTE findings of mural hyperenhancement, wall thickness, stratification, comb sign, and perienteric fat stranding were not significant after including hyperenhancement and comb sign in the multivariable model. A model including the combination of CDAI, elevated CRP, low albumin, and anemia without CTE data resulted in an AUC of only 0.61 with no significant associations, p > 0.05.

Conclusion: CTE is more accurate than biomarkers or clinical symptoms for the non-invasive prediction of active inflammation in Crohn’s disease. The CTE features that best predict active disease are mural enhancement and the comb sign.

Disclosure: - DH Bruining - None
- JG Fletcher - Grant Support - Siemens Medical Solutions, GE Healthcare, E-Z-EM, Inc. H. Siddiki - none
- J. Hudrich - none
- J. Fuller - Grant Support - E-Z-EM, Inc W. Harmsen - none
- J. M. Vender - none
- W. Sandborn - none
- E. Loftus - none

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EFFECT OF COMBINATION LUBIPROSTONE AND SENNA ON GASTROINTESTINAL TRANSIT AND BOWEL FUNCTION IN HUMANS


Purpose: Senna, an anthraquinone laxative, stimulates release of serotonin, histamine and prostaglandin-like material in the gut. Lubiprostone is an oral chloride channel activator used to treat constipation that increases intestinal fluid secretion and may trigger peristalsis. Hypothesis: Senna enhances the effects of lubiprostone on gastrointestinal transit and bowel function in humans. Aims: To evaluate the effect of the combination of senna and lubiprostone on intestinal transit in humans.

Methods: In this randomized, double-blind, placebo-controlled, 3 X 3 factorial design study, 71 healthy men and women were randomized to senna 8.6 mg once or twice daily, lubiprostone 24 micrograms once or twice daily, and senna or placebo. The primary endpoints were colonic geometric center (GC) at 24 hrs and ascending colon (AC) transit time (T1/2). Secondary endpoints included gastric emptying T1/2, colonic GC at 8 and 48 hrs, and colonic filling at 6 hrs measured by validated scintigraphic methods. Additionally, subjects recorded stool characteristics using a bowel habit diary. Treatment effects were assessed using analysis of covariance adjusting for BMI and gender, based on the 3 X 3 factorial design.

Results: Overall significant (p<0.02) effects on colonic transit were observed for senna with the twice daily dose increasing the GC at 24 hrs (p=0.04) and the GC at 48 hrs (p=0.11) compared to placebo; there was no significant effect on AC T1/2. The effect of senna on colonic transit (twice daily dose) was most pronounced at the twice daily dose of lubiprostone. No overall treatment effects of lubiprostone on overall colonic transit or AC T1/2 were detected (p>0.17). Gastric emptying T1/2 was modestly increased (mean ∆T1/2 over placebo 19 minutes) by lubiprostone (p=0.08) but no overall effect of senna was detected (p>0.5). No significant effects on colonic filling at 6 hrs were detected. Stool frequency increased overall with both senna and senna or placebo (p<0.02 and 0.004 respectively) and both doses for each agent differed from placebo. Bristol stool form scores increased overall (p=0.015 for senna and 0.008 for lubiprostone) with the once daily dose of lubiprostone and the twice daily dose of senna having the biggest effect.

Conclusion: Senna increased colonic transit; number of stools and stool form increased significantly with both agents, and the combination of the twice daily dose of senna and once daily dose of lubiprostone had the greatest impact. Overall, the data suggest that the main effect of both agents to alter bowel function may be related to intestinal secretion. There is no statistical evidence of synergism between the two therapeutic approaches Supported by NIH DK79028.

Main Effects of Treatment (least square means ± SEM)
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DEMOGRAPHIC AND PATHOLOGIC EVALUATION OF 2139 PATIENTS WITH
SESSILE SERRATED ADENOMAS IN A ONE-YEAR PERIOD
R. H. Lash, MD, C. M. Schuler, MD, R. M. Genta, MD. Caris Diagnostics, Irving, TX.
Purpose: Sessile serrated adenomas (SSA) are increasingly recognized polyps that resemble
large hyperplastic polyps of the colorectum. Previously thought to be innocuous, a subset of
these lesions have been associated with histologic dysplasia/carcinoma. Uncertainty exists as to
their behavior and treatment. This study characterizes a large sample of SSAs diagnosed in a
consensus-based environment structured with the goal of consistency in diagnosis.
Methods: We analyzed diagnostic reports generated at Caris Diagnostics between 4/1/07 and
3/31/08 from 290,810 colonoscopic specimens on 179,111 patients. Data were extracted from a
Microsoft Access Database using Structured Query Language and Visual Basic for Applications. Statistical calculations for uncorrected chi-square, Student’s t, and the Mann-Whitney
Rank Sum tests for non-parametric data were performed using SigmaStat v3.5; Proportions t
tests were used as appropriate.
Results: SSAs with or without dysplasia/carcinoma (SSA+/-) were identified in 1.6% of the
133,808 patients with mucosal polyps. There were 2,416 specimens from 2,139 patients with at
least one SSA+/-. An additional 3,555 specimens from 3,158 patients (not included in this
SSA+/- study group) had polyp(s) with features considered suggestive but not diagnostic of
SSA. The SSA+/- group consisted of 1,162 (54%) women and 977 (46%) men. The distribution
of SSA+/- was: right-sided, 1,737 patients (81.2%); left-sided, 240 patients (11.2%); both right
and left-sided, 70 patients (3.2%); not specified, 92 patients, (4.3%). There were 1,816 (85%)
patients without dysplasia (SSA-), 257 (12%) with low-grade dysplasia (SSALD), 45 (2%) with
high-grade dysplasia (SSAHD), and 21 (1%) with adenocarcinoma (SSACA). The median age
of patients with SSA+/- was 62 years, and there were significant differences between most subgroups [SSA-=61 years vs. SSALD=66 years (p<0.001) vs. SSAHD=72 years (p=0.002) vs.
SSACA=76 years (p=0.07, ns)]. Women comprised 53% of the SSA- group (968/1,816), 57% of
the SSALD group (147/257), 69% of the SSAHD group (31/45), and 76% of the SSACA group
(16/21). The predominance of women in each group was significant (p<.001 to p=.002). Also,
women
were
significantly
over-represented
among
patients
with
SSA+
(SSALD/SSAHD/SSACA) compared to patients with SSA- (p=.034).
Conclusion: SSAs occur in 1.6% of our patient population with colonic polyps, are found primarily in the right colon, and are associated with the development of dysplasia and carcinoma.
This progression occurs significantly more frequently in women, and the significant age differences between groups suggest that this progression occurs in a stepwise fashion over a period
of 15 years.
Disclosure - Dr. Schuler - Employee, Caris Diagnostics, Irving, Texas Dr. Lash - Stockholder,
Employee, Caris Diagnostics, Irving, Texas Dr. Genta - Stockholder, Employee, Caris Diagnostics, Irving, Texas

ENDOSCOPIC RESECTION OF LARGE COLORECTAL LESIONS IN THE UNITED
STATES IN A REFERRAL CENTER IS A DOMINANT STRATEGY - LONG-TERM
EFFICACY AND COST ANALYSIS RESULTS
T. Kaltenbach, MD, MS, K. Binmoeller, MD, V. Kalindindi, MD, R. Soetikno, MD, MS.
Interventional Endoscopy Services, California Pacific Medical Center, San Francisco, CA.
Purpose: Long-term efficacy and cost data on endoscopic mucosal resection (EMR) of large
nonpolypoid (flat and depressed) colorectal lesions is limited. The majority of such lesions are
typically referred for surgery due a variety of reasons including: insufficient technical skills,
high complication risk, increased utilization of endoscopy resources and time, and inadequate
reimbursement.
Methods: We reviewed a 2 year period of existing data from consecutive patients who were referred to an urban tertiary interventional endoscopy center for endoscopic resection of a colon
or rectal lesion. A standardized inject and cut mucosal resection technique was used. We analyzed eligible patient data, including the index, treatment and follow-up colonoscopy and
pathology reports; as well as procedure cost data (collected by the hospital).
Results: We studied 141 patients: 118 were referred by gastroenterologists and 23 by surgeons.
The majority (n=91, 65%) were men with a mean age of 67 ± 12 years. Slightly less than a half
of the patients had Medicare or MediCal insurance. The mean lesion size was 28 ± 13mm
(range 6 – 80 mm). The majority were flat (n=77, 55%) and located in the right colon (n=84,
60%). We successfully removed 81% (n=114) of lesions by EMR. We recommended surgery to
19% (n=27) of patients due to an invasive cancer pattern detected before EMR (n=9, 33%),
large lesion size (n=6, 23%) or non-lifting sign (n=12, 44%). Advanced histopathology accounted for 48%, and serrated adenoma 11%. Of the 40% (46/114) EMR patients who have
undergone follow-up, 80% had only scar and 20% had minor residual lesion (mean size=
4mm). There were no major complications. Hospital costs data are available from 100 patients.
The total costs were $2,071: direct was $1,471 and indirect was $600. Most (89%) of the direct
costs were incurred from utilization of supplies (44%), use of post-anesthesia care unit and endoscope charges. Pharmacy and pathology contributed insignificantly (2% each). Although
only one snare was used in most cases, the snare costs were most significant (18%), followed by
the costs of clips (10%). Overall, though total hospital revenue was greater than the cost.
Conclusion: Based on the hospital costs of a single center experience, the referral of large colorectal lesions for endoscopic evaluation and possible resection is a dominant strategy. The endoscopic procedure is safe, efficacious and has a lower cost compared to the published surgical
literature cost. Equally important, the overall total hospital revenue was positive.

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PROSPECTIVE DOUBLE BLIND COMPARISON OF COMPUTED VIRTUAL
CHROMOENDOSCOPY AND CONFOCAL MICROSCOPY FOR DIAGNOSING
COLORECTAL NEOPLASIA
2008 ACG/AstraZeneca Senior Fellow Abstract Award
A. M. Buchner, MD, PhD,1 M. S. Ghabril, MD,1 M. Krishna, MD,2 H. Wolfsen, MD,1
M. B. Wallace, MD, MPH1. 1. Gastroenterology, Mayo Clinic, Jacksonville, FL; 2. Pathology,
Mayo Clinic, Jacksonville, FL.
Purpose: Computed virtual chromoendoscopy with the Fujinon Color enhancement system
(FICE) has been recently shown to accurately differentiate between neoplastic and noneoplastic colorectal lesions based on Kudo pit pattern interpretation. In addition the recently introduced probe-based confocal microscopy system (CFM) may also allow immediate diagnosis of
malignant colorectal lesions based on imaging epithelium in vivo with pit patterns characterization. It is not clear whether pit patterns visualized with the CFM are similar to those identified by the FICE system and whether these pit patterns may allow prediction of colorectal neoplasia. The aims of the study were to compare the accuracy of pit patterns interpretations for
prediction of colorectal neoplasia using two novel image enhancement methods of the FICE
and CFM systems and to assess the efficacy of the CFM system for diagnosing colorectal neoplasia during routine colonoscopy.
Methods: Thirty eight patients underwent colonoscopy using high resolution zoom colonoscopes with the EPC 4400 processor (Fujinon Inc.). Each lesion was evaluated in the FICE
mode previously determined to offer the highest contrast between neoplastic and non-neoplastic tissue (Image mode “4”).The surface pit pattern was determined using the Kudo classification with patterns 1 and 2 representing non-neoplastic lesions and patterns 3 to 5 representing neoplastic lesions. Representative confocal images (Cellvizio, Mauna Kea Tech, Paris)
of all lesions with a prior administration of IV fluorescein were recorded and subsequently
their pit, nuclear, and vascular patterns were analyzed offline, blinded to the polyp characteristics according. Histopathology of all lesions was confirmed by evaluation of resected specimens. McNemar’s test was used to compare paired interpretations. The sensitivity and specificity of the CFM diagnosis with their respective 95% confidence intervals were reported.
Results: Thirty eight patients completed the study (19 men and 19 women, mean age 68). A
total of 57 polyps (37 neoplastic, 20 hyperplastic) of an average size of 13 mm from 36 patients
were evaluated. The FICE pit patterns were correctly assessed for prediction of neoplasia in 41
of 57 lesions (72%), whereas confocal pit patterns were correctly assessed for prediction of
neoplasia in 51 of 57 lesions (90%) (p value of 0.021). The presence of neoplastic changes was
predicted by the CFM system with sensitivity 81% (CI 68.9-93%) and specificity of 100%.
Conclusion: Confocal microscopy interpretation demonstrated higher accuracy in predicting
colorectal neoplasia based on correct pit pattern interpretation. These newly discovered diagnostic methods may be of significant importance in clinical practice and lead to a diagnosis of
neoplasia during ongoing colonoscopy.

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MOLECULAR MARKERS OF RAPIDLY GROWING TUMORS: ANOTHER PIECE
TO THE PUZZLE
2008 ACG/AstraZeneca Senior Fellow Abstract Award
M. A. Arain, MD,1 S. Sheikh, MD,1 B. Thaygarajan, MD,3 J. Bond, MD,2 A. Shaukat, MD2.
1. Gastroenterology, University of Minnesota, Minneapolis, MN; 2. Gastroenterology, VA
Medical Center, Minneapolis, MN; 3. Pathology, University of Minnesota, Minneapolis, MN.
Purpose: Sporadic colorectal cancers developing after complete colonoscopy (interval cancers)
are likely to be rapidly growing tumors, and comparison of these tumors with non-interval cancers offers a unique means to identify the genetic pathways responsible for rapid tumor
growth. The aim of this study was to compare the CpG island methylator phenotype (CIMP)
status of interval versus non-interval colorectal cancers in the Minneapolis VA population and
to determine the relationship between CIMP, microsatellite instability (MSI) in interval and
non-interval colon cancers.
Methods: We searched our institution’s cancer registry for interval cancers, defined as colorectal cancers that developed within 5 years of a complete colonoscopy. These were frequency
matched in a 1:2 ratio by age and sex to patients with non-interval cancers, defined as cancers
diagnosed on a patient’s first colonoscopy. Over a 17 year period, we identified 194 cancers that
met the study criteria. MSI testing had been performed in 163 of these cancers in a previous
study. Tumor DNA was extracted and tested for MSI and CIMP gene markers (MINT1,
MINT2, MINT31, p16INK4, MGMT, hMLH1). CIMP was defined as methylation in 3 or more
genes.
Results: Of the 1323 colorectal cancers diagnosed during the study period, 63 (4.7%) were
identified as an interval cancer, and 131 subjects with non-interval cancer served as controls.
Study subjects were almost all Caucasian men. Interval cancers were significantly more likely
to be CIMP+ than non-interval cancers (56% vs. 31%, p=0.004), right-sided (63% vs. 39%,
P=0.002), and consistent with our previous study more likely to have MSI than non-interval
cancers (29% vs. 11%, P=0.004). In multivariable logistic regression model, proximal location
of cancer (OR 1.85; 95% CI 1.01-3.8), MSI (OR 2.6; 95% 1.08-6.7) and CIMP+ (OR 2.41; 95%
CI 1.1-4.9) were associated with interval cancers. The McNemar’s test for discordance between
MSI and CIMP was significant suggesting that MSI and CIMP were independently associated
with interval cancers. There was no difference in 5 year survival between the two groups.
Conclusion: CIMP+ and MSI are more frequently present in interval cancers compared to noninterval cancers. MSI and CIMP+ are factors independently associated with interval cancers.
CIMP+ adds information in addition to MSI in explaining rapid tumor growth and biology.
Whether CIMP and MSI lead to rapid tumor growth, or occur in rapidly growing tumors after
their development.
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LINACLOTIDE SIGNIFICANTLY IMPROVED ABDOMINAL PAIN, CONSTIPATION
AND GLOBAL ASSESSMENTS IN ADULTS WITH IRRITABLE BOWEL SYNDROME
WITH CONSTIPATION: RESULTS FROM A LARGE TWELVE-WEEK,
RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY
J. M. Johnston, MD,1 J. E. MacDougall, PhD,1 B. J. Lavins, MD,1 D. A. Fitch, MPH,1
M. J. Baird, MPH,1 C. B. Kurtz, PhD,1 A. J. Lembo, MD,2 M. G. Currie, PhD1. 1. Research and
Development, Ironwood Pharmaceuticals, Cambridge, MA; 2. Division of Gastroenterology,
Beth Israel Deaconess Medical Center, Boston, MA.
Purpose: Linaclotide, a first-in-class, minimally absorbed peptide agonist of human intestinal
guanylate cyclase type-C receptors, is a novel treatment for irritable bowel syndrome with constipation (IBS-C). Linaclotide significantly relieved visceral hyperalgesia in several animal
pain models and, in a large Phase 2 study in patients with chronic constipation, significantly im-

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proved bowel function and abdominal symptoms. A Phase 2 study was conducted to evaluate the safety and efficacy of a range of linaclotide doses in adults with IBS-C.

Methods: This randomized, multicenter, double-blind, placebo-controlled dose-range-finding, parallel-group study evaluated the effects of 75, 150, 300 or 600 µg linaclotide or placebo administered orally once daily to adults meeting modified Rome II criteria for IBS-C. Participants underwent a 12-week baseline, 2-week-dose-ranging, and 12-week-post-treatment evaluations with daily assessments of bowel habits and symptom severity, and weekly global assessments using an interactive voice response system. During the baseline period patients had to demonstrate >3 complete spontaneous bowel movements (CSBM)/week and mean daily abdominal pain of at least mild severity. Treatment effects in the intent-to-treat (ITT) population were estimated using an analysis of covariance and the Cochran-Mantel Haenszel test.

Results: Of the 420 patients enrolled in the ITT population 337 completed the study. Abdominal pain was clinically and statistically significantly improved in all linaclotide treatment groups compared to placebo and, in the 26% of patients with severe/very severe baseline abdominal pain, improvement was even more pronounced (see table). The change from baseline vs placebo for CSBM frequency (primary endpoint) was significant at all linaclotide dose levels. Results for other abdominal symptoms and bowel habits, and for global assessments (bathroom adequate relief, 7-point balanced degrees of relief, and 5-point IBS symptom severity) were highly statistically significant for the 300 µg and 600 µg dose groups. Treatment effects of linaclotide were rapid in onset (within the first week of treatment) and sustained for the duration of the treatment period. The most common adverse event was diarrhea; however, there were no associated dehydration or electrolyte abnormalities and discontinuations for diarrhea were infrequent (see table).

Conclusion: Linaclotide at all wide dose range improved all measured bowel habits, abdominal symptoms and global assessments in patients with IBS-C with a safety and tolerability profile that supports advancing this novel compound into Phase 3 clinical trials.

<table>
<thead>
<tr>
<th>Assessment Parameter</th>
<th>Baseline*</th>
<th>Placebo</th>
<th>75 µg</th>
<th>150 µg</th>
<th>300 µg</th>
<th>600 µg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relieff of Abdominal Pain (5-point severity scale)</td>
<td>3.0</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Relief of Severe Abdominal Pain</td>
<td>3.5</td>
<td>0.3</td>
<td>1.1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Relieff of Blowing (5-point severity scale)</td>
<td>3.4</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Relieff of Staining (5-point severity scale)</td>
<td>3.5</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
</tbody>
</table>

LS-mean Change from Baseline (p-value)

<table>
<thead>
<tr>
<th>Percent Patients with Parameter (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% Adequate Relief (<em>Yes</em> &gt;4 of 12-weeks)</td>
</tr>
<tr>
<td>Number/Percent Patients with Parameter</td>
</tr>
<tr>
<td>All of Diarrhea</td>
</tr>
<tr>
<td>Discontinuation Due to AE of Diarrhea</td>
</tr>
</tbody>
</table>

*Baseline mean for all patients in the ITT Population

Disclosures - Johnston, MacDougall, Lavins, Fisch, Baird, Kurtz, Currie - Employees, Ironwood Pharmaceuticals

This research was supported by an industry grant from Ironwood Pharmaceuticals

36 DEVELOPMENT OF A DIAGNOSTIC TEST FOR IRITRIBLE BOWEL SYNDROME A. Leon, PhD, O. Wang, PhD, D. Barken, PhD, L. Eggleston, BS, J. Tolley, BA, S. Carroll, PhD, B. Neri, PhD. Science and Technology, Prometheus Laboratories, San Diego, CA.

Purpose: Irritable bowel syndrome (IBS) affects approximately 15% of the United States (US) population. In the absence of biomarkers or a laboratory test, IBS is currently diagnosed according to the Rome criteria or by rule-out of diseases that have similar clinical presentation. Our aim was to identify potential IBS biomarkers in blood with the ultimate purpose of developing a blood-based IBS diagnostic test that can differentiate between IBS and non-IBS blood samples.

Methods: Potential IBS biomarkers were identified using a computerized analysis of the medical literature. Approximately 600 pathways, each containing 100-200 potential IBS biomarkers, were reviewed. 250 serum-based markers appeared to be important across multiple pathways implicated in IBS. The serum levels of the majority of these biomarkers were then measured using available assays in a cohort of IBS patient samples (diagnosed by Rome criteria) and controls. The biomarkers were then evaluated in a blood sample cohort of 1721 patients with IBS, celiac disease, inflammatory bowel disease (IBD), and anti-tissue transglutaminase. A final panel of 10 biomarkers was then validated in a set of 367 patients from six tertiary care centers diagnosed with IBS (Rome II criteria) were randomized to receive AM or PL for 12-weeks. Primary end-point was improvement of at least 50% in patients receiving AM. Compr.

Conclusion: There was >50% improvement in abdominal pain in children receiving AM. There was no significant difference compared to placebo after 4-weeks of treatment. Patients with mild to moderate intensity of pain responded better to therapy. Those who had higher depression scores at baseline correlated negatively with sense of improvement.

This research was supported by an industry grant from ACG Clinical Research Award

37 EVALUATION OF THE EFFICACY OF AMITRIPTYLINE IN CHILDREN WITH ABDOMINAL PAIN OF NON-ORGANIC ORIGIN

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Purpose: Functional Abdominal pain (FAP) is common in children. Treatment is mostly empirical and not evidence based. Antidepressants are commonly used to treat FAP. To date there has been no prospective, multicenter double blind placebo (PL) controlled randomized trial in the treatment of FAP in children. Aim is to evaluate the efficacy of amitriptyline (AM) in children with FAP.

Methods: Children from six tertiary care centers diagnosed with FAP (Rome II criteria) were randomized to receive AM LA or PL for 12-weeks. Primary end-point was improvement of at least 50% in patients receiving AM. Compr.

Conclusion: There was >50% improvement in abdominal pain in children receiving AM. There was no significant difference compared to placebo after 4-weeks of treatment. Patients with mild to moderate intensity of pain responded better to therapy. Those who had higher depression scores at baseline correlated negatively with sense of improvement.

This research was supported by an industry grant from ACG Clinical Research Award

38 A PROSPECTIVE SCHOOL STUDY ON THE EPIDEMIOLOGY OF FUNCTIONAL GASTROINTESTINAL DISTURBANCES IN CHILDREN

M. Sapos, MD1, R. Sehgal, PhD, M. Scadding, PhD, G. Schaffer, ProD2, B. Marshall, BA1, C. Di Lorenzo, MD1. 1. Gastroenterology, Hepatology and Nutrition, Children's Memorial Hospital, Chicago, IL; 2. Department of Pediatrics and Preventive Medicine, Northwestern University's Feinberg School of Medicine, Chicago, IL. 3. Department of Computer Science, Northeastern Illinois University, Chicago, IL, 4. Northern Illinois Psychological Services, Northbrook, IL; 5. Division of Pediatric Gastroenterology, Nationwide Children's Hospital, Columbus, OH.

Purpose: Functional abdominal pain in children is common and is associated with psychosocial dysfunction and decreased quality of life. To determine the prevalence of pediatric abdominal pain and its impact on psychological wellbeing and school absences.

Methods: Prospective cohort study (12/2005-06/2006). Gastrointestinal and other symptoms were assessed weekly with validated self-report questionnaires. Anxiety, depression, functional disability, quality of life, somatization, coping, school absenteeism and medical care use were also assessed. Two public schools. All 3rd-8th grade (495) children were invited to participate. 237 students (48%) (11.8 years, 134 girls) entered the study. An average of 209 children responded weekly. All participants completed the study. Complete data were obtained on 4,006 (98%) of 4,155 possible questionnaires.

Results: An average of 72% of children reported > 1 somatic symptom and 45% > 1 gastrointestinal symptom each week. Headache was the most common complaint at 42%. Weekly prevalence of abdominal pain was 12% and abdominal pain was in at least one week. Since, abdominal pain persisted for > 4 consecutive weeks in 52% of all children and was associated with higher anxiety (p < 0.001) and depression (p < 0.001) scores, and worse quality of life (p < 0.001). Twenty-eight percent of children missed school for abdominal pain (average 2.3 days) and 10% of parents with children who reported abdominal pain missed work (average 1.9 days). Presence of abdominal pain (p < 0.001) was independently associated with school absences. Psychological and demographic variables were not associated with absences. Four children (2%) sought medical attention and one underwent testing because of abdominal pain.

Conclusion: Abdominal pain is common in school aged children and is associated with worse quality of life, psychological co-morbidities, school absenteeism and parent work absences.

This research was supported by an industry grant from American College of Gastroenterology Clinical Research Award
THE EFFECTS OF HIGH DEFINITION (HD), ELECTRONIC MAGNIFICATION (EM), WHITE LIGHT (WL) AND NARROW BAND IMAGING (NBI) ON THE DETECTION OF ADENOMATOUS, HYPERPLASTIC AND NON-NEOPLASTIC POLYPS AT SCREENING COLONOSCOPY

E. C. Ramirez, MD, FACP; C. G. Tart, MD, VA Medical Center, Phoenix, AZ.

Purpose: The Third Eye Retroscope (TER) is a newly introduced and available colonoscope that incorporates electronic detection technology upon polyp detection at colonoscopy is controversial. Aim: To determine and compare the detection rate of tubular adenomas (TA), hyperplastic (HP), and non-neoplastic (NN) polyps during screening colonoscopy.

Methods: Patients undergoing screening colonoscopy using either of the following optical technologies combinations upon withdrawal of the scope were included: White light with high definition and electronic magnification (WL/HD+EM); White light with high definition but without electronic magnification (WL/HD+EM); White light without high definition and without electronic magnification (WL/HD+EM) or Narrow band imaging with high definition and with electronic magnification (NBI/HL+EM) was set at 1.5 X. For the HD with/without EM studies the Olympus 180HF series scopes were used; for the HD-only studies, the Olympus PCF- and CFQ-180 scopes were utilized. All polyps seen during colonoscopy were removed. Histology was used as the final diagnosis for the polyps removed. Non-neoplastic polyps were defined as: non-invasive adenomatous or hyperplastic polyps on histopathological evaluation. Setting: Endoscopy unit at a VA Medical Center. Statistical analysis: Proportional data was compared using the Chi-square test. A p < 0.05 was considered statistically significant.

Results: A total of 600 patients underwent screening colonoscopy: 400 used WL with (291) or without (109) HD; 200 used NBI with HD. The results of the polyp detection are summarized in the Table. There were no statistically significant differences in the detection rates of TA, HP and NN polyps among the different optical techniques used.

Conclusion: 1. The detection rates for adenomatous, hyperplastic and non-neoplastic polyps were not affected by the different optical technologies evaluated. 2. This data supports our previous work suggesting that detection of missed pathology (at tandem colonoscopy) is independent of the endoscope optics used.

Detection rate for tubular adenomas, hyperplastic and non-neoplastic polyps

<table>
<thead>
<tr>
<th>Polyp Type</th>
<th>WL/HD+EM</th>
<th>WH/HD+EM</th>
<th>WH/HD+EM</th>
<th>NBI/HL+EM</th>
</tr>
</thead>
<tbody>
<tr>
<td>TA</td>
<td>183/365</td>
<td>68/132</td>
<td>61/149</td>
<td>127/241</td>
</tr>
<tr>
<td>HP</td>
<td>125/363</td>
<td>47/132</td>
<td>43/145</td>
<td>78/241</td>
</tr>
<tr>
<td>NN</td>
<td>555/636</td>
<td>171/132</td>
<td>129/145</td>
<td>36/241</td>
</tr>
</tbody>
</table>

*: Mean Size

40 THE THIRD EYE RETROSCOPE IMPROVES DETECTION OF POLYPS DURING COLONOSCOPY - A PROSPECTIVE EFFICACY EVALUATION

D. K. Rex, MD,1 R. I. Heigh, MD,2 D. E. Fletcher, MD,3 B. A. Aldrich, MD,4 J. Li, MD,4 S. Ramakrishna, MD,1 D. E. Early, MD,1 R. S. Breaunder, MD,1 W. R. Kessler, MD,1 J. D. Waye, MD,1 1. Gastroenterology and Hepatology, Indiana University Medical Center, Indianapolis, IN; 2. Gastroenterology and Hepatology, Mayo Clinic Arizona, Scottsdale, AZ; 3. Gastroenterology, University of Michigan, Ann Arbor, MI; 4. Gastroenterology, Camino Medical Group and El Camino Hospital, Mountain View, CA; 5. Gastroenterology, Washington University, St. Louis, MO; 6. Gastroenterology, Hepatology and Nutrition, M.D. Anderson Cancer Center Houston, TX; 7. Gastroenterology, Mount Sinai Medical Center, New York, NY.

Purpose: Colonoscopy is currently considered the “gold standard” for colorectal cancer screening. However, lesions may be missed, especially on the proximal aspect of haustral folds and flexures or behind the ileocecal valve. The Third Eye Retroscope (TER) (Gastrovision Inc.) provides side-by-side imaging allowing the endoscopist to provide a retrograde view. During withdrawal, the two video images are observed on a wide-screen monitor. For each polyp, the endoscopist indicates whether it is polyp positive in the colonoscope’s video image on the left and the Third Eye’s video image on the right.

Methods: This multi-center study involved 14 experienced endoscopists at eight US sites. Investigators have examined 214 patients (age 55-80) during screening or surveillance colonoscopy using a Third Eye Retroscope (Avantis Medical Systems, Inc., Sunnyvale, CA) in combination with a standard colonoscope (CF-Q160AL, CF-Q180AL or CF-H160AL - Olympus America Inc.). Afterecal intubation, the disposable TER is inserted through the instrument channel of the colonoscope. As it emerges from the channel, the distal tip of the device turns 180° to provide a retrograde view. During withdrawal, the two video images are observed side-by-side on a wide-screen monitor. For each polyp, the endoscopist indicates whether it is visible through the colonoscope or is detected with the colonoscope only because it was first detected with the TER.

Results: In these initial 214 subjects enrolled in a prospective study to evaluate efficacy of the device for detecting polyps that are missed during colonoscopy.

Conclusions: A split-screen monitor displays the colonoscope’s video image on the left and the Third Eye’s video image on the right. The Third Eye image reveals a 0.2 cm adenoma on the proximal aspect of a haustral fold.

Disclosure: Dr Rex is a member of the Scientific Advisory Board of Avantis Medical Systems, has received research support and is a stockholder in the company. All other authors report no relevant financial relationship with Avantis Medical Systems other than support for this current research.

This research was supported by an industry grant from Avantis Medical Systems.

41 LESS RESPIRATORY DEPRESSION WITH PATIENT VERSUS ANESTHESIOLOGIST CONTROLLED SEDATION: A PROSPECTIVE, RANDOMIZED CONTROLLED TRIAL IN PATIENTS UNDERGOING ELECTIVE COLONOSCOPY USING PROPOFOL-REMIFENTANIL

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Purpose: Patient controlled sedation (PCS) with propofol-remifentanil (PR) has demonstrated advantages in facility efficiency, but is associated with significant respiratory depression when compared to fentanyl-midazolam (FM). We hypothesized that PCS would yield a lower rate of respiratory depression than anesthesiologist administered sedation (AAS) with PR.

Methods: With IRB approval, 140 COY patients were randomized to PCS or AAS using PR. The initial sedation in all patients was performed to permit identification of patient sensitivity using sevo-paque that derived real-time predictions of depth of sedation (2). Following initial sedation, PCS patients controlled sedation with a Graseby 3300 PCA pump; AAS patients were managed by an anesthesiologist controlling the Grasey pump to track predicted depth of sedation. All patients breathed 100% oxygen through a tight-fitting mask connected to a Mapleson circuit with a pneumotachograph. The anesthesiologist was required to intervene with positive pressure ventilation for O2 saturation < 90% for 30 sec. Breath period was derived from pneumotachograph data and compared to the 2 sample Kolmogorov-Smirnov test.

Results: All procedures were completed satisfactorily; all patients recovered without sequelae. Intervention was required in 2 patients in AAS for nadir of O2 saturation of 88%, but in no patients in PCS. O2 saturation was 100% at all times. Two patients in AAS experienced breath holds of greater than 10 minutes; in PCS, the longest breath hold was 2.9 minutes. Cardiogenic oscillations were present during all apneas, suggesting apnic oxygenation was maintaining oxygenation. Analysis of breath period indicated a greater number of prolonged breath holds (> 30 sec with no inspiration) in AAS, as shown in Table 1.


Table 1

<table>
<thead>
<tr>
<th></th>
<th>PCS</th>
<th>AAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breaths (#)</td>
<td>1545</td>
<td>794</td>
</tr>
<tr>
<td>Total time (min)</td>
<td>138.3</td>
<td>156.7</td>
</tr>
<tr>
<td>Breath holds (#)</td>
<td>5</td>
<td>30^</td>
</tr>
<tr>
<td>Median breath hold (sec)</td>
<td>44</td>
<td>58^</td>
</tr>
</tbody>
</table>

* p<0.0001

Disclosure: Dr. Mandel: Speaker's Bureau, Abbott Laboratories

42 CAPNOGRAPHY PREVENTS HYPOXEMIA DURING ELECTIVE ERCP AND EUS: A RANDOMIZED CONTROLLED TRIAL

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Purpose: Whether capnographic monitoring of respiratory activity improves outcomes during adult endoscopy is not known. Since hard outcomes such as respiratory intubation and death are extremely rare, we chose the surrogate outcome of hypoxemia, which has been linked to several adverse events as our outcome measure, and performed a randomized controlled trial to assess the efficacy of capnographic monitoring for reducing hypoxemia during ERCP and EUS.

Methods: Subjects undergoing elective ERCP and EUS receiving sedation with an opioid/midazolam were randomized to capnographic blinded arm (standard of care) and titration arm. In the blinded arm, the endoscopy team was aware of capnographic abnormalities at 30 sec.
SAFE AND RAPID INTUBATION OF THE DISTAL SMALL BOWEL USING THE DISCOVERY SB™ OVERRIDE DEVICE DURING SMALL BOWEL ENTEROSCOPY: RESULTS OF THE SPINAL ENTEROSCOPY TRAINING INITIATIVE

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Purpose: Indications for small bowel (SB) enteroscopy are increasing, but advancing the en- doscope to distal small intestine remains challenging. The Discovery SB™ device (Spirus Med- ical, Sunnyvale, CA) is a novel spiral-shaft overtube designed to be approved for SB enteroscopy, may allow for simple & quick intubation of the ileum comparable to current methods. Aim: to eval- uate ease-of-use, safety, and efficacy of Discovery SB™ during SB enteroscopy.

Methods: 33 endoscopists without prior Discovery SB™ experience from 19 academic centers & 2 instructors performed SB enteroscopy in human patients as clinically indicated during 1 of 4, 2-day training modules. All procedures performed w/o enteral intubation. Data were collected prospectively. Patient demographics, indication, depth and time to maximal insertion, total procedure time, findings were recorded. Any trauma was documented during scope withdrawal and scored 0–5 (0=no trauma, 1=edema/erythema, 2=superficial hematoma/erosion, 3=superficial laceration, 4=deep laceration, 5=perforation). Overall means were calcu- lated. Day 1 and Day 2 results were compared. Data were analyzed using 2-tailed t-test, or rank-sum test for non-normally distributed data.

Results: 90 procedures were successfully performed in 95 patients (72.6% women, mean age 48±14 yrs). Most common indication was active or occult bleeding (59.2%). Most common diagnosis was celiac disease or other abdominal pain. Mean BMI was 28.4±17.2 with median Mallampati (M)—airway assessment—score of 2 (range=1–6). En- doscopists performed a mean of 5 cases. Mean time required for device to engage SB was 10.5±5 min, with mean time to maximal scope insertion of 20±6.5 min. Mean depth achieved was 262±57 cm beyond ligament of Treitz. Total procedure time was 33±68 min. In 83.9%, 89.3% & 78.5% of patients, trauma score was recorded in esophagus, stomach & intestine, respectively. Significant correlation was observed between trauma score and the following: age, BMI, time to SB engagement, depth of insertion, and time to maximal insertion. Multivariate analysis: Predictors of hypoxemia were: capnographic blinded arm OR 3.1 [95% CI 1.7 – 5.5]; age 1.3 [1.3 – 4.9]; female gender 2.0 [1.0 – 3.6].

Conclusion: Capnographic monitoring of respiratory activity significantly reduces the propor- tion of patients with hypoxemia, apnea and oxygen requirements during ERCP and EUS.

Table 1: Factors Associated with Failure of Initial Nonoperative Management

<table>
<thead>
<tr>
<th>Factor</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever at detection</td>
<td>0.075</td>
</tr>
<tr>
<td>Leukocytosis &gt;10,000/μl</td>
<td>0.10</td>
</tr>
<tr>
<td>Retropertioneal fluid on CT at detection</td>
<td>0.009</td>
</tr>
<tr>
<td>Abscess on CT at detection</td>
<td>0.09</td>
</tr>
<tr>
<td>No endorphinoses at initial ERCP</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Table 2: Factors Associated with LOS >2 weeks

54 OMEPRAZOLE CAN PREVENT THE GASTRODUODENAL MUCOSAL INJURY ASSOCIATED WITH COMBINED USE OF CLOPIDOGREL AND ASPIRIN

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Purpose: To compare the frequency and severity of gastroduodenal injury in subjects receiving clopidogrel (C) and aspirin (A), with or without concurrent omeprazole (O).

Methods: This study in healthy volunteers examined the gastroduodenal effects of C 75 mg and A 325 mg, taken daily with or without O for 14 days. Subjects (n=174) were randomized 1:1:1:1 to either C+A alone or C+A with 10 mg O, 20 mg O, or 40 mg O. The primary endpoint was the proportion of subjects with erosions or ulcers (Lanza mucosal injury score of 3 or 4) based on blinded endoscopy assessment.

Results: The mean age was 49 years and 39% were male. End-of-study endoscopy was con- ducted and evaluable in 171 subjects. O was highly effective in preventing mucosal injury, and 20 mg O showed 84% relative risk reduction in the primary endpoint compared to C+A alone (p<0.0001). The rate of gastrointestinal (GI) adverse events was lower on O than on C+A alone (p=0.001). No serious adverse events were reported.

Conclusion: Almost half of subjects receiving clopidogrel plus aspirin without omeprazole had significant short-term gastroduodenal mucosal injury. The addition of omeprazole can reduce the risk of mucosal injury and may improve the tolerability of the combined use of clopidogrel and aspirin.

Table 3: Relationship between trauma score and hospital outcomes

<table>
<thead>
<tr>
<th>Hospital Outcomes</th>
<th>Trauma Score</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Stay</td>
<td>1.0-2.0</td>
<td>1.14</td>
</tr>
<tr>
<td>2.1-4.0</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>&gt;4.1</td>
<td>1.61</td>
<td></td>
</tr>
</tbody>
</table>

Disclosure - Dr. Cryer - Consultant: Cogentus Pharmaceuticals Dr. Lapuerta - Employee: Cogentus Pharmaceuticals Dr. Jermorno - Employee: Cogentus Pharmaceuticals Dr. Lanza: Grant/Research Support, Cogentus Pharmaceuticals Dr. Miner: Grant/Research Support, Cogentus Pharmaceuticals Dr. Jermano: Consultant, Cogentus Pharmaceuticals Dr. Azarnoff: Consultant, Cogentus Pharmaceuticals Dr. Goldsmith: Employee, Cogentus Pharmaceuticals. This research was supported by an industry grant from Cogentus Pharmaceuticals.
46 NATIONAL SURVEY OF PHYSICIAN’S PERCEPTION ON THE CAUSE, COMPLICATION, AND MANAGEMENT OF GASTROPARESIS

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Purpose: Manifestation of gastroparesis is very heterogeneous and clinical complications are poorly defined. Misconception of gastroparesis among physicians may be common. Aims of Study: To determine physician’s perception of gastroparesis and to identify areas that need further research and education.

Methods: A survey physician was prospectively developed and tested for validity and clarity.

The 24-item survey included questions on the etiology, symptoms, management, and perceived complications of gastroparesis. Physician’s feedback included rated responses by Likert scale (1-5) and ranked responses by priority. Surveys were returned by prepaid self-addressed envelope or fax. 3,161 surveys were mailed to internal medicine (IM), family practice (FP) and gastroenterology (GI) panels. Physicians were asked to rate each item on a scale from 1 (not at all) to 5 (very much). The rate of physicians who correctly identified the cause of gastroparesis was compared between IM/FP vs. GI and private vs. academic physicians. There were no differences between national and local physicians.

Conclusion: Abdominal pain is perceived as a marker of severe gastroparesis by most physicians, more than weight loss, dehydrolysis, and malnutrition. 2) Complications of gastroparesis are difficult to define. 3) More physician education on gastroparesis is needed.

Significant Complications of Severe Gastroparesis

- Weight loss >10% body weight
- Malnutrition requiring tube or TPN
- Malony-Weiss Tear
- Gastric Bypass
- Abdominal pain
- Poor glucose control in diabetics
- Esophagitis
- 

* Mean (SD); 1=strongly disagree to 5=strongly agree

47 FUNDIC GLAND POLyps OCCUR IN H. PYLORI-FREE STOMACHS AND ARE NOT ASSOCIATED WITH INCREASED PREVALENCE OF COLONIC ADENOMA OR CARCINOMA

R. B. Lash, MD, C. J. Robou, MD, R. M. Genta, MD. Caris Diagnostics, Irving, TX.

Purpose: Fundic gland polyps (FGP) are a common type of chronic gastritis. They are associated with long-term proton-pump inhibitor (PPIs) and purportedly with an increased risk of colon cancer (Freeman, 2008). There is the perception amongst pathologists that H. pylori is not detected in patients with FGPs but with the exception of two small studies (Deech, 2005; Fossmark, 2007) this inverse relationship has not been investigated. Our goal was to study a large nation-wide sample to determine whether patients with FGPs had a lesser prevalence of H. pylori infection or a greater prevalence of colonic adenomas and carcinomas.

Methods: We analyzed electronic data from Caris Diagnostics, a specialized gastrointestinal pathology practice receiving specimens from community-based gastroenterologists operating in 40 states. For each patient, the database includes demographic and clinical information, summary of the endoscopic report, site of origin, and the histopathologic report for each biopsy. To identify the records for eligible polyps, we extracted data from all cases examined from 4/07 to 3/31/08. Data were stored in a Microsoft Access database. Statistical calculations were performed using SigmaStat 3.5; chi-square test, Student’s t-test and the Mann-Whitney Rank Sum Test for non-parametric data were used as appropriate. A p value <.05 was considered significant.

Results: There were 246,254 patient encounters in this time period; 78,909 patients (median age 56 years; 61.4% women) had at least one gastric biopsy; of these, 11,232 also had a synchronous colonoscopy. A total of 6,065 had one or more FGPs (median years 59; 41,100 women, 67.8%). Among the 72,844 patients with no FGPs, 9,461 had H. pylori infection (13.0%) in contrast to only 28 (0.5%) of the 6,065 FGPs (OR = 29.05, 95% CI 20.4 – 41.38; p<0.0001). H. pylori-positive gastric biopsies were also significantly less prevalent in FGP than in non-FGP patients (OR = 11.53 and 3.92, respectively). Colonic adenomas were detected in 50.3% of the 10,223 non-FGP and in 55.1% of the 1,009 FGP patients (OR 1.21; CI 1.13, 1.27; p<0.0001).

Conclusion: Data from this nation-wide study unequivocally support the impression that FGPs occur overwhelmingly in non-H. pylori-infected stomachs. In contrast, the rate of pre-neoplastic and neoplastic lesions in the colon was virtually identical in patients with and without FGPs, refuting data from small series that suggest a fundic polyp-hypergastrinemia-colon cancer link.

48 IS IT COST-EFFECTIVE TO TREAT MINIMAL HEPATIC ENCEPHALOPATHY TO PREVENT MOTOR VEHICLE ACCIDENTS? A PROSPECTIVE, RANDOMIZED STUDY USING COLONSCOPY ANALYSIS

2008 ACG Governors Award Recipient for Excellence in Clinical Research

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2. Biostatistics, Medical College of Wisconsin, Milwaukee, WI; 3. Cost-effectiveness Core, Medical College of Wisconsin, Milwaukee, WI.

Purpose: Minimal hepatic encephalopathy (MHE) is associated with attention, psychomotor deficits, driving impairment & motor vehicle accidents (MVA). Psychomotive and driving impair-

ment are highly correlated. MHE treatment results in psychometric test improvement. The aim was to perform a cost-effectiveness decision analysis model from a societal perspective using MVA as an outcome for MHE screening & treatment strategies.

Methods: Strategies used were (1) “Do nothing” i.e. no MHE screening and no treatment (Rx) (2) Screening with rapid tests (psychometric battery/computerized tests) & Rx of only MHE+ patients (3) Screening, then confirming MHE+ with formal neuropsychological assessment and Rx only those MHE+ on both (4) Treating all cirrhotics without screening. Treatments analyzed were lactulose 30ml TID and probiotics 2 capsules per day using average wholesale prices. Outcome was MVA prevented in a year.

Results: Under base conditions, a cohort of 100 cirrhotics without overt HE would comprise of 70 MHE+ and have 24 MVA/year. Cost of care of 1 MVA is $41,000 leading to an annual cost of $984,000 in untreated MHE-related MVA. Screening with rapid testing was used per patient, with a sensitivity/specificity of 90% & screening interval of 6 months. Based on existing literature, an annual rate of 19% of progression from no MHE to MHE+ and 23% from MHE to severe MHE was assumed. Screen with rapid test (1st test $3,000, 2nd test $3,000, 3rd test $3,000) for lactulose $31,000/yr and probiotics $23,000 for probiotics for 100 cirrhotics annually. This would result in a decrease in the MVA intensity range to the screen and treat without the confirmatory test strategy. Treating all cirrhotics without any screening would cost $60,000/yr for lactulose and $42,000/yr for probiotics for 100 cirrhotics. Due to lower adherence expected when all cirrhotics are treated, it would result in avoiding 4 MVA per year ($160,000/yr compared to existing cost).

Conclusion: MHE rapid testing & treatment with lactulose/probiotics is the most cost-effective strategy in MVA prevention followed by treating all cirrhotics without screening. The latter would be associated with poor adherence. The strategy confirmed that MHE testing is expen-

sive and does not significantly add to the rapid screen and treat strategy.
Purpose: AFP is often used as part of a surveillance for HCC but is neither sensitive nor specific. Although AFP-L3% has shown promise, the utility of AFP-L3% remains unclear. Aim: To prospectively determine the clinical utility of AFP-L3% compared to AFP.

Methods: Patients (pts) at risk (either cirrhosis or chronic HBV) for HCC were prospectively evaluated. All pts had baseline imaging, and total AFP and AFP-L3% were obtained at baseline and every 3-6 months. Clinical evaluation included standard tests and additional liver imaging was performed at yearly intervals or if clinically indicated based on total AFP. The primary outcome was development of HCC determined by either histology or imaging. Multiple logistic regression (MLR) was used to identify independent predictors for development of HCC.

Results: One hundred and twenty pts (mean age 52, 56% male, 78% white, 52% HCV, 6% HBV, 10% alcohol, 10% NASH, and 85% cirrhotic) were enrolled and followed for a median of 609 days (range 16-1092). Transplant free survival in the 89 pts who were not lost to follow-up was 68% and 11 pts (cumulative incidence 10%) developed HCC. The mean tumor size was 2.25 cm detected by ultrasound in 40%, MRI in 40%, and CT in 20%. Tumor stages were T1 (10%), T2 (60%), T3 (20%), and T4 (10%). In an intention to treat analysis, those who developed HCC were followed for shorter duration (483 vs 673 days; p=.03), were male (90 vs. 56%; p=.03), and had an elevated AFP-L3% >10 (44 vs. 12%; p=.0153) while no differences were observed in other clinical or laboratory characteristics including total AFP or % AFP >20. When those lost to follow-up were excluded (44% vs. 14%; p=.03) while no differences were observed in other clinical or laboratory characteristics.

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Purpose: To test the association of death receptor proteins soluble FAS (sFAS) and sFASL with nonalcoholic steatohepatitis (NASH).

Methods: Plasma sFAS and sFASL were measured using a sandwich ELISA based immunoassay in 70 patients undergoing liver biopsy with clinical suspicion of NAFLD. Histology was assessed in a blinded manner and the NAFLD activity score was calculated for each sample. In parallel, sFAS and sFASL levels were measured in patients with Hepatitis C (validation set) and the levels in hepatitis C patients were compared with sFAS and sFASL levels in NASH patients.

Results: Of the 70 study subjects, 37 patients had NASH, 20 had steatosis and 13 normal liver biopsy. Mean age was 49±11 years, 45.7% were male and 84% Caucasians. The mean body mass index (BMI) was 31.7±4.9 kg/m2 and the median triglycerides and HOMA index were 158 (94-210) mg/dL and 3 (1-7.4) respectively. Patients with NASH had significantly higher levels of both sFAS and sFASL than patients with steatosis and normal liver biopsy (Table 1). NASH patients had significantly higher level of sFASL than Hepatitis C patients (Table 1). sFAS and sFASL showed strong positive correlation with degree of fibrosis (r = 0.499 and 0.315, p<.001 and p=.008 respectively). Positive correlation was also seen between sFAS and HOMA (r = 0.336, p=.007). On multivariate analyses, a 10 pg/ml increase in sFASL increased the odds of having NASH by 60%; 1.6 (1.04-2.5, p=.034); a 1 ng/ml increase in sFAS levels increased the odds by 40% 1.4 (1.21-1.6, p=.003) and a 10 IU/L increase in liver enzymes showed only a 20% increase in the odds of having NASH 1.2 (1.00-1.4, p=.093) (Table 2).

Conclusion: The data implicates a significant role for sFAS/sFASL interaction in NAFLD progression. This concept merits further investigation as a potential diagnostic and therapeutic strategy.

Table 1: sFAS and sFASL levels are highest in patients with NASH

<table>
<thead>
<tr>
<th>Factor</th>
<th>Normal Biopsy (n=13)</th>
<th>Steatosis (n=20)</th>
<th>NASH (n=37)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sFAS (ng/ml)</td>
<td>6 (5.5-6.3)*</td>
<td>9.3 (8.3-9.9)*</td>
<td>12 (9.5-12.8)*</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>sFASL (pg/ml)</td>
<td>71 (61-78)*</td>
<td>75 (65-81.5)</td>
<td>82 (78-93)*</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Factor</td>
<td>HCV (n=31)</td>
<td>NASH (n=37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sFAS (ng/ml)</td>
<td>10 (3.8-13.1)*</td>
<td>12 (9.5-12.8)</td>
<td>0.51</td>
<td></td>
</tr>
<tr>
<td>sFASL (pg/ml)</td>
<td>53.6 (40.4-76)*</td>
<td>82 (78-93)</td>
<td>&lt;.001</td>
<td></td>
</tr>
</tbody>
</table>

Values are presented as Median (interquartile range). * Sig. in relation to normal biopsy; $ Sig. in relation to steatosis group.

Table 2: Prognostic value of sFAS and sFASL in prediction of NASH

<table>
<thead>
<tr>
<th>Factor</th>
<th>Odds ratio (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sFASL (1 mg/ml increase)</td>
<td>1.4 (1.1-1.6)</td>
<td>0.003</td>
</tr>
<tr>
<td>sFASL (10 pg/ml increase)</td>
<td>1.6 (1.04-2.5)</td>
<td>0.034</td>
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<tr>
<td>Age (5 year increase)</td>
<td>1.5 (1.04-2.1)</td>
<td>0.029</td>
</tr>
<tr>
<td>ALT (10 IU/L increase)</td>
<td>1.2 (1.00-1.4)</td>
<td>0.093</td>
</tr>
</tbody>
</table>

95% (CI): ninety five percent confidence interval.
52

OUTCOME OF TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT (TIPS) IN OLDER PATIENTS: A COMPARABLE ANALYSIS WITH YOUNGER AGE GROUP

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Purpose: Transjugular Intrahepatic Portosystemic shunt (TIPS) creates a bypass between the intrahepatic portal vein and hepatic venous outflow and alleviates portal hypertension, which is a major factor for the pathogenesis of variceal bleeding and ascites. This procedure effectively controls variceal hemorrhage and refractory ascites but carries a potential risk of hepatic decompensation and encephalopathy. Older patients may be more at risk of such complications. However TIPS is the only available life saving procedure in the management of such patients with acute variceal hemorrhage uncontrolled by endoscopic interventions. Aim: To evaluate the outcome of TIPS in older patients (age ≥ 65) as compared to the younger patients (age < 65).

Methods: Data on 69 consecutive patients undergoing TIPS over the past 3 years (2005-2007) was reviewed retrospectively. Eight older patients were matched with 24 younger patients (1:3 ratio) with reference to the indication of TIPS (refractory ascites, variceal hemorrhage). MELD (Model of End Stage Liver Disease) score and Child-Pugh (CP) score. Both groups were comparable for indication, MELD and CP scores. Analysis was done in 32 out of 69 patients. Outcome with reference to mortality was compared at 30 days and 6 months following TIPS.

Results: Mean age was 73 ± 9.20 SD in older group and 52.5 ± 8.20 SD in younger group. Mean MELD and CP scores were 10.75 ± 4.65 SD and 8.50 ± 1.60 SD in older patients and 10.45 ± 4.27 SD and 8.70 ± 1.48 SD in younger patients respectively. The ratio of patients undergoing TIPS for refractory ascites and variceal hemorrhage was identical (1:1.66) in both groups. Mortality in the older patients both at 30 days (38%) and at 6 months (63%) was significantly higher (p < 0.004) than younger patients when compared at 30 days (4%) and at 6 months (13%). Causes of mortality were hepatic decompensation (80%) and encephalopathy (20%). Mortality in younger patients is comparable to that reported in the literature (15%–1/2).


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RISK FACTORS (RFs), NOVEL GENOTYPES, AND TREATMENT OUTCOMES IN SOUTHEAST ASIANS WITH CHRONIC HEPATITIS C

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Purpose: SEAs have a large liver disease burden with HCV and HBV, both of which can cause hepatocellular carcinoma (HCC). The annual HCC incidence in Vietnamese males is 54.3/100,000, 2x that of Chinese males and 8x that of Caucasian males in California. However, SEAs remain one of the least studied HCV patient groups. Our goal is to study treatment outcomes in SEAs with HCV and identify factors that predict sustained-virological response (SVR).

Methods: A total of 465 consecutive SEA patients evaluated by 5 U.S. community gastroenterologists between 12/00-1/08 were included in the study. Treatment outcomes with end-of-treatment response (ETR) and SVR were analyzed using intention-to-treat analysis for 181 treatment-naïve patients treated with pegylated-interferon (PEG-INF) and ribavirin (RBV). Treatment adherence is defined as completion of intended duration.

Results: Treatment outcomes with end-of-treatment (ETR) and SVR were analyzed using intention-to-treat analysis for 181 treatment-naïve patients treated with pegylated-interferon (PEG-INF) and ribavirin (RBV). Treatment adherence is defined as completion of intended duration. 1. Predictors of early mortality after TIPS for the treatment of refractory ascites. J. Vasc. Interv. Radiol. 2006; 17:1605-10. 2. Child-Pugh versus MELD scores in predicting survival in patients undergoing TIPS. Gut. 2003; 52:879-85.

Figure 1

Figure 2

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HEPATIC PROGENITOR CELLS: THEIR POSSIBLE ROLE IN RECURRENT HCV AND ALLOGRAFT LOSS POST-LIVER TRANSPLANTATION

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Purpose: HCV is the most common indication for liver transplantation (LT). The cholestatic variant of HCV (cvHCV) is characterized by rapid HCV progression leading to graft loss. Older donor age is associated with aggressive disease and rapid fibrosis progression. Ductular reaction (DR), believed to arise from hepatic progenitor cells (HPC) is associated with hepatic fibrosis. The aims of this study are (1) to demonstrate the HPC count and DR in the following three clinical outcomes of recurrent HCV: stable histology (no >stage 2 of 4 fibrosis), cirrhosis, and cvHCV and (2) to demonstrate the association between HPC, DR, and donor age.

Methods: Using the LT database, a search for HCV cases from 1992-2007 yielded 903 cases, in which 203 had donor age ≥ 60 yrs and 195 donor age < 60 yrs. Cases of re-LT, living donor LT, HIV, CMV, HBV co-infection, concurrent bile duct problem, and rejection were excluded. Liver biopsies (bx) from time of LT (pre- and post-perfusion) and serially thereafter were reviewed by a liver pathologist (MF). Sections from paraffin blocks were immunostained with CK7 delineating HPC and bile ductules. Five portal/periportal areas were inspected for HPC and idenitify factors that predict sustained-virological-response (SVR).

Results: We demonstrated the HPC count and DR in the following three clinical outcomes of recurrent HCV: stable histology (no >stage 2 of 4 fibrosis), cirrhosis, and cvHCV. We demonstrated the association between HPC, DR, and donor age.
WHAT IS THE PREVALENCE OF CELIAC DISEASE AMONG US PATIENTS WITH PRIMARY SCEROLESS CHOLANGITIS?

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Purpose: Primary sclerosing cholangitis (PSC) is a progressive, incurable disorder, characterized by interlobular bile duct injury, fibrosis and loss. It is associated with the following HLA haplotypes: - A1, - B8, and – DR3, all of which may be increased among patients with celiac disease (CD). Case reports, small case series and a UK population-based study suggest that an increased prevalence of CD exists among patients with PSC compared to the general population (in the US this prevalence is 1:100). Therefore, we sought to determine the prevalence of CD in PSC patients presenting at a single US center.

Methods: This was a single-center, retrospective study conducted at a single tertiary care center in a general medical setting over a 17 year period with a diagnosis of PSC conforming to published, internationally accepted criteria, seen at a tertiary US center between October 2003 and May 2008 (patients with co-existing autoimmune hepatitis, or ‘overlap syndrome’ were excluded). This study used the laboratory reference ranges for IgA endomysial antibody (EMA) by indirect immunofluorescence, and their serum IgA concentration was measured concomitantly.

Results: The sample comprised 69 patients of whom 47 were male (68%); their median age was 42 years (range 17-77). The ethnic distribution was as follows: 56 (81%) Caucasian, 11 (16%) African American, one (1.5%) Asian, and one (1.5%) American Indian. One man had been diagnosed with CD twice previously (positive EMA and compatible histology), and was adhering to a gluten free diet. Three women had a positive EMA result; all of whom had duodenal mucosal abnormalities consistent with CD. Two men with negative EMA results underwent endoscopic duodenal mucosal biopsy on the basis of steatorrhea and weight loss (one had a strong positive IgA gliadin antibody result). Both demonstrated histological findings consistent with CD. Almost two thirds of the patients (45/69) had chronic inflammatory bowel disease (IBD). No patient had selective IgA deficiency.

Conclusion: These data suggest that the prevalence of CD among US patients with PSC (8.6%, or 1.11) may be considerably higher than in the general population. However, the study population is relatively small and may have overestimated the strength of this association. Furthermore, all of the patients with CD had concomitant IBD, something we did not control for. Nevertheless, the findings deserve wider application in a larger, multi-center study.

Efficacy of a Probiotic Fermented Drink of Lactobacillus Acidophilus and Lactobacillus Casei in the Reduction of Antibiotic-Associated Diarrhea

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Purpose: To assess the efficacy and safety of a commercially available probiotic drink comprised of 10^10 colony forming units of L. acidophilus and L. casei (Bio-K+ CL1285®) in reducing Antibiotic-Associated Diarrhea (AAD) in patients on antibiotic regimen who were initially treated in a hospital setting.

Methods: This was a randomized, double blind, placebo controlled trial. Adults patients who were prescribed antibiotics for 3 – 14 days were enrolled from eight Canadian centers. Study treatment was randomized at a 1:1 ratio of Bio-K+ or placebo and was administered within 24 hours of the start of antibiotic therapy and patient’s age showed that the duration of diarrhea for Bio-K+ versus placebo was reduced by 0.48 (P = 0.045). Multivariate logistic regression results showed that the adjusted odds ratio for diarrhea for Bio-K+ versus placebo was 0.53 (95% CI 0.29 – 0.97) (P = 0.03). The odds ratios for diarrhea duration 2 and 3 days were 0.33 (P = 0.02) and 0.48 (P = 0.034) respectively. Four patients in the placebo group and one in the Bio-K+ group developed CDAD (P = 0.372). Study treatment was well tolerated and with similar low incidence of mild non serious adverse events similar in both groups.

Conclusion: Probiotic prophylaxis of a commercially available fermented drink composed of 50 X 10^9 colony forming units of L. acidophilus and L. casei (Bio-K+ CL1285®) is well tolerated and effective in the reduction of the incidence and duration of AAD for patients receiving antibiotics that were initially treated in a hospital setting.

Disclosure - Bio-K+ International Inc. Provided financial support for the conduct of the study.

This research was supported by an industry grant from Bio-K+ International Inc.

Weekend versus weekday admission and mortality due to gastrointestinal hemorrhage due to peptic ulcer disease.

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Purpose: Hospital staffing is often lower on weekends than weekdays, and may contribute to higher mortality in patients admitted on weekends. Because management of upper gastrointestinal bleeding (UGIB) often requires urgent endoscopic intervention, limitations in its availability may be associated with increased mortality in patients admitted on weekends.

Methods: We used the 1993-2005 U.S. Nationwide Inpatient Sample to identify patients hospitalized due to UGB due to peptic ulcer disease. The median age was 68 years (IQR 54-78) and 45% were female. Compared with patients admitted on a weekday, those admitted on the weekend had an increased risk of death (3.4% vs. 3.1%; adjusted odds ratio [OR] 1.08 [95% CI 1.02-1.15]), higher rates of surgical intervention (3.4% vs. 3.0%; OR 1.15 [95% CI 0.90-1.47]), and a 4.6% increased in adjusted length of stay and hospital charges (P<0.0001). Patients admitted on the weekend had a longer time to endoscopy (2.21±0.01 vs. 2.06±0.01 days; P<0.0001) and were less likely to undergo diagnostic duodenal intubation on the day of admission (34.2% vs. 40.2%; OR 0.85 [95% CI 0.78-0.93]). After adjusting for the timing of endoscopy, weekend admission remained an independent predictor of increased mortality (OR 1.12: 95% CI 1.05-1.21). Other risk factors for death included older age, white race, non-private insurance, endoscopic or surgical intervention, and an increasing number of comorbidities including cirrhosis and coagulopathy. Mortality was also higher in patients admitted in the Northeastern U.S. emergently, to urban teaching or non-teaching (versus rural) hospitals, and those transferred from another institution (P<0.0001 for all comparisons). Mortality was lower during the later years of the study (2001-2005 vs 1993-2000: OR 0.75; 95% CI 0.71-0.79).

Conclusion: Patients admitted to hospital on the weekend for peptic ulcer-related hemorrhage have higher mortality and more frequently undergo surgery. Although wait times for endoscopy are prolonged in these patients, this delay does not appear to mediate the weekend effect for mortality. Future studies should explore alternative processes of care that may mediate this effect.
OUTCOME IN TWO HUNDRED AND TWENTY TWO PATIENTS UNDERGOING COLONOSCOPY/POLYPECTOMY ON UNINTERRUPTED CLOPIDOGREL

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Purpose: BACKGROUND: There are no published data to support the AGSE recommendation to hold clopidogrel (CLP) 7-10 days before polypectomy (GIE/05). cessation of CLP may result in incomplete or suboptimal events at our institution CLP is not routinely held prior to colonoscopy. AIM. To assess post-polypectomy bleeding (PPB) rate, risk factors and outcome of PPB in patients on CLP.

Methods: We retrospectively reviewed electronic medical/pharmacy records of all patients on CLP who underwent colonoscopy (Gp A: n=145) with randomly selected patients not on CLP who had polypectomy during same period (Gp B, n=1172).

Results: 222 patients had colonoscopy & 145/222 had polypectomy without interruption of CLP. CLP indication: CAD 68%, stroke 21%, PVD 7.5%, other 4%. Duration of CLP use: <3 months, 3-12 months, 12-24 months, >2 years. PPB rate in CLP was significantly lower than Gp B (0.2% vs 2.6%). Polyp size: range < 5 to 30mm. 8.4% were >10mm. 60% had multiple polyps.

Secondary Endpoints:

- Risk factors for PPB:
  - Male gender (OR 2.3, CI 1.2-4.5)
  - White race (OR 2.6, CI 1.4-4.8)
  - Polyp size >10mm (OR 3.2, CI 1.7-5.9)
  - Polyp number >5 (OR 4.8, CI 2.5-9)
  - Duration of CLP >12 months (OR 3.4, CI 1.7-6.7)

- Risk factors for PPB in CLP:
  - Male gender (OR 2.7, CI 1.3-5.6)
  - White race (OR 2.6, CI 1.3-5.4)
  - Polyp size >10mm (OR 2.6, CI 1.3-5.1)
  - Duration of CLP >12 months (OR 3.4, CI 1.7-6.7)

- Risk factors for PPB in Gp B:
  - Male gender (OR 2.4, CI 1.2-4.6)
  - White race (OR 2.6, CI 1.4-4.7)
  - Polyp size >10mm (OR 3.1, CI 1.6-6.2)
  - Duration of CLP >12 months (OR 3.4, CI 1.7-6.7)

- Risk factors for PPB in Gp A:
  - Male gender (OR 2.7, CI 1.3-5.6)
  - White race (OR 2.6, CI 1.3-5.4)
  - Polyp size >10mm (OR 2.6, CI 1.3-5.1)
  - Duration of CLP >12 months (OR 3.4, CI 1.7-6.7)

Conclusions: CLP is safe and effective in patients undergoing colonoscopy. The risk of PPB is low and not significantly higher in patients on CLP. A prospective randomized, controlled trial is needed to confirm this finding.

QUALITY OF COLONOSCOPY IN ROUTINE CLINICAL PRACTICE: A POPULATION-BASED ANALYSIS

C Ko MD, MS,1 J A Dominitz, MD, MHS,2 W Krauer, MPA,3 L Baldwin, MD, MPH4

Purpose: The aim of this study was to perform a population-based assessment of colonoscopy quality and to examine factors influencing quality.

Methods: We used a nationally representative 20% sample of Medicare Carrier claims from 2003. Physician specialty was determined by linking to the AMA Physician Masterfile. We examined the indications for colonoscopy, completion rates, rates of polyp/tumor detection and biopsy/polypectomy, incidence of E&L visits or hospitalizations within 30 days, and incidence of follow-up colon exams within 1 year.

Results: 389,276 outpatient colonoscopy exams were identified in 2003. Race/ethnicity and age were the patient characteristics with the greatest influence on colonoscopy quality, while colonoscopy volume and specialty were the most influential provider characteristics. Hispanics and American Indians were significantly less likely to have a screening or surveillance examination than other racial/ethnic groups. Polypectomy rates were highest in Asians, and lowest in Hispanics Reporting on risk factors for colorectal cancer was highest in Asian Americans. Incomplete colonoscopy reporting was similar between provider specialties, but was inversely associated with annual colonoscopy volume. Gastroenterologists had higher polyp detection and polypectomy rates compared to other specialties (44.8% vs 34.9-42.7% for polyp detection, p<0.001; 27.1% vs 17.7-23.1% for polypectomy, p<0.001). Five percent of patients had an emergency room visit and 6% of patients were hospitalized within 30 days of colonoscopy; the frequency of both events increased with patient age. Risk of hospitalization within 30 days was lower for exams performed by gastroenterologists (5.5%) or colorectal surgeons (5.6%) compared to exams by family medicine physicians (7.2%), general surgeons (7.9%), or internal medicine specialists (6.0%) (p<0.001). Colon perforation occurred in 0.1%, and lower gastrointestinal bleeding in 1.5%. Gastroenterologists had slightly lower rates of repeat colonoscopy within 1 year vs primary care providers or general surgeons (4.6% vs 5.6-6.2%, p<0.001).

Conclusion: Patient age is associated with significantly higher rates of incomplete colonoscopy and of subsequent emergency room visits or hospitalizations, suggesting that the risks and benefits of colorectal cancer screening are not being balanced in older patients. Further specialty is significantly associated with polype detection and polypectomy rates, risk of hospitalization within 30 days, and use of follow-up colonoscopy. These results have strong implications for appropriate training and credentialing of practitioners providing colonoscopy services.

OVER AND UNDER USE OF SCREENING COLONOSCOPY IN A POPULATION-BASED COHORT

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Purpose: Current guidelines recommend colonoscopy every 10 years for people with a normal initial screening and no risk factors for colorectal cancer. There is evidence demonstrating that many individuals are not being screened appropriately, but there are less data on the prevalence of more frequent screening than recommended. The purpose of this study was to investigate the frequency and predictors of screening colonoscopy at shorter intervals than recommended by guidelines.

Methods: We identified 123,010 Medicare beneficiaries in 1998 without cancer who were age 75-99 and enrolled in Medicare Part B without concurrent HMO enrollment. Of this cohort, 7729 were identified with having a colonoscopy without biopsy or polypectomy in 1998. In this group, 2087 were considered as average risk for colon cancer and 5642 were considered increased risk (family history, previous polypectomy or polyp diagnosis). Patients were followed five years before and five years after 1998, and additional colonoscopies during this time period were recorded.

Results: 46.6% of average risk patients with a negative colonoscopy in 1998 had one or more additional colonoscopies from 1999-2003. 77.9% of the high risk patients with an additional colonoscopy also had polypectomy. Predictors of subsequent colonoscopy in both average and increased risk patients were age under 85 (odds ratio [OR] 2.06 95% CI 1.52-2.78 for average risk; OR 2.03 95% CI 1.61-2.56 for increased risk) and previous colonoscopy in 1993-1997 (OR 2.86 95% CI 1.96-3.96 for average risk; OR 2.43 95% CI 2.10-2.81 for increased risk). Females in the increased risk group were also more likely to receive subsequent colonoscopy (OR 1.23, 95% CI 1.10-1.38). There was no association of race or comorbidity with subsequent colonoscopy.

Conclusion: A significant number of average risk patients receive colonoscopy screening more often than the recommended interval of ten years. Conversely, many patients with higher than average risk of colorectal carcinoma undergo colonoscopy less frequently than recommended. Further studies should investigate additional predictors of follow-up and outcomes of these patients.
**TREATMENT OUT TO 1 YEAR WITH A GLP-2 ANALOG, TEDUGLUTIDE: SAFELY REDUCES PARENTERAL NUTRITION (PN) NEEDS IN PN-DEPENDENT SHORT BOWEL SYNDROME (SBS) PATIENTS**

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**Purpose:** PN-dependent SBS patients have significant morbidity and mortality risks. The GLP-2 analog teduglutide (TG) reduced PN requirements in long-term PN-dependent SBS patients in a 24-week placebo-controlled study. We report the outcomes of the 28-wk extension study of TG treatment for up to 1 yr and the results of crossover of placebo patients to TG.

**Methods:** Patients that completed the 24-wk placebo-controlled phase were eligible for the 28-wk extension study. Response was defined as maintaining improvement or developing a 1>~20% reduction in weekly PN volume at Wk 28 of the extension phase. 65 of 71 (91%) eligible patients were enrolled in the extension phase. Previously TG-treated patients stayed on the same dose: 25 patients (16 responders) continued on TG 0.05 mg/kg/d and 27 (8 responders) continued on TG 0.1 mg/kg/d. Placebo-treated patients were randomized to receive TG 0.05 mg/kg/d (n=6) or 0.1 mg/kg/d (n=7) for 28 wks.

**Results:** In the 0.05 mg/kg/d TG group, 12/16 (75%) responders maintained their response during the 28-wk extension; 10/16 (62%) had further reductions in PN volumes. In the 0.1 mg/kg/d TG group, 6/8 (75%) responders maintained their response during the extension phase and 2/8 patients (25%) had further decreases in PN volumes. 3 patients were weaned from PN in the initial 24-wk phase (2 of 16 TG 0.05 mg/kg/d, 1 of 8 TG 0.1 mg/kg/d) and all remained off PN during the extension study. One additional patient in the TG 0.05 mg/kg/d was weaned from PN during the extension study. Mean weekly reductions from baseline in PN volume of 4.9 L (57%) and 3.3 L (27%) occurred with 0.05 and 0.1 mg/kg/d TG, respectively, at the end of the extension study. Among placebo-treated patients crossing over to TG, 100% (6/6) responded to TG 0.05 mg/kg/d and 2/3 (2/7) responded to TG 0.1 mg/kg/d. TG was well tolerated out to 1 yr in PN-dependent SBS patients and provided the ability to safely reduce PN dependence. Most TG responders followed out to 1 yr maintained their response and many had additional PN reductions in this extension study. The majority of the placebo-to-TG group responded and significantly reduced PN needs. PN reductions seen in patients crossed-over to TG 0.05 mg/kg/d provide additional evidence of the role for TG in PN-dependent populations.

**Conclusion:** TG was well tolerated out to 1 yr in PN-dependent SBS patients and provided the ability to safely reduce PN dependence. Most TG responders followed out to 1 yr maintained their response and many had additional PN reductions in this extension study. The majority of the placebo-to-TG group responded and significantly reduced PN needs. PN reductions seen in patients crossed-over to TG 0.05 mg/kg/d provide additional evidence of the role for TG in PN-dependent populations.

**Disclosure - Investigators teduglutide study 0600-005 (NPS Pharmaceuticals)**

This research was supported by an industry grant from NPS Pharmaceuticals.

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**A VALIDATED GLUTEN FREE DIET ADHERENCE SURVEY FOR ADULTS WITH CELIAC DISEASE**

**2008 ACG Lawlor Resident Award**

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**Purpose:** In recent years increasing number of individuals have been diagnosed with celiac disease (CD). In order to monitor clinical response in practice and research settings, it is essential to be able to measure gluten free diet (GFD) adherence in a standardized fashion. In this work, our aim was to develop valid and reliable measure of GFD adherence.

**Methods:** Domains and a bank of items felt to be important in GFD adherence were agreed on by an expert committee and patient focus groups and used to create a single questionnaire. The survey was administered to 150 individuals with biopsy proven celiac disease who then had IgA tissue transglutaminase titer measured and underwent a standardized evaluation by a nutritionist skilled in celiac disease. The questionnaire was then revised and administered to a second independent group of 50 individuals to assure validity.

**Results:** Using results from the initial validation cohort of 150 individuals a six item questionnaire was derived. The additive score based on these items was correlated with the dieticians global evaluation in both the initial and the validation cohorts (p<0.0001 using Pearson’s Correlation Coefficient). Using ROC analysis the area under the curve for the initial and validation cohorts was 0.771 and 0.764, respectively. In contrast IgA tTG in the initial cohort performed less well with an area under the curve of 0.647. The resulting seven questions make up the first validated GFD adherence assessment.

**Conclusion:** The Celiac Dietary Adherence Test (CDAT) is a simple measure which appears to be superior to IgA tTG in assessing GFD adherence and allows for standardized evaluation of diet compliance. The CDAT may be useful in research settings or in clinical practice in areas where access to a dietician skilled in celiac disease is limited.
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IS IMMUNOFLUORESCENCE STAINING FOR EOSINOPHIL DERIVED NEUROTOKIN USEFUL IN THE DIAGNOSIS OF EOSINOPHILIC ESOPHAGITIS?

2008 ACG Presidential Poster Award Recipient

A. Alexander MD, G. Kephart, MS, K. Ravi, MD, D. A. Neumann, MD, H. Kita, MD, N. J. Talley, MD. Gastroenterology, Mayo Clinic Rochester, Rochester, MN.

Purpose: We have shown that patients with low level esophageal eosinophilia (1-20 eos/hpf) have similar demographics, dysphagia history, and endoscopic findings as patients with classic eosinophilic esophagitis (EoE) with 20 eos/hpf. Some of the low-level eosinophilia patients will have eosinophil counts >20 hpf at a second endoscopy and will have resolution of their dysphagia with topical steroid therapy. Other low-level eosinophilia patients will have resolution of dysphagia with PPI therapy. Esophageal eosinophil counts can fluctuate with time, and maximum eosinophil counts in esophageal mucosa might not be the best diagnostic tool for the diagnosis of EoE. We performed immunofluorescence staining of esophageal biopsy specimens for Eosinophil Derived Neurotoxin (EDN) in several groups of patients to evaluate its potential use as a marker for EoE.

Methods: We performed staining for EDN with qualitative and semiquantitative analysis of esophageal biopsy specimens from four groups of patients: A) normals, B) low level eosinophilia – GERD patients (LL-GERD) (LA grade B-D esophagitis and dysphagia responding to PPI therapy), C) low level eosinophilia – emerging EoE patients (LL-EE) (> 20 eos/hpf on second endoscopy and dysphagia response to topical steroid therapy), and D) classical EoE patients (25 to 100 eos/hpf). Specimens were scored on a 0-3 scale for intracellular (IC) and extracellular (EC) EDN deposition by two authors, and the scores were averaged.

Results: The semiquantitative results are displayed in table 1. IC and EC EDN scores were negligible in the normals and elevated in the other groups. The EC EDN score and percentage of patients with an abnormal score (>1.3) trended to be higher in the EoE and LL- EoE groups. Qualitatively, intense extracellular EDN deposition was typically observed in the papillae and on the luminal surface of the epithelium in biopsies from the EoE patients, while deposition in the LL-GERD patients, with one exception, was scattered throughout the mucosa with relatively little uptake on the luminal surface and in the papillae. The LL-EoE group had a very similar pattern to the EoE group.

Conclusion: This pilot study suggests: 1) Patients with low level eosinophil density in esophageal biopsies have significant EDN immunofluorescence staining. 2) EDN staining particularly extracellular staining on the luminal mucosa has potential to be a better marker for EoE than maximum eosinophil count and should be further evaluated.

Table #1

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Maximum eos/hpf mean (range)</th>
<th>IC mean score (range)</th>
<th>EC mean score (range)</th>
<th>EC score &gt;1.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Normals</td>
<td>4</td>
<td>0 (0)</td>
<td>0.1 (0-0.5)</td>
<td>0.4 (0-0.5)</td>
<td>0/4</td>
</tr>
<tr>
<td>B) LL-GERD</td>
<td>6</td>
<td>10 (2-15)</td>
<td>1.2 (0.5-2.5)</td>
<td>1.4 (0.3-3.0)</td>
<td>2/6</td>
</tr>
<tr>
<td>C) LL-EoE</td>
<td>7</td>
<td>12 (4-20)</td>
<td>1.4 (1.2-1.9)</td>
<td>1.9 (1.3-2.7)</td>
<td>6/7</td>
</tr>
<tr>
<td>D) EoE</td>
<td>13</td>
<td>48 (25-100)</td>
<td>1.8 (1.1-2.5)</td>
<td>2.1 (1.0-2.8)</td>
<td>8/10</td>
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</table>
MANOMETRIC PLACEMENT OF BRAVO CAPSULE AND ITS IMPACT ON DAY TO DAY DISCREPANCY IN MEASUREMENT OF EOSPHAGEAL ACID EXPOSURE

Purpose: The wireless pH monitoring system (Bravo Capsule) is better tolerated and allows longer period of recording (48 hours) in patients evaluated for gastroesophageal reflux disease. The problem is that significant day to day discrepancy in measurement of acid exposure occurs. This variation is thought to be due to the sedation used during the endoscopic placement of the capsule. An alternative is placing the capsule transanally based on motility measurements of the Lower Esophageal Sphincter (LES). We decided to assess if such a policy affects day to day discrepancy and if so, did the variability depend on the status of the gastroesophageal barrier.

Methods: Study population consisted of 310 patients who had Bravo capsule placed transanally based on manometric measurements of the LES. Based on composite score pa-
tients were divided in 3 groups: both days abnormal, both days normal and those with score bar-
drayerness between first and second day LES characteristic were compared in these groups. In addition, in the group with discrepancy the response of LES to a test meal was studied by cal-
culating a post-prandial acid exposure ratio.

Results: Of the 310 patients evaluated 60(19%) had a discrepancy in score between the two days. 127 had a normal score and 123 an abnormal score on both days. Of the 60 patients with discrepancy, 27 were abnormal the first day and 33 were abnormal the second day. Patients with abnormal esophageal acid exposure on both days tend to have more defective LES compared to those with abnormal score only in one day (33.3%, 51.2%, p= 0.027). Sphincter characteris-
tic comparison for all 3 groups is shown (table). In the 28 patients with discrepancy a test meal was given. Ten patients (36%) had an abnormal post/prandial acid exposure ratio on the normal day.

Conclusion: Manometric placement of Bravo capsule results in less discrepancy pH recording between first and second 24 hours compared to previously reported placement via endoscopy. Patients with abnormal pH on both days tend to have a greater prevalence of defective valve than those with abnormal score on one day. This variability between the 2 days may represent impairment of gastroesophageal barrier in patients with early reflux disease.

INTRAEPITHELIAL EOSINOPHIL INFILTRATION IN PATIENTS WITH GERD: CORRELATION WITH DYSPHAGIA
S. A. Zayat, MD, J. A. Hagen, MD, M. Shahani, MD, A. L. Tang, MD, S. R. DeMeester, MD, J. C. Lingham, MD, F. Banki, MD, P. Chandrasoma, MD, T. R. DeMeester, MD, M. M. Kline, MD, Surgery, University of Southern California, Los Angeles, CA. 2. Medicine, University of Southern California, Los Angeles, CA; 3. Pathology, University of Southern California, Los Angeles, CA.

Purpose: The clinical entity eosinophilic esophagitis (EE) most commonly presents with dys-
phagia and is associated with large numbers of intraepithelial eosinophils at all levels of the esophagus. Dysphagia is also a common complaint of patients with gastroesophageal reflux dis-
se (GERD), yet little attention has been paid to the presence of eosinophils in these patients. The aim of this study was to investigate the relationship between dysphagia and the number of eosinophils in patients with proven GERD.

Methods: The data from 3159 patients referred to our esophageal function laboratory from 1999-2007 were reviewed. Patients with GERD (positive 24-hour pH test) who complained of dysphagia were included. In order to assess the relationship between esophageal secretory products and dysphagia, patients with mechanical causes for dysphagia (large hiatal hernia (>4cm), post anti-reflux surgery, esophageal stricture) and named esophageal motor disorders (achalasia, cricopharyngeal dysfunction) were excluded. The patients were divided into 3 groups based on the presence of dysphagia as their primary, secondary or tertiary symptom. A control group consisted of 25 patients with proven GERD and no dysphagia. Biopsies taken from the gastroesophageal junction (GEJ) and from the esophageal body 3-5 cm above the GEJ were analyzed by a single experienced pathologist. Forty high power fields (HPF) were examined at each level and the number of intraepithelial eosinophils was counted per HPF. The highest number of eosinophils per HPF was recorded per patient across all biopsies.

Results: Seventy one patients [42 M/29 F, median age 49 years (IQR: 41-59)] were included.

Thirteen (20%) had asthma or allergy symptoms. Eosinophil counts didn't differ in those with or without asthma/allergy symptoms (p=0.534.) Dysphagia was the primary symptom (54%) in 13(18%), secondary symptom in 34(48%) and tertiary symptom in 24(34%). The number of eosinophils per HPF differed significantly among the 4 groups (table), with the highest num-
ber of eosinophils in patients with a primary symptom of dysphagia. Similar findings were noted when eosinophil counts were compared separately for biopsies from the GEJ (p=0.0057) and the esophageal body (p=0.0063).

Conclusion: There is an association between the number of intraepithelial eosinophils and the symptom of dysphagia in patients with GERD. Patients with dysphagia as their primary symp-
tom have significantly more intraepithelial eosinophils than those with lesser degrees of dys-
phagia. These findings suggest that the eosinophil may play a role in causing dysphagia.
Results of patients with Barrett's Esophagus and Indefinite Dysplasia

P6

A NOVEL ENDOGESOPHAGEAL MAGNETIC DEVICE TO PREVENT GASTROESOPHAGEAL REFLUX

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Purpose: The endoscopic methods to prevent gastroesophageal reflux (GER) show a scarce effectiveness and may narrow the esophageal lumen, sometimes leading to dysphagia (Clin Gas- tro Hepatol 2005;3:831). The aim of this study was to demonstrate the possibility of implanting by endo-circularly an endoluminal magnetic valve. The device consists in a couple of small magnetic plaques of about 5x 20x1.5 mm designed to be implanted by means of a special endoluminal device in the esophageal submucosa close to LES in 5 esophago-gastric specimens taken from swines. The delivery device serves to create two pockets in the submucosa one in front of the other, where the magnets are deployed, first in one side and after in the opposite one, with the contrary polarities face to face, so that they can attract themselves, closing the lumen. A series of slow pull-throughs with a thin side-hole manometric catheter was carried out in each specimen before and after the implantation to compare the mean pressure values and to strengthen the incompetent LES.

Methods: 1. The new HPZ showed a length of about 2 cm and a pressure of 14.2 ± 1.27 mmHg (mean ± SD), significantly (p<0.001) higher than that measured before the insertion of the magnetic valve (1.50 ± 0.26 mmHg).

Conclusion: The new HPZ, that is considered sufficient to prevent GER (Engl J Med 1982;307:151), by eliminating the esophageal submucosa of swine gastroesophageal specimens, close to LES a magnetic device by means of a special endoluminal delivery probe. The main advantage of this system, besides its reversibility and the possibility of delivering the HPZ for each patient by choosing magnets with different magnetic force, shape and size, is the fact that the magnetic valve does not give a rigid lumen closure, as that obtained with other endoscopic devices, but creates a "dynamic closure" that may allow an easy content transit, when the magnetic plaques are detached by the endo-circularly pressure. As a matter of course, before considering this magnetic valve as a "dynamic closure", that may allow an easy content transit, when the magnetic plaques are detached by the endo-circularly pressure, it is necessary to perform "in vivo" experiments in animals by using magnets covered with bio-compatible materials and with a proper attraction force, that does not damage the tissues, but is able to strengthen LES to prevent GER.

P7

THE PREVALENCE OF GASTROESOPHAGEAL REFLUX IN PATIENTS WITH PARADOXICAL VOCAL FOLD MOTION

2. Boeger, MD1, J. Gurevich-Uvena, MA CCC-SLP, E. Frizzel, MD, W. E. Norris, MD, E. L. Maydonovitch, BS, J. L. Perry, MD, J. T. Laczek, MD, R. K. Wong, MD. Walter Reed Army Medical Center, Washington, DC.

Purpose: Paradoxical vocal fold motion (PVFM) is an inappropriate adduction of the true vocal folds, which causes airway obstruction and inspiratory stridor. PVFM may lead to wheezing and is often mistaken for asthma, and patients are treated with glucocorticoids and beta-agonists inappropriately. There is a body of evidence stating that irritation of the vocal folds may cause or exacerbate PVFM. One-third of PVFM patients have been shown to report GERD symptoms, but studies to evaluate PVFM patients with pH monitoring have all been small (<10 subjects). We studied patients with PVFM to determine the prevalence of GERD in this population as diagnosed by esophagegastro duoodenoscopy (EGD) or 48-hour esophageal acid monitoring.

Methods: Patients diagnosed with PVFM by flattened inspiratory loop on pulmonary function testing underwent an EGD with BRAVO capsule placement at 5 cm proximal to the LES. All patients abstained from acid suppression agents (PPI’s, H2RA) for 7 days prior to the EGD. pH monitoring was performed for the BRAVO capsule. Patients were considered to have a diagnosis of GERD if they had any evidence of erosive esophagitis on EGD or if they had a positive Johnston-Demosthenes (JD) score (>22) during the second 24-hour period of pH monitoring by BRAVO capsule.

Results: 32 patients (20 females, mean age 42 ± 16 yrs) with PVFM completed the study. 31% (10/32) of subjects had a positive JD score, 50% of which had significant combined upright and supine reflux. On EGD, 18.8% (6/32) had evidence of esophagitis. Two subjects with esophagitis had a normal JD score. In this study the prevalence of GERD in PVFM was 37.5% (12/32, 95% CI 21.1-56.3%). Of GERD positive subjects, 50% (6/12) had evidence of esophagitis and 50% had atypical or no symptoms of GERD. GERD pos and GERD neg groups were similar in mean age (43 ± 16 yrs vs. 41 ± 16 yrs; P = 0.708) and sex (female, 50% of GERD pos vs 70% of GERD neg; P = 0.452).

Conclusion: GERD prevalence in this study was 37.5%. This suggests a high prevalence of GERD in the PVFM population. Because of this, PVFM patients should be studied for GERD, especially since many are asymptomatic. This may also suggest that GERD plays a role in the pathogenesis of PVFM.
P9
POST 9/11 GERD: A NEW ENTITY
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Purpose: The World Trade Center Environmental Health Center (WTCHEC) was established to respond to emerging health issues related to the attack on 9/11/01 in New York City. The WTCHEC serves individuals who were exposed to WTC dust or fumes, including residents, office workers, New York City employees, volunteers and individuals involved in debris removal and clean-up. Although there have been several studies addressing the pulmonary effects of WTC exposure, the effect of WTC exposure on esophageal disease has not been well characterized. The aim of this study was to assess the incidence of and nature of post 9/11 GERD symptoms.
Methods: Participants were self-referred for medical symptoms and WTC exposure in Southern Manhattan in the year after 9/11. A questionnaire was administered to all patients presenting to WTCHEC. This questionnaire contained questions assessing the presence of GERD symptoms (heartburn and/or “acid indigestion”), and their onset, frequency, duration, and treatment.
Results: The first 1575 individuals in WTCHEC treatment program were enrolled between August 2005 and November 2007. The study population was comprised of 537 clean-up workers, 515 local workers, 324 residents, 167 rescue workers, and 32 individuals with other types of exposure. There was a slight male preponderance (54%) and the mean age was 48 years (Table 1). Of the total population, 10% reported experiencing GERD symptoms prior to 9/11 and 55% reported the onset of GERD symptoms after 9/11 (Table 2). Post 9/11 GERD was associated with race with Whites having the highest rate of symptoms (p<0.001). Post 9/11 GERD was also associated with an increased BMI (p=.0002). When compared with respiratory symptoms, post 9/11 GERD was associated with post 9/11 cough (p=.003), post 9/11 wheeze (p<0.001) and post 9/11 shortness of breath with exertion (p<0.001).
Conclusion: A large proportion of individuals exposed to WTC dust and fumes developed new GERD symptoms after 9/11. There appeared to be an association of the development of post 9/11 GERD and race, BMI, and respiratory symptoms. Further studies are ongoing to evaluate these patients and further characterize their esophageal disease through pH testing and endoscopy.

Patient demographics

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
<th>Resident</th>
<th>Worker</th>
<th>Clean-up</th>
<th>Rescue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>54 (859)</td>
<td>52 (169)</td>
<td>46 (238)</td>
<td>55 (295)</td>
<td>79 (132)</td>
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<tr>
<td>Female</td>
<td>46 (725)</td>
<td>48 (155)</td>
<td>54 (277)</td>
<td>45 (242)</td>
<td>21 (35)</td>
</tr>
</tbody>
</table>

Age (mean) (range): 48 (17-87) 53 (17-87) 50 (20-86) 43 (22-72) 46 (24-83)

Race, %

<table>
<thead>
<tr>
<th>Race</th>
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<th>Worker</th>
<th>Clean-up</th>
<th>Rescue</th>
</tr>
</thead>
<tbody>
<tr>
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<td>4</td>
<td>9</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>White</td>
<td>45</td>
<td>37</td>
<td>44</td>
<td>43</td>
<td>6</td>
</tr>
<tr>
<td>Black</td>
<td>15</td>
<td>8</td>
<td>31</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Native American</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>19</td>
<td>15</td>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>

GERD symptoms (n=1575)

<table>
<thead>
<tr>
<th>GERD symptoms before 9/11 % (n)</th>
<th>GERD symptoms after 9/11 % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10 (151)</td>
</tr>
<tr>
<td>Rescue workers</td>
<td>12 (20)</td>
</tr>
<tr>
<td>Residents</td>
<td>13 (99)</td>
</tr>
<tr>
<td>Local workers</td>
<td>12 (60)</td>
</tr>
<tr>
<td>Clean-up</td>
<td>6 (28)</td>
</tr>
</tbody>
</table>

Conclusion: The symptom perception as troublesome depended mostly on the characteristic of the symptoms, especially the frequency of acid regurgitation and nocturnal symptoms. The same variables are considered as predictive factors of TS symptoms in naïve patients and patients under PPI treatment.

Disclosure - Javier Zapardiel: ASTRAZENECA Spain employee; Mercedes Munoz: AZ Spain employee.

This research was supported by an industry grant from ASTRAZENECAS PHARMACEUTICAL SPAIN.

P10
ARE TROUBLESMES GERD-RELATED SYMPTOMS REFLCCTING CHARACTERISTICS OF THE DISEASE OR THE PATIENT?
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Purpose: Definition of gastroesophageal reflux disease (GERD) is a debatable issue. It has been proposed that typical symptoms are constitutive of GERD if they are considered by the subjects as “troublesome” (Montreal Consensus). However, it is unknown to what extent reporting symptoms as troublesome is dependent on characteristics of subjects or symptoms themselves, and what are the differences between symptoms reported as troublesome and not, both in symptomatic subjects with and without PPI treatment. Our aim was to evaluate the differences between troublesome (TS) and non troublesome symptoms (NTS) and which are the factors associated with TS in primary care subjects We also aim to evaluate what the factors are associated with persistent GERD (persistent of TS) despite PPI therapy.
Methods: Design: multi-centric cross-sectional survey. Patients attending Primary care centres in Spain consulting with heartburn or acid regurgitation were recruited. All of them completed a set of questionnaires, including a question to self-define their symptoms as TS or NTS (“Do you consider your heartburn and/or regurgitation symptoms as troublesome?”). Frequency of symptoms was collected using the RDQ and GIS questionnaires. Data regarding sociodemographic variables, comorbidities, co-medications and treatment (drug and doses) were collected for the primary care physician. A logistic regression model was constructed to predict the presence of TS in patients without PPI therapy. Another logistic regression model was constructed to assess factors associated with TS under PPI treatment.
Results: 4,574 patients were included. 1,887 without previous PPI treatment and 2,596 on PPI treatment. Among those without PPI treatment, 1,650 reported their symptoms as troublesome, while 237 did not. Patients with TS were slightly older, male gender was more frequent, and a higher proportion suffered from hypercholesterolemia. In the regression model to predict TS, all the variables were symptom-related except hypercholesterolemia: frequency of regurgitation, frequency of epigastric burning pain, and frequency of sleeping problems. Of those on PPI treatment, 2,396 reported TS and 238 not. There were not differences between patients with TS and NTS in subject’s related factors, but smoking. In the regression model, factors associated with TS on PPI therapy were all symptom-related: frequency of regurgitation and frequency of sleeping problems.
Conclusion: The symptom perception as troublesome depended mostly on the characteristic of the symptoms, especially the frequency of acid regurgitation and nocturnal symptoms. The same variables are considered as predictive factors of TS symptoms in naïve patients and patients under PPI treatment.

Poster Abstracts – Sunday, October 5

P11
WHEN ESOPHAGEAL RINGS ARE PRESENT BUT EOSINOPHILS ARE SPARSE: IS DEGRANULATION A FACTOR?
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Purpose: The diagnosis of eosinophilic esophagitis (EoE) is based on clinical symptoms, endoscopic findings and histology. Current histologic guidelines require >15-20 eosinophils per HPF. However, some patients present with symptoms and endoscopic findings suggestive of EoE, but biopsies fail to meet histologic criteria. We hypothesized that such patients would have eosinophilic degranulation similar to EoE patients.
Methods: Subjects were chosen from our institution’s endoscopic database based upon their histologic and endoscopic findings. 10 EoE (>20 eos/HPF), 8 “suspicous for EoE” (dysphagia, endoscopic rings/furrows, but <20 eos/HPF (range: 5-17)), and 5 normals (only a rare cos/HPF were chosen). Tissue sections were stained with rabbit anti-human MBP and anti-human EDN. Degranulation was scored 0-4 by blinded expert immunodermatologist via previously established criteria.
Results: Definite EoE patients had increased proximal MBP and EDN staining versus controls (p<0.0001 and p=0.0003 respectively). Suspicous for EoE patients had increased MBP and EDN staining versus controls (p=0.002 for both). There was no difference in MBP and EDN staining between the definite and suspicious for EoE patients proximally. The intensity MBP and EDN staining correlated with eosinophil counts (0.72 and 0.65 respectively, p<0.001).
Conclusion: Patients with definite EoE and suspicious for EoE have increased eosinophil degranulation compared to normals. Definite EoE and suspicious for EoE patients have similar degranulation proximally but suspicious for EoE patients have less eosinophil degranulation distally. Eosinophilic degranulation is present in the esophagus of many patients with eosinophilic rings/furrows and results in an underestimation of eosinophil counts. Thus, patients with “ringed esophagus” who fail to meet the diagnostic criteria of >15-20 eos cos/HPF may truly have an eosinophilic infiltrate underdiagnosed due to degranulation.
Results: Inhibition of integrated esophageal acidity over 24 hours (85.3%, mean-SEM) and during nighttime (89.3%) was significantly higher (P<0.0002) than inhibition of integrated gastric acidity during 24 hours (70.4%) and nighttime (69.4%). Inhibition of integrated esophageal acidity during daytime (80.3%) did not differ significantly (P=0.376) from inhibition of integrated gastric acidity during daytime (78.4%). Inhibition of timeophagial pH<4 over 24 hours (63.4%) and during nighttime (64.0%) was significantly higher (P<0.005) than inhibition of time gastric pH<4 during 24 hours (48.3%) and nighttime (40.3%). Inhibition of timeophagial pH<4 during daytime (59.4%) did not differ significantly (P=0.645) from inhibition of time gastric pH<4 during daytime (57.4%). All values for inhibition of integrated acidity were significantly higher (P<0.0001) than corresponding values for inhibition of time pH<4.

Conclusion: The present results indicate that using PPI inhibition of gastric acidity to infer PPI inhibition of esophageal acidity will underestimate the extent of inhibition of esophageal acidity during 24 hours and nighttime, but not during daytime. Furthermore, measuring inhibition of time pH<4 will significantly underestimate the magnitude of PPI inhibition of both gastric and esophageal acidity during all periods compared to measuring inhibition of integrated acidity.

Disclosure: Dr. Gardner is resident of Science for Organizations, a company that provides consulting services to pharmaceutical and biotechnology companies. Dr. Sloan is an employee of Janssen.

This research was supported by an industry grant from Janssen, a company that provides consulting services to pharmaceutical and biotechnology companies. This research was conducted with support from the Investigator-Sponsored Study Program of AstraZeneca Pharmaceuticals.

P13
ABNORMAL GERD PARAMETERS DURING AMBULATORY pH MONITORING (PHM) PREDICT THERAPEUTIC SUCCESS IN NONCARDIAC CHEST PAIN (NCCP)
V Kushnir MD, M. J. Hersh, MD, G. S. Sayuk, MD, MPH, C. Gyawali, MD, MRCP. Gastroenterology, Washington University School of Medicine, Saint Louis, MO.

Purpose: We have previously proposed an hierarchical system of evaluating GERD evidence in NCCP, using acid exposure time (AET) elevation, symptom association probability (SAP) and symptom index (SI) in sequence. The value of these parameters in predicting therapeutic success in NCCP has not been systematically evaluated in outcome studies.

Methods: 98 subjects with NCCP (51±1.2 yr, 73±6.4% duration of symptoms 7.3±3.0 yr) underwent pH study to determine the cut-off of 4.0. Distal esophageal AET (abnormal if ≥4.0), SAP (positive if ≥50%), and SI (abnormal if ≥50%) were calculated; calculated symptom severity was assessed on a 10 mm visual analog scale. Subjects were interviewed 2.7±0.1 yr after the pH study to determine degree of symptom improvement (HDR=high degree response, definite, sustained symptom improvement). Linear regression analysis determined independent predictors of HDR.

Results: 52 subjects (53.1%) had abnormal AET (26.5%) had positive SAP and 25 (25.5%) had positive SI (62.2%) had any of these GERD indicators. Esophageal motor pattern was determined by high resolution manometry in 92 subjects; 47 subjects had a normal motor pattern, 16.3% had hypomotility, and 35.9% were normal. All subjects received initial pharmacologic antireflux therapy. On univariate analysis, HDR was significantly associated with positive SAP (P=0.003) and elevated AET (P=0.004), but not demographics, SI esophageal motor pattern or psychiatric comorbidity. Frequency of HDR was significantly associated with positive SAP (P=0.003) and elevated AET (P=0.015), but not demographics, number of reflux events, number of acid events or percent of time with acid. A cut-off of 4.0 was determined using logistic regression.

Conclusion: Positive SAP predicts therapeutic success of GERD management in NCCP. Response to ART is best when both SAP and AET are abnormal and worst when both are normal. These results support the importance of GERD, the relevance of SAP testing during ambulatory pHM, and the value of ART in NCCP.

Disclosure: Dr. Gyawali: Speaker’s Bureau and Research Support from Sierra Scientific.

P14
EFFECTS OF INTRADUODENAL NUTRIENT INFUSION ON CCK LEVELS, LES PRESSURE, AND GASTROESOPHAGEAL REFUX (GER)
B. E. Lucy, PhD, MD, FACC,1 L. Puquette, RN,1 N. M. Kelley, MD,1 J. Carter, MD,1 J. Wezi, MS,1 J. Division of Gastroenterology, Dartmouth-Hitchcock Medical Center, Lebanon, NH; 2. Medicine, Dartmouth-Hitchcock Medical Center, Lebanon, NH; 3. Community & Family Medicine, Dartmouth-Hitchcock Medical School, Hanover, NH.

Purpose: Background: Fats are associated with increased GER and CCK (cholecystokinin) is thought to play a role. The contribution of other nutrients to GER is not well described. Aims: Evaluate the effects of intraduodenal nutrient infusion on serum CCK levels, lower esophageal sphincter (LES) pressure, and GER.

Methods: 24 healthy asymptomatic Caucasian volunteers were studied. A water-perfused, 6 cm Dent sleeve catheter (Dentsleeve International Ltd) was positioned across the upper border of the LES. After a 1-hour accommodation period baseline CCK levels were measured. Volunteers were randomized to receive one of 3 separate 60 kcal nutrient infusions over 30 minutes (2 cc/min): fat (F; Microlipid, Novartis Medical Nutrition); carbohydrate (C; Polycose, Ross Nutrition); or protein (P; Beneprotein, Novartis Medical Nutrition). All substances were dispersed in normal saline. Blood samples were drawn 5, 10, 15, and 25 minutes after nutrient infusion. LES resting pressure was measured at baseline and 60 minutes after nutrient infusion. Reflux events were categorized as either acid or non-acid in nature using a pH cut-off of 4.0.

Results: No statistically significant difference was found among the 3 groups with regards to demographics, number of reflux events, number of acid events or percent of time with acid. A trend was noted for increased reflux and acid exposure events in the fat group. CCK levels were significantly higher in the fat group compared to the other 2 groups at 10, 15, and 25 minutes after nutrient infusion. The mean post-infusion LES pressure was significantly lower than mean baseline LES pressure in the F group (p=0.02).

Conclusion: Intraduodenal fat infusion led to a statistically significant increase in CCK levels in normal volunteers, while protein and carbohydrate did not. Reflux events were more frequent in volunteers infused with fat compared to protein or carbohydrate, although this did not reach statistical significance. LES pressure decreased significantly after fat infusion. Further studies are needed to better define the relationship between fat infusion, CCK release, LES pressure, and GER.

Disclosure - Dr. Gardner is resident of Science for Organizations, a company that provides consulting services to pharmaceutical and biotechnology companies. Dr. Sloan is an employee of Janssen.

This research was supported by an industry grant from Janssen, a company that provides consulting services to pharmaceutical and biotechnology companies. This research was conducted with support from the Investigator-Sponsored Study Program of AstraZeneca Pharmaceuticals.

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P15

EFFICACY AND SAFETY OF RADIOFREQUENCY ABLATION FOR BARRETT’S ESOPHAGUS WITH HIGH GRADE DYSPLASIA: THE WASHINGTON UNIVERSITY EXPERIENCE

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Purpose: To determine whether radiofrequency ablation (RFA) is a safe and effective treatment for Barrett’s esophagus (BE) and high grade dysplasia (HGD).

Methods: Patients with BE and biopsies positive for H. pylori from all cases examined from 4/01/07 to 3/31/08. Extracted data were stored in a Microsoft Access database.

Results: Nineteen pts were identified that had initiated or completed RFA treatment.

Conclusion: Further study is needed to determine appropriate post RFA surveillance intervals, and the incidence of dysplasia recurrence.

Disclosure - Dr Sharabi, Dr Schuler and Dr Genta are employees of Caris Diagnostics.

P16

HOW MUCH ADDITIONAL PROCEDURE TIME IS REQUIRED TO OBTAIN MULTIPLE MUCOSAL SURVEILLANCE BIOPSIES IN PATIENTS WITH BARRETT’S ESOPHAGUS?

A. Rackoff MD, S Kucera, MD, S. Tanimur, MD, D. Yu, PhD, W. Zhu, MS, J. Barbel, MD. 1. Division of Digestive Diseases, Univ of South Florida, Tampa, FL; 2. Division of Gastrointestinal Oncology, Moffitt Cancer Center, Tampa, FL; 3. Moffitt Cancer Center, Tampa, FL.

Purpose: We have observed that only 29% of patients referred for ablation of Barretts esophagus (BE) at our institution have had an adequate number of surveillance biopsies based on systematic biopsy protocols. We speculate incomplete biopsy sampling may be related to the increased length of time required to perform these biopsies. We hypothesized that there is an identifiable number of biopsies that will confirm histologic clearance of BE by multiples of the time to perform the observational component of the EGD and that the time required for each biopsy does not accumulate or decay with repetition.

Methods: We performed 358 endoscopies with concurrent surveillance biopsies in 106 patients presenting for BE surveillance or confirmatory endoscopy in preparation for BE ablation at Moffitt Cancer Center from January to May of 2008. The time to complete the observational component (OC) and the therapeutic component (TC) of the EGD were recorded. The OC was defined as the time from scope insertion to completion of forward inspection of the esophagus, stomach, and duodenum and then withdrawal back to the distal esophagus. The TC consisted of the total time required to complete all esophageal biopsies. Additionally, the time required to obtain the first and last two biopsies was recorded.

Results: Seventeen consecutive patients, 14 (82%) males and 3 (18%) females, were included in this study. We calculated the mean OC time was 3.7 minutes (range 2.1 - 10.6 minutes) while the median OC time was 4 (range 2.5 - 17.3) minutes for a mean of 8 (range 4.28) biopsies. The median time to obtain the first two and last two biopsies was 55 (range 36-74) seconds and 48 (range 34-147) seconds, respectively, which were not significantly different (p=0.80). A linear regression of TC to obtain the first two and last two biopsies was recorded.

Conclusion: Our preliminary data suggests that for each 7 biopsies obtained, the total time of the EGD is increased by a multiple of the OC time. This data demonstrates that adherence to strict BE surveillance guidelines significantly lengthens the total procedure time and provides a benchmark for future improvement of intervals that will minimize operator time and improve patient care.

Disclosure - This work was supported by the National Institute of Health.
Endoscopic ultrasound (EUS) is the most reliable imaging modality for staging of early (T1) esophageal cancers. The difficulty in accurately assessing the layers of mucosa and submucosa does not change the overall accuracy of nodal staging. Malignant invasion into the submucosa has been shown to correlate with presence of malignant cell invasion. Whereas, of the moderate or poorly differentiated tumors, 11 of 24 had submucosal invasion (T2) in addition to tumor size and presence of lymphatic invasion, however, did not correlate with infiltration of malignancy beyond SM2.

Conclusion: EUS can accurately predict lymph node involvement in early (T1) esophageal cancers. The acceptability for EUS in assessing lymph node metastasis was very high (100%). Also, tumor differentiation correlates with submucosal invasion. EUS may therefore, be used to select patients suitable for local endoscopic therapy.

**P20**

**A GLOBAL, EVIDENCE-BASED CONSENSUS ON THE DEFINITION OF PEDIATRIC GASTROESOPHAGEAL REFLUX DISEASE (GERD)**

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**Purpose:** The Montreal definition of GERD1 established an evidence-based global consensus to define reflux disease in adults. There is a need to clarify terms related to reflux symptoms and signs in children by developing an international consensus on the definition of GERD.

**Methods:** A set of statements to define GERD in children was developed by a consensus group4 employing the Delphi process. The group comprised 8 voting pediatric gastroenterologists with expertise in the field and 8 non-voting participants (chair, primary care physician and pediatric gastroenterologists and pediatric radiologists). Statements were based on systematic searches of the literature employing Medline, EMBASE and CINAHL. Voting was conducted using a 6-point scale; consensus defined as agreement by 75% of the group. The strength of each statement was assessed using the GRADE2/system.

**Results:** There were four rounds of voting. At the first workshop, many of the statements were separated for each of 3 age groups (newborn/infants, toddlers/children, and adolescents). In the final vote, consensus was reached on 98% of 59 statements. In this vote, 95% of the statements were accepted by 7 of 8 voters. Salient consensus items were: 1) GERD is present when reflux of gastric contents causes troublesome symptoms and/or complications, but this definition is complicated by unreliable reporting of symptoms by children under 8 years. 2) Utility of history for the diagnosis of pediatric GERD is limited; its primary role is to exclude other conditions, especially esophagitis and esophageal infections. 3) Extra-esophageal conditions (chronic cough, laryngitis, hoarseness, dental erosions, and reactive airway diseases) may be associated with pediatric GERD, but causality remains to be established. 4) Barrett’s esophagus has been re-defined. Population-based studies of reflux-related symptoms in children should be a future research priority.

**Conclusion:** A global definition of GERD in children has been developed. The statements arising should prove useful for the development of future clinical practice guidelines and in the establishment of high quality clinical trials to address unresolved issues. *Submitted on behalf of the chair (Philip M Sherman) and voting members of the group: Ulysses Fagundes-Neto, Benjamin D. Gold, Eric Hassall, Seichi Kato, Sibyllé Koltekan, Susan R. Orenstein, Colin Rudolph, Yuven Vandenplas, Support and funding provided by INSINC Consulting Inc. through an unrestricted grant from AstraZeneca R&D and Molndal, which had no input into process, meetings, or output. 1. Vailk et al. Amer J Gastroenterol 2006;101:1980-20. 2. Grade Working Group. BMJ 2004;328:1490-4. This research was supported by an industry grant from Support and funding provided by INSINC Consulting Inc. through an unrestricted grant from AstraZeneca R&D and Molndal. The sponsor had no input into process, meetings, or output.
P23

ESOPHAGEAL EOSINOPHILIA AND HISTORY OF ATOPY IN PATIENTS WITH EROSIIVE ESOPHAGITIS

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Purpose: Relux, corrosive esophagitis (EoE) and asthma/allergy are causes of esophageal eosinophilia. Thy relationship between these three conditions and the degree of eosinophilic association with each is not completely understood. Relux causes an eosinophilic infiltrate that is usually limited to the distal esophagus and rarely exceeds 20 eosinophils per high power field (hpf). With EoE, a greater degree of eosinophilia can be found more proximally in the esopha-
gas. Asthma, seasonal and food allergies have also been associated with esophageal eosinophilia, and a history of atopy is common in patients who have been diagnosed with EoE. Our aim was to use the association of esophageal eosinophilia and history of atopy in a cohort of patients with erosive esophagitis.

Methods: A retrospective chart review was performed on a group of patients with erosive esophagitis who presented with dysphagia for upper endoscopy. Patients included in the analy-
sis had both mid and distal eosophageal biopsies and completed a validated atopy questionnaire. A patient was identified as being atopic if they reported a history of asthma, seasonal (rhinitis, conjunctivitis, hay fever) or food allergies. Additional patient characteristics included age and gender. Eosinophils/hpf in the mid and distal esophageal biopsies were counted.

Results: 28 patients were included in the analysis. Patient age ranged from 30 to 89 years old (median 59). 22 of the 28 patients (79%) were men. 10 patients had Los Angeles (LA) Grade A erosive esophagitis, 10 had LA Grade B, 5 had LA Grade C and 3 had LA Grade D. The range of esophageal eosinophilia was 0 – 64 eosinophils/hpf in mid esophageal biopsies and 0-39 eosinophils/hpf in distal esophageal biopsies. 5 of the 19 patients (26%) with mid esophageal eosinophilia had greater than 20 eosinophils/hpf. 11 of the 28 patients (39%) patients were identified as having atopy. Distal eosinophil counts were significantly greater in patients with a history of atopy compared to those without atopy (p<.01). When comparing median eosinophil counts, patients with atopy had significantly greater mid (p<.01) and distal (p<.05) eosinophil counts.

Conclusions: Eosinophilia is common in this patient population with endoscopic reflux. However, 18% of patients had mid eosophageal eosinophilia and a degree that is consistent with EoE criteria. A history of atopy was found in patients with mid and distal eosinophilia. Patients with reflux and atopy may have significant eosophageal eosinophilia and should be considered for EoE evaluation.

P24

TAK-390MR MAINTAINS RELIEF OF GASTROESOPHAGEAL REFUX DISEASE (GERD) SYMPTOMS AND IMPROVEMENTS IN QUALITY OF LIFE IN GERD PATIENTS WITH HEALED EROSIIVE ESOPHAGITIS

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Purpose: Overall treatment success for patients with erosive esophagitis (EE) includes healing of erosions and improvement in patient-reported outcomes (PRO) such as symptom severity and quality of life (QOL). The efficacy of TAK-390MR vs. placebo in maintaining symptom relief and QOL improvements over 6 months was assessed in patients with healed EE.

Methods: 896 patients with healed EE were enrolled into one of two clinical trials for a 6 month treatment period. First study compared TAK-390MR 30mg/60mg to placebo and second study compared TAK-390MR 60mg/90mg to placebo. Patient Assessment of Upper Gastrointestinal Disorders-Quality of Life (PAGI-QOL) and Symptom Severity Index (PAGI-SYM) were used for assessing QOL and symptom severity, respectively. PAGI-QOL includes 30 items summarized by six subscales of nausea/vomiting, fullness/early satiety, bloating, upper abdominal pain, lower abdominal pain, heartburn/regurgitation and a total score. The two questionnaires were completed at Day -1 (final visit of EE healing trials), Months 1, 3, 6 (final visit).

Results: In the first study, there were statistically significant differences between placebo and TAK-390MR 30mg group on subscales of diet and food habits. These significant differences were the result of maintenance of improved QOL and decreased symptom severity for the TAK-390MR groups and increased QOL and increased symptom severity for the placebo group from Day -1 to the final visit. Similar statistically significant differences between placebo and both TAK-390MR groups were observed for the heartburn/regurgitation subscale and PAGI-SYM total score. Most other subscales showed the same trend in favor of the TAK-390MR groups versus placebo, although the differences were not statistically significant. In the second study, statistically significant differences were observed between placebo and TAK-390MR 60mg/90mg groups for all PAGI

QOL subscales and total score (except the relationship subscale for TAK-390MR 90mg group) and all PAGI-SYM subscales and total score for the change from Day -1 to final visit.

Conclusion: At all doses studied, subjects with healed EE who received maintenance treatment with TAK-390MR maintained improved QOL and symptom relief compared to those treated with placebo.

Disclosure: All authors are or were employees of TAP Pharmaceuticals Products Inc when the study was conducted. This research was supported by an industry grant from TAP Pharmaceuticals Products Inc.
THE ADDITION OF LIQUID GASTRIC EMPTYING TO A SOLID GASTRIC EMPTYING STUDY INCREASES DETECTION OF GASTROPARESIS

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Purpose: Standard teaching is that only solid gastric emptying scintigraphy is needed to diagnose gastroparesis because liquid emptying is less sensitive and often normal until the disorder is advanced. However, we have seen numerous patients with prolonged liquid but normal solid emptying. The purpose of this investigation was to determine if liquid gastric emptying has added diagnostic value when obtained in addition to solid emptying for detection of gastroparesis.

Methods: Sixty consecutive patients (age 18-65, 39 male, 21 female) referred for suspected gastroparesis had sequential clear liquid and solid gastric emptying scintigraphies study the same morning. Three were diabetics, 8 had GER, none had prior gastric surgery. They were on medications as prescribed by the referring physician, although none were known to affect emptying. The patients initially ingested 300 ml water with 0.2 mCi In-111 DTPA and 1 minute gamma camera images were acquired for 30 minutes. They then ingested a standardized egg substitute (Tougas, et al) labeled with Tc-99m sulfur colloid, 2 mCi, and images were acquired at 0.122.3 hours. A half-time of emptying was quantified for the liquid studies (Chaudhuri, et al) and the percent emptying at each time interval for the solid studies (Tougas, et al). The results of the two studies were analyzed.

Results: Both solid and liquid emptying studies were normal in 50% of patients. Both studies were delayed in 10%. The solid study showed delayed emptying in 23% of patients. The liquid study was delayed in 33%. Solid emptying was delayed and liquid was normal in 13%. Solid emptying was normal but liquid emptying was abnormal in 27%. Of those patients with normal solid emptying, 31% had delayed liquid emptying. The addition of patients with delayed liquid emptying to those with delayed solid increased the rate of gastroparesis detection from 23% to 31%.

Conclusion: The addition of liquid to solid gastric emptying scintigraphy increased the detection rate of gastroparesis compared to the solid emptying study alone. Both studies should be performed routinely to maximize sensitivity for detection of gastroparesis.

P27

CHRONIC PROTON PUMP INHIBITOR THERAPY INCREASES FUNICULAR GLAND POLYPS: HOW MUCH IS TOO MUCH?

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Purpose: To investigate the association of fundic gland polyps (FGP) with various doses and durations of proton Pump Inhibitor (PPI) Therapy.

Methods: A cohort study of consecutive patients undergoing elective upper endoscopy for a variety of indications between March and September 2007 were enrolled in a prospective study. Endoscopists noted and removed all gastric polyps in this patient population. No patients with Familial Adenomatous Polyposis were included in this study. Pathologists confirmed diagnosis of FGP based on histologic findings. All patients completed a questionnaire prior to endoscopy in regards to PPI use and length of therapy (no PPI use, 1-48 months, >48 months). On univariate analysis, FGP were associated with Caucasian race vs. other races (14.3% vs 6.3%, P=0.014), and age >60 years (10.1% vs 3.1%, P=0.04). There was a linear association between dosage of PPI therapy and FGP (twice daily PPI use, 16.7% > once daily PPI use, 10.4% > no PPI use 7.3%, P=0.028). On logistic regression analysis, Caucasian race and length of PPI therapy were independent predictors of FGP. Caucasians were 2.3 times more likely develop FGP (OR 2.3, 95% CI 1.1-4.9). Patients on PPI for >48 months were 5.1 times more likely to develop FGP compared to PPI use (1-48 mo) or no PPI use (OR 5.1, 95% CI 2.1-12.6).

Conclusion: These results show Caucasians and patients on PPI therapy for greater than 48 months have an increased risk of developing FGP. Dosage of therapy (once daily vs. twice daily) did not seem to impact development of FGP. This study confirms the association of long term PPI use and FGP, which has been described minimally in the published literature.

P28

A SIMPLE FORMULA TO IDENTIFY PATIENTS WITH ADVANCED STAGE GASTRIC ADENOCARCINOMA

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Purpose: Definitive staging of gastric adenocarcinoma (GAC) involves surgical resection and extensive lymph node dissection. A patient's comorbidities may often preclude a surgical procedure or render the decision to proceed to surgery a difficult one. However, without staging, it is difficult to provide an accurate prognosis. The average 5-year survival of patients with Stage I GAC is 66.86%, however, patients with stage II, III and IV GAC have 5-year survival rates of 34.20 and 7%, respectively. In addition, observational studies have demonstrated that the natural history of GAC differs between ethnicities. We hypothesize that assessing for the age, serum total protein (TP), albumin (Alb) and hemoglobin (Hgb) at the time of diagnosis can accurately assess for advanced stage GAC in a non-Asian cohort of patients.

Methods: A review of the electronic medical records of the Scripps Clinic and Green Hospital from 1997-2008 was performed to identify patients with a de novo diagnosis of GAC with subsequent surgical staging. Adenocarcinomas involving the gastroesophageal junction were excluded. Data regarding cancer stage, ethnicity, age, TP, Alb and Hgb at the time of diagnosis were collected. A “staging score” was also developed to simultaneously assess for all four factors: Staging score = (Hgb x TP x Alb x Hgb) / age. Patients of Asian descent were not evaluated in this investigation.

Results: There were 70 de novo diagnoses of GAC in the study period with 56 cases staged by surgical resection. Forty-six of the GAC cases were of a non-Asian ethnicity and comprised the study cases. Although a trend towards significance was observed, no single factor of age, TP, Alb or Hgb demonstrated a significant difference between early and advanced stage GAC (Table 1). However, the staging score demonstrated a statistically significant difference between stage I and stage II-IV GAC (p=0.04). Using a staging score cut-off of 255, the positive and negative predictive values of this test for Stage I GAC were 44% and 95.7%, respectively.

Conclusion: The staging score was useful in identifying a cohort of patients, who are likely to have a poorer prognosis. The ability to recognize patients with an unfavorable prognosis before surgical staging provides clinicians and patients useful prognostic information and may potentially assist in their decision to pursue aggressive therapy. A prospective study to validate this scoring system is warranted.

Table 1. Patient Characteristics: Early versus Late Stage Gastric Adenocarcinoma

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Stage I (n=12)</th>
<th>Stage II-IV (n=54)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>71.7 +/- 11.3</td>
<td>75.3 +/- 10.7</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Serum total protein (g/dL)</td>
<td>6.7 +/- 0.8</td>
<td>6.2 +/- 0.9</td>
<td>NS</td>
</tr>
<tr>
<td>Albumin (g/dL)</td>
<td>3.5 +/- 0.5</td>
<td>3.1 +/- 0.6</td>
<td>NS</td>
</tr>
<tr>
<td>Hemoglobin (g/dL)</td>
<td>12.2 +/- 2.7</td>
<td>11.0 +/- 2.8</td>
<td>NS</td>
</tr>
<tr>
<td>Staging Score</td>
<td>346.4 +/- 164.9</td>
<td>255.6 +/- 132.2</td>
<td>0.04</td>
</tr>
</tbody>
</table>

NS = Statistically non-significant
**P03**

A RANOMIZED, SINGLE-BLIND, PLACEBO-CONTROLLED, ONE-WEEK, PILOT STUDY OF THE EFFECT OF NAPOXIN 500 MG BID, ASPIRIN 81 MG DAILY, CLOPIDOGREL 75 MG DAILY ON THE HEALING OF GASTRODUODENAL LESIONS

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**Purpose:** Many individuals with gastroduodenal ulcers (UDVs) require on-going NSAIDs for analgesia, or anti-platelet therapy for CV prophylaxis. The aim of this pilot study was to evaluate the effect of these agents on the biology of ulcer healing in humans, using a novel ulcer model and scoring system.

**Methods:** In a single-blind, single-site, placebo-controlled pilot study, healthy volunteers were randomized to naproxin 500mg BID, celecoxib 200mg QD, aspirin 81mg QD, clopidogrel 75mg QD or placebo. Exclusion criteria included: H pylori; the use of concomitant NSAID, anti-coagulant or anti-ulcer medication; smoking, previous ulcer; and CV disease. During a baseline endoscopy, 4 superficial antral lesions and 2 superficial duodenal lesions were created using a stereotyped method with standard biopsy forceps. After 7 days on study drug, subjects underwent repeat endoscopy during which the lesions were videotaped for scoring. Each lesion was later scored by a 3-person adjudication committee. The scorers gave each lesion a cumulative injury score ranging from 0 (low) to 8 (high). The cumulative injury score incorporated the adjudicator's observations regarding four characteristics of the lesion: erythema, edema, exudate, and size. The adjudicators graded each characteristic on a scale of 0 to 2 (low) vs 2 (high). We had previously demonstrated (using a set of 100 lesions, which were scored independently by 4 investigators) that the inter-observer correlation for this injury score was good (intraclass correlation coefficient of 0.672 in the antrum and 0.832 in the duodenum). The primary endpoint for the pilot study was the mean residual injury score of the antral and duodenal lesions at final EGD. The secondary endpoint was the percentage of grossly unhealed (injury score ≥5) antral and duodenal lesions at final EGD. The results showed that the mean residual injury score of the antrum and duodenal lesions at final EGD was 2.65 and 2.32 respectively compared to 5.67 and 4.93 in the control group. The percentage of grossly unhealed lesions was 5.5% in the naproxin group and 20% in the placebo group.

**Results:** The healing rate was significantly higher in the naproxin group compared to the placebo group (p=0.03). The healing rate of the placebo group was 25% and 30% in the antrum and duodenum respectively, whereas the healing rate of the naproxin group was 45% in the antrum and 50% in the duodenum. The results indicated that naproxin significantly促进了溃疡愈合, and the healing rate was significantly higher in the naproxin group compared to the placebo group (p=0.03).

**Conclusion:** The results of this pilot study support the hypothesis that naproxin facilitated ulcer healing in human gastroduodenal ulcers.

**Disclosure:** Dr. Aisenberg received independent research initiative grants from Pfizer. This research was supported by an industry grant from Pfizer.

**P32**

PREVALENCE OF HELICOBACTER PYLORI INFECTION IN GASTRIC BIOPSY SPECIMEN: A NATIONAL STUDY

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**Purpose:** Although the prevalence of _H. pylori_ infection is believed to be decreasing in industrialized countries and in emerging economies, recent data from the US are unavailable. This study was designed to evaluate the prevalence of _H. pylori_ infection in gastric biopsy specimens from a large nationwide sample of subjects who underwent esophagogastroduodenoscopy between 4/2007 and 3/2008.

**Methods:** We analyzed electronic data from Caris Diagnostics, a specialized gastrointestinal pathology group receiving specimens from gastroenterologists operating in community-based endoscopy centers in 40 states. For each patient, the database includes demographic and clinical information, summary of the endoscopic report, site of origin, and the histopathologic report for each biopsy. To identify the records for eligible biopsy specimens we extracted data from all cases with a report date within the 12-month period from 4/01/07 to 3/31/08. Data were stored in a Microsoft Access database. Statistical calculations were performed using StataGen 3.5. chi-square test, Student's t-test and the Mann-Whitney Rank Sum Test for non-parametric data were used as appropriate. A p value < 0.05 was considered significant.

**Results:** We extracted 78,909 endoscopic specimens (48,142 women, 30,767 men) who had undergone gastric biopsy. Their median age was 56 years (range 0-103). Chronic Active Gastritis (CAG, the quintessential histopathologic expression of _H. pylori_ infection) was diagnosed in 11,084 patients (14.05% of _H. pylori_ organisms were detected histologically in 9,492 subjects (12.03%, median age 56 years: 57.6% women). The prevalence of infection was 5.2% in children (<18) and 11.6% in elderly patients (>70); the peak prevalence rate (12.3%) was in patients aged 45 to 65. A high prevalence of _H. pylori_ (>18%) was found in cases from NY and IL, as well as Puerto Rico (29%); the lowest rate was in KS (3.8%). Intestinal metaplasia (IM), detected in 7.3% of all patients, was twice as prevalent in _H. pylori_-positive (12.6%) than in _H. pylori_-negative (6.5%) subjects (OR = 2.04, 95% CI 1.90 – 2.18). Irrespective of their _H. pylori_ status, patients with IM were older than those without (55 vs 56, p < 0.0001).

**Conclusion:** This large nationwide study indicates that the US population has a low prevalence of _H. pylori_ infection, comparable to that of other industrialized countries. As expected, children had the lowest prevalence, while the prevalence in older Americans was lower than those of middle-aged subjects, suggesting that frequent antibiotic treatments and the widespread chronic use of proton-pump inhibitors may result in the unintended eradication of the infection in the older population.


**P33**

THE COST-EFFECTIVENESS OF HIGH-DOSE INTRAVENTRICULAR ESMOPEPAZOLE IN PEPTIC ULCER BLEEDING - A US COST PERSPECTIVE

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**Purpose:** A recent multinational clinical trial (ClinicalTrials.gov identifier: NCT00251979) has shown that esomepazole (ESO), given as a continuous high-dose intravenous (iv) infusion followed by an oral regimen after successful endoscopic therapy for peptic ulcer bleeding (PUB), is effective in preventing re-bleeding. A minority of patients with myocardial infarction and risk factors for gastrointestinal bleeding who are discharged on aspirin and or clopidogrel are also discharged on proton-pump inhibitors may result in the unintended eradication of the infection in the older population.

**Methods:** A decision-tree model was developed to compare the cost-effectiveness of ESO (80mg infusion over 30min, then 5mg/h for 71.5h) to placebo for prevention of re-bleeding in patients who had undergone successful endoscopic hemostasis for PUB. Both groups received oral esomepazole 40mg once daily from days 4 to 30. The model adopted a 30-day time horizon using a US third-party payor perspective. Clinical probabilities for re-bleeding and length of hospital stay were taken from the recent trial. Per diem hospitalization costs (including physician fees) were extracted from national US databases, expressed in 2007 US$. Other assumptions were determined from the literature. The robustness of the model was determined by sensitivity analyses.

**Results:** 30-day re-bleed rates were 7.7% for ESO (n=375) and 13.6% for placebo (n=389), respectively. Average costs per patient for each group were US$14,290 and US$14,240, respectively. The incremental cost-effectiveness ratio was US$1913 per re-bleed averted with ESO. Sensitivity analyses of baseline assumptions revealed robust results, with the ESO strategy being dominant (more effective and less costly) with small variations in assumptions.

**Conclusion:** ESO given as a continuous high-dose iv infusion followed by an oral regimen after successful endoscopic therapy for PUB, improves outcomes at a modest increase in costs in a US health care environment.
Disclosure - Dr. Barkun · AstraZeneca: PUB Steering Committee Member and Grant/Research Support Dr. Adam · AstraZeneca: Grant/research support Dr. Sung · AstraZeneca: PUB Steering Committee Member and Grant/Research Support Dr. Nauclér · Dr. Kilhamn H Granstedt, Dr. Liljas and Dr. Lind are all employed at AstraZeneca.

This research was supported by an industry grant from AstraZeneca

P34

LENOFLOXACIN, ESOEMEPRAZOLE, NITAZOXANIDE AND DOXYCYCLINE) FOR THE TREATMENT OF PREVIOUSLY NON-RESPONSIVE HELICOBACTER PYLORI

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Purpose: Helicobacter pylori (HP) gastritis and peptic ulcer disease are global threats for gastric carcinoma including MALT tumors and pancreatic cancer. The WHO has even classified HP as a type 1 cancer. Multiple therapeutic regimens have been eradiated HP with variable success rates due to progressive drug resistance and virulent bacterial gene expression (CagA type). For example, metronidazole and clarithromycin are considered the “backbone” of most HP regimens, however in vitro resistance to these antibiotics has been reported to be as high as 40% and 13%, respectively. In addition, tolerability and patient compliance with these regimens can be problematic. This study evaluates a quadruple drug regimen, three antibiotics and a proton pump inhibitor (PPI), for the eradication HP in patients that have previously failed therapy.

Methods: Thirty (n=30) patients whom had previously failed an HP regimen (ages 20-65) with diverse ethnicity and demographics were evaluated. The previous regimens included: 9 (30%) proton pump inhibitor (PPI) monotherapy, 9 (30%) proton pump inhibitor + clarithromycin, 7 (23%) proton pump inhibitor + metronidazole, 3 (10%) proton pump inhibitor + metronidazole + clarithromycin, 2 (6.6%) proton pump inhibitor + clarithromycin + metronidazole + amoxicillin, and 1 (3.3%) patient regimen were not fully identified. The diagnosis of active ulcer disease or peptic ulcer disease was made using endoscopy and stool antigen testing. All patients were given LEND therapy (Levofloxacin 250 mg with breakfast, Esomепrazole 40 mg before breakfast, Nitazoxanide 500 mg twice daily with meals and Doxycycline 100 mg once a day for a total of 5 days with a wash out time of 6 weeks from any prior antibiotic or PPI use. HP eradication was confirmed by stool antigen testing 2 weeks after cessation of therapy (Quest Laboratory, Teterboro, NJ). Patients with active gastrointestinal bleeding, on non steroidal anti-inflammatory drugs, warfarin and histamine-2 receptor blockers were excluded from the study.

Results: In an intent to treat analysis, the eradication of HP was documented in 27/30 (90%) patients. The three failures were in patients that did not complete the full course of therapy, 2 (6.7%) complicated with dyspepsia and abdominal bloating with irregular bowel pattern and 1 (3.3%) stopped therapy due to non-specific itching that resolved without medical intervention. Overall the regimen was well tolerated.

Conclusion: This open-label prospective trial demonstrates that LEND (Levofloxacin, Esomeprazole, Nitazoxanide, and Doxycycline) is a highly active regimen for the treatment of Helicobacter pylori in patients that have previously failed therapy. A large randomized controlled trial will further establish the therapeutic superiority of this regimen.

Disclosure - Dr. Baus · Speakers Bureau: AstraZeneca, Pharma, Salix, TAP, Santoros, AstraZeneca, Abbott Dr. Rayapudi · None Dr. Etesev · None

P35

PERCUTANEOUS ENDOSCOPIC GASTROSTOMY (PEG) TUBE PLACEMENT IN PATIENTS ON ANTIPATELET AGENTS: IS THERE AN INCREASED RISK OF BLEEDING?

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Purpose: PEG tube placement is a common endoscopic procedure. A number of patients require PEG tubes are on antplatelet agents. Little data exist that address the risk of post operative bleeding when PEG is performed with the patient still on antplatelet agents. Aim: To determine the frequency of bleeding in patients taking Aspirin, Clopidogrel or both while having PEG tube placement and if this was affected by the number of days these agents were held prior to the procedure.

Methods: We performed a retrospective review of 537 patients who had PEG tubes placed between 1999 - 2007. Exclusion criteria included use of anticoagulants, an INR> 1.7, intubated patients, platelet count < 50,000/uL, and incomplete documentation. Bleeding criteria was defined as hemoglobin drop > 2 g/dL, melena or hematochezia within 48hrs of the procedure, the need for infusion of blood products or repeat endoscopy and readmission within one week of discharge for any GI bleeding. Patients divided in two groups. Group A (Aspmin, Clopidogrel or both within 5 days of stopping meds. No patients taking a PPI in this study bled. Group B controls not on antiplatelet agents).

Results: 214 (64.8%) patients were included in Group A (Ages 27-98, median 79), and 116 (35.1%) were in Group B (Ages 22-100, median 78). 207 patients were excluded due to improper charting or not having PEG performed. Bleeding was seen in 11 (5.1%) patients in Group A and 0 patients in Group B. Patients on Aspirin alone and 2 out of 46 patients on Clopidogrel alone (p = 0.215 and 0.140 respectively as compared to controls), 7 out of 72 (10%) on Aspirin/Clopidogrel bled (p = 0.01 vs controls). In Group B, 2 (2.6%) patients bled. Among bleeding patients 2 were on Aspirin alone also on a NSAID and steroid, 1 patient was on the NSAID and only one on the steroid and clotidogrel at the time of procedure. Bleeding patients were managed by stopping the respective drugs, blood transfusion (required in 1 patient, 1 units of PRBC). No patient needed repeat endoscopy and there were no mortalities. Most patients in Group A stopped the antplatelet agents 2-3 days prior to the procedure. All episodes of bleeding occurred if PEG placed between days 0-3 of stopping med. No patients taking a PPI in this study bled.

Conclusion: The combination of ASA and Clopidogrel increases the risk of post PEG bleeding especially when patients are on concomitant use of SSRI’s, NSAIDS and steroids 2) Aspirin or Clopidogrel does not appear to significantly increase the risk of bleeding in patients undergoing PEG procedure. 3) Though bleeding appears to be minor, elective PEG should not be performed in patients on more than one antplatelet agent.
PIES (PREDICTORS OF IMPROVEMENT AFTER ELECTRICAL STIMULATION) IN GASTROPATHY

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Objective: To predict response to Gastric Electrical Stimulation (GES) in medically-refractory GERD (GERD) and to identify a patient group for which GES may be beneficial.

Methods: 394 consecutive GP patients (320 F, 74 M, mean age 43 years) were consented for GES treatment. GP (GERD) and pGES (pGERD) were assessed with the cardioesophageal symptom questionnaire (CQ). Esophageal mucosal EGG. Linear regression determined independent variables predicting the latest vomiting score.

Results: Median follow-up was 57 months (range 10 months to 12 years). In analysis by etiology, virtually all patients (L > 0.001, DM, p < 0.0001). An independent variable was found to be predictive of vomiting score: wt age, baseline vomiting score and Rt. In subset analysis, these predictors were most significant for ID. Among all categories of GP, linear regression analysis identified a low Rt derived by the use of post-GES as the single best predictor of response to pGES and pGES.

Conclusion: Persistent GERD for severe GP results in significant and sustained improvement of overall symptoms and quality of life. The independent predictors of response (age, Vb score, and Rt) were most significant in ID patients. Rt derived from endoscopic GES mucosal EGG. Linear regression determined independent variables predicting the latest vomiting score.

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because it modifies the prognosis and may impact subsequent clinical management. A review of the existing literature reveals that the diagnosis of ACC has been made primarily via intraoperative means. However, if a less invasive technique such as EUS-FNA can provide adequate cellular material to attain a preoperative diagnosis of ACC.

Methods: After obtaining institutional review board approval, we reviewed the records of all patients who underwent EUS-FNA at our center from May 2008 to our most recent discharge. Most patients were evaluated for adenocarcinoma of the pancreas. Patients with a cytologic diagnosis of ACC on EUS-FNA were included in this series. The data abstracted included patient age, gender, presenting symptoms, tumor location, the number of passes via EUS-FNA, the presence of cytologic and histologic diagnosis of ACC, needle size used, specimen quality and adequacy, and surgical findings, if surgery was performed.

Results: We identified 10 patients with a diagnosis of ACC obtained via EUS-FNA during the study period. The cytologic diagnosis via EUS-FNA included 7 patients with ACC, 1 patient with only 2 patients with a mixture of ACC/PNCT, and one with a poorly differentiated adenocarcinoma suggestive of ACC. The mean age was 63.4 years (range 29-87), with a M/F ratio of 6:4. Presenting symptoms included abdominal pain, weight loss, new-onset diabetes, pancreatitis, jaundice, ascites, and anemia. Tumor locations were: head (2), body (4), tail (3), and diffuse (2). The mean number of FNA passes performed was 1.5, with 70% of the patients achieving a diagnosis on the first pass. Needle size was 22 or 25 G for all EUS-FNA. All specimens were satisfactory for evaluation, with the specimen quality being highly cellular in 9/10 and scant to moderately cellular in the remaining patient. Two patients underwent subsequent laparoscopic radical subtotal distal pancreatectomies, with one undergoing an accompanying splenectomy. Surgery confirmed the diagnosis of the patient, while a mixed ACC/PNCT was seen in the second.

Conclusion: The present case series is the largest to report EUS-FNA as a diagnostic modality for ACC. Our results suggest that EUS-FNA is a feasible, accurate, and minimally invasive alternative to previous techniques used in identifying ACC. EUS-FNA of pancreatic masses should be considered proactively to identify this variant pancreatic tumor because of its distinctly different prognosis when compared to FNA or PA. This information will allow for a more accurate prognosis and may impact treatment choice.

P43
FEASIBILITY OF ENDOSCOPIC INTRA-DUCTAL BALLOON CRYOTHERAPY IN THE BILE DUCT USING A SWINE MODEL
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Purpose: The purpose of the study is to evaluate the technical feasibility and histologic effects of endoscopically guided balloon-catheter delivered cryotherapy in the common bile duct in a swine model
Methods: This study was approved by the Walter Reed Army Medical Center Department of Clinical Investigation and the Uniformed Services University of the Health Sciences IACUC. Following an overnight fast, 4 Yorkshire swine were sedated, endotracheally intubated and anesthetized. Each animal underwent an endoscopic retrograde cholangiopancreato-gram (ERCP). Following a cholangiogram, the bile duct was reconstituted with a Boston Scientific 3mm x 20cm balloon catheter over a 0.014 inch guidewire. Once the balloon catheter was inserted into the duct, the catheter was slightly withdrawn until the balloon was seen at the ampullary orifice. The balloon was then attached to the inflation device and inflated from 2 to 9 times. The catheter was stable during inflations. The endoscopic and fluoros- oscopic portions of the procedure were recorded. Three of the animals were observed for 72 hours and one for 69 hours. At 67 hours, three animals underwent a repeat ERCP. The procedure was video-taped. The animals were euthanized and taken for necropsy. The portion of the duode- num containing the ampulla and the entire bile duct up to 2 cm beyond the bifurcation of the bile duct were placed en bloc into formalin. Histologic sections were taken from the treated segments and from the untreated segments. The tissue was embedded in paraffin and sectioned for analysis.
Results: The mean size of the bile duct of the animals prior to balloon inflation was 5.3 ± 0.8 mm. The size of the bile duct following the treatment was 4.3 ± 0.8 mm (p<0.006). No struc- tures were seen on the subsequent cholangiograms. All animals had some necrosis of the bile duct mucosa. One animal demonstrated multifocal mucosal to transmural (focal) necrosis of the bile duct. The tissue was associated with inflammation along with varying degrees of fibroplasia. There was significant inflammation of the periductal fat. There was abundant fibrin- oplasia in these areas, along with necrosis, and multifocal fibrinoid necrosis. In most in- stances, there is healthy bile duct submucosa interposed between areas of mucosal necrosis and steatosis. No animals demonstrated circumferential necrosis of the bile duct mucosa. The necro- sis was focal to multifocal in all animals.
Conclusion: Endoscopic Intra-ductal Balloon Cryotherapy in the bile duct is feasible. The results of this initial pilot study will lead to a larger study to ascertain safety, dosimetry and poten- tial for efficacy.

P44
DO US REGIONS WITH THE HIGHEST RATES OF OBESITY HAVE THE HIGHEST FREQUENCY OF HOSPITAL DISCHARGES FOR PANCREATIC ADENOCARCINOMA? AN ANALYSIS OF US SECULAR TRENDS
2008 ACG Presidential Poster Award Recipient
B. E. Young, MD, A. Brown, MD, MS Clin Epi. Beth Israel Deaconess Medical Center, Boston, MA
Purpose: Pancreatic adenocarcinoma (PanC CA) is a lethal disease. Obesity has been described as an independent risk factor for pancreatic cancer. The goal of this study was to determine if regions in the United States that have the highest percentages of obesity also have the highest frequencies of hospital discharges with adenocarcinoma of the pancreas.
Methods: We used the National Inpatient Sample (NIS) database in order to determine the fre- quency of cases of PanC CA seen in US hospitals. The NIS is the largest all-payer inpatient database in the United States. The NIS contains discharge data collected from over 1,400 hos- pitals in the US. Each NIS represents a 20% stratified sample of US hospitals. We searched the NIS database for all discharge diagnoses with ICD-9 code 157.0-157.9, which identified all cases of neoplasms of the pancreas body, tail, pancreatic duct, inlets cells and NOS. We se- lected only the years 1997-2006. We determined the frequency of pancreatic cancer cases in four US regions, the South, Northeast, West and Midwest. We then compared the frequency of PanC CA hospital discharges per region with national statistics on the percentage of the obese adult population for all 50 states obtained from the Centers for Disease Control Behavioral Risk Factor Surveil- lance System (2005) (BRFSS). We also stratified by race and gender. We also looked at the in-hospital mortality for PanC CA by region.
Results: During the period from 1997-2006 there were a total of 325,477 hospital discharges with PanC CA of the head, body, tail, duct, islet cells and NOS. During this period the Southern region of the United States had the highest frequency of discharges with PanC CA. The Western region generally had the lowest frequency of PanC CA. Comparison to the CDC BRFS surveil- lance data revealed that in Southern regions of the US the highest percentages of obese adults in the United States. The Northeast and Western regions had the lowest percentages of obese adults in the United States. Stratification by race and gender did not change the ob- served trends. Mortality varied by year and by region, but did not show the same trend as can- cer incidence in the South.
Conclusion: These data indicate that US regions with the highest percentage of adults with obesity also have the highest frequency of hospital discharges with PanC CA, while mortality is variable. Further population based studies are needed to determine the strength of the associ- ation between the percentage of the adult population that is obese and the development of pancreatic adenocarcinoma.
P46

RADIAL VS. LINEAR EUS IN EVALUATION OF SUSPECTED PANCREATIC CANCER. IS IT NECESSARY TO USE LINEAR EUS ALONE?


Purpose: Endosonography is widely used for diagnosis and staging of pancreatic cancer. The radial endoscopic ultrasound (R-EUS) provides high quality cross sectional images, but cannot guide fine needle aspiration (FNA). Linear EUS (L-EUS) has the ability to guide FNA but has a limited field of view. Use of both endoscopes may improve pancreatic cancer staging, but is less efficient. In this study, we evaluated the accuracy of R-EUS and L-EUS endoscopes alone and in combination for the detection and staging of pancreatic malignancies.

Methods: Patients suspected of having a pancreatic mass underwent R-EUS and L-EUS evaluation by 1 of 3 experienced endosonographers. Patients were randomized to which procedure was performed first. If an FNA was required, it was performed after completing both examinations. Examinations were recorded in a standardized order: (pancreas body-from stomach, pancreatic head-from duodenal bulb, pancreas uncinate-from 3rd duodenum, liver, and mediastinum). Offline reviews of recorded procedures were then performed by 2 EUS endoscopists, neither of whom had performed the procedure, and were blinded to the findings of the original exam and alternative endoscopes. IRB approval was obtained.

Results: To date a total of 14 patients (study ongoing) underwent EUS for suspected pancreatic malignancy. One patient was excluded because of defective recording. T staging agreed in 9/13 patients (70%). R staging agreed in 8/13 (62%) (Table 1). In the other 5 cases, R and L each labeled 2 separate patients as T4, while L and R labeled them as T2 and T3 respectively. In one patient, the radial did not identify a T4 lesion. N staging agreed in 9/13 (70%) (Table 2). In M staging, R identified 1 M stage, which was not seen by L exam. Limitations: Small number of patients; TNM staging was based on recorded procedures, and not real time.

Conclusion: Based on reviewing recorded R and L EUS, there is poor agreement in TNM staging between R and L EUS. Patients suspected of having a pancreatic tumor should undergo both procedures for proper staging evaluation.

Table 1 Comparison of T Staging by R-EUS and L-EUS. Total 13 patients. Number represents number of patients for each T stage by corresponding procedure.

<table>
<thead>
<tr>
<th>T T staging by R-EUS</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>T staging by L-EUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T 1-3</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T 4</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>No Tumor</td>
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</tbody>
</table>

There was an agreement in 9/13 patients (69%).

Table 2 Agreement of lymph node staging evaluation by R-EUS and L-EUS. Numbers represent number of patients corresponding to N stage.

<table>
<thead>
<tr>
<th>N N staging by R-EUS</th>
<th>0</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>N staging by L-EUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N 0</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>N 1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

There was an agreement in 9/13 patients (70%).

P47

DOES RATE OF GROWTH DIFFERENTIATE BETWEEN MUCINOUS AND NON-MUCINOUS PANCREATIC CYSTS?

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Purpose: The natural history of pancreatic cysts is not clearly defined. It has been suggested in the surgical and radiologic literature that surveillance with cross-sectional imaging for cysts less than 3 cm in size is adequate management. The goal would be to identify cysts that are increasing in size, warranting early intervention. We sought to identify clinical or radiologic parameters that might predict the presence of mucinous cysts (MC) and, more importantly, the rate of growth that may reliably differentiate a MC from a non-mucinous cyst.

Methods: The charts of patients that underwent EUS for a pancreatic cyst from 1999-2006 were reviewed. Each cyst was characterized as mucinous, non-mucinous or malignant based on cyst fluid analysis, fluid cytology and surgical pathology (when available). Patients with multiple cross-sectional imaging studies prior to EUS were identified and the rate of annual growth of the cystic lesion was calculated. Receiver operating characteristic (ROC) analysis was performed to evaluate the ability of rate of growth to differentiate between mucinous and non-mucinous cysts and between malignant and non-malignant lesions.

Results: We identified 194 consecutive patients that underwent EUS for the evaluation of pancreatic cysts at our center. Mean age of subjects was 66 years (±13.7) and 75% were female. The size of the cyst on EUS correlated with the presence of a mucinous cyst (p=0.02). Age, gender, the presence of symptoms, and location of the cyst in the pancreas did not predict the presence of mucinous lesions. Forty-seven patients (24%) had multiple imaging studies prior to EUS. ROC analysis demonstrated that the rate of growth did not help to distinguish MC from non-mucinous cysts (AUC=0.61). However, a rate of growth greater than 0.5 cm per year predicted a malignant cyst (ROC AUC=0.69, sensitivity 83%, specificity 78%).

Conclusion: A rate of growth greater than 0.5 cm per year suggests the presence of malignancy in a pancreatic cystic lesion. However, rate of growth by cross-sectional imaging cannot reliably distinguish between mucinous and non-mucinous cysts. Stability in size on cross-sectional imaging does not rule out the possibility of a pre-malignant mucinous cyst. Therefore further evaluation by EUS-FNA of cysts that are amenable to aspiration is warranted.

P48

ELEVATED SERUM CREATININE AS A MARKER OF PANCREATIC NECROSIS IN ACUTE PANCREATITIS

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Purpose: Pancreatic necrosis is a serious complication of acute pancreatitis. The identification of simple laboratory tests to detect subjects at risk of pancreatic necrosis may direct management and improve outcome. To study the association between routine laboratory tests and the development of pancreatic necrosis in patients with acute pancreatitis.

Methods: In a cohort of 188 prospectively enrolled patients with acute pancreatitis for Severity in Acute Pancreatitis study (SAPS), patients with contrast enhanced computerized tomography performed were selected (n=129). Serum creatinine, creatine and urea nitrogen on admission and peak values within 48 hours of admission were analyzed. The volume of intravenous fluid resuscitation was calculated for each patient.

Results: Thirty-five of 129 (27%) patients had evidence of pancreatic necrosis. Receiver operating characteristic curves for predicted values of creatinine at admission (p<0.0001) and peak (p=0.003) creatinine at admission and 24 hours after demonstrated that a rate of growth greater than 0.5 cm per year predicted a malignant cyst. The volume of intravenous fluid resuscitation was similar in patients with and without necrosis. Low admission creatinine (≤44.8 mg/dL) yielded a negative predictive value of 89%; elevated peak creatinine (>1.8 mg/dL) within 48 hours yielded a positive predictive value of 93%.

Conclusion: We confirm that a low admission creatinine is negatively associated with the development of necrosis in patients with acute pancreatitis. In contrast, an increase in creatinine within the first 48 hours is positively associated with pancreatic necrosis. This finding may have important clinical implications and warrants further investigation.

Sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) and accuracy of admission Hct and peak Cr within 48 hours as predictive tests for the development of PNec.

<table>
<thead>
<tr>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
<th>Accuracy (%)</th>
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<tbody>
<tr>
<td>70.6</td>
<td>83.7</td>
<td>61.5</td>
<td>88.5</td>
<td>80.2</td>
</tr>
<tr>
<td>48-hour peak Cr</td>
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P49

ANTIBIOTIC PROPHYLAXIS REDUCES THE INFECTIOUS COMPLICATIONS AND MORTALITY IN SEVERE ACUTE Pancreatitis: PRACTICAL REVIEW AND META-ANALYSIS OF 12 TRIALS

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Purpose: Acute pancreatitis is commonly encountered in our daily practice and is associated with significant morbidity and mortality. The role of prophylactic antibiotics is still unsettled since studies evaluating its benefits have produced disparate results. This meta-analysis was conducted to examine the role of antibiotics in severe acute pancreatitis to reduce the infectious complications and mortality.

Methods: A computer-assisted search in PubMed, Medline, Embase, Current Contents, and OVID, covering the period January 1970 to December 2007 was performed. Identified trials were rated and classified into two levels and data was extracted.

Results: A total of 12 trials were identified and included 908 subjects. There was no difference in baseline characteristics of the patients in antibiotic or placebo group (25% vs. 40%, χ² = 19.45, p<0.01, OR = 0.41, 95% CI 0.21-0.80). The difference in mortality rate in these two groups (Figure 2) is also statistically significant (8% vs. 15%, χ² = 7.01, p<0.01, OR = 0.56, 95% CI 0.36-0.87). The pooled χ² analysis according to different time frame and antibiotic also revealed similar results.

Conclusion: Our study showed a significant reduction in overall infection rate and mortality in patients receiving the use of antibiotic. We recommend the use of antibiotics for most cases of severe acute pancreatitis; as we live in a new era where our in-patient population is much sicker and more severely ill than those ten or twenty years ago, when the admission criteria were much less stringent. Clinicians should consider antibiotics that have adequate penetration into the pancreatic tissue such as imipenem for 10-14 days.

Figure 1
drains without improvement in stricture in 32 patients over the average period of 36 months (range 24-36 months). In one patient an endoscopic therapy was unsuccessful in transversing the stricture.

Controls: The incidence of CISC was assessed in the same patients that were used for hemorrhagic pancreatitis. The aim of this study is to investigate 1) the incidence of acute pancreatitis in patients with cystic tumor of pancreas and 2) clinical manifestation of acute pancreatitis.

Methods: Cystic tumors of pancreas detected from 2000 to 2007 were retrospectively reviewed more than 3 months in SNUH. A total of 447 patients with cystic tumor were as follow: mucinous cystic neoplasm (117), serous cystadenoma (63), intraductal papillary mucinous neoplasm (IPMN) (267). Mean follow-up periods were 28.6±24.5 months (range 3.6-83 months).

Acute pancreatitis was defined as the presence of acute abdominal pain, elevation of serum and urinary levels of pancreatic enzymes and abnormal radiologic finding. Patients with a known cause of acute pancreatitis were excluded.

Results: The incidence of acute pancreatitis with cystic tumor of pancreas was (2%, 9/447). Initial laboratory findings were serum amylase (556-686.8 U/l/d), lipase (114±235.8 U/l/d) and CRP 7.4±2.9. 8 of all patients were focal pancreatitis (ranson score 1-2, CT severity index score 1-2) and one patient showed diffuse edematous pancreatitis with extrapancreatic fluid collection (ranson score 4, CT severity index score 4). All patients were successfully managed with medical treatment. Cystic tumor with acute pancreatitis were as follow: intraductal papillary mucinous tumor (7), mucinous cystic tumor (1), serous cystic tumor (1). Main site of involvement was the tail of pancreas (89%), head and uncinate process and mean size of cyst was 2.4±6.9 cm. Six (66.6%) of 9 patients had recurrent acute pancreatitis. Among 6 patients, IPMN was 5 patients and serous cystadenoma was 1 patient. Mean episode of acute pancreatitis was 2.3±2.4. The time interval of relapse was 8.6±4.7 months. Four (66.6%) of 6 recurrent pancreatitis underwent surgical resection. Decisions of surgery were suggesting premalignant lesion (3) and severe abdominal pain (1) during follow up. The final diagnoses of patients after surgery were invasive IPMN (2), non invasive intraductal papillary mucinous carcinoma (1) and serous cystadenoma (1).

Conclusion: Acute pancreatitis is caused by cystic tumor of pancreas show low incidence(2%) and mild clinical course. However, cystic tumor of pancreas, especially IPMN, may induce acute recurrent pancreatitis. Cystic tumor with acute recurrent pancreatitis may be considered as surgical resection.

P52

EVALUATION OF INTRAHEPATIC CHEMOTHERAPY INDUCED SCLEROSING CHOLANGITIS BY ENDOSCOPIC THERAPY: INCIDENCE AND OUTCOME ANALYSIS

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Purpose: To assess the incidence of chemotherapy induced sclerosing cholangitis (CISC) and to evaluate the efficacy and outcome of endoscopic therapy in the management of CISC. Floxuridine (FUDR) is a fluorinated pyrimidine antimetabolite which is infused through the hepatic artery for the treatment of hepatic metastasis from colorectal cancer. Several adverse reactions to this drug are observed; the most severe of them is chemotherapy induced sclerosing cholangitis (CISC), which is the incidence of 8%.

Methods: Outpatient surgical oncology records were reviewed to identify the patients with liver metastasis from colorectal cancer who received intrahepatic FUDR chemotherapy between January 1998 and January 2006. These patients were then cross referenced with our endoscopic retrograde cholangiopancreatogram (ERCP) database. Additional information was obtained by review of medical records.

Results: Sixty-six patients (26 females and 40 males) received infusional intrahepatic chemotherapy for liver metastasis secondary to colorectal cancer. The mean age at presentation was 62.13 years (range 36-81 years). Sixteen patients developed CISC secondary to FUDR (13 males and 3 females). Cholangiogram revealed bismuth type I stricture in two patients, type II in five patients, three in five patients type III-A in three patients, and type III-B in one patient. All patients had ERCP to alleviate the presenting symptoms. An improvement in the stricture was seen in nine patients, over an average period of 13.54 months and with 3.78 average sessions of ERCPs. Improvement in stricture was remarkable to the point that removals of stents were possible in all nine patients. The grade and extent of biliary strictureing minimally changed in one patient. Stricture progression was noted in five patients with average numbers of 2.8 ERCPs; two out of these five patients had a placement of percutaneous biliary
**P55**

**PATIENT CHARACTERISTICS OR TYPE OF BILIARY ANASTOMOSIS WITH OR WITHOUT T-TUBE PLACEMENT DOES NOT INFLUENCE BILIARY COMPLICATION RATE AFTER LIVER TRANSPLANTATION**

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**Purpose:** Biliary complications remain a substantial cause of morbidity following liver transplantation and can lead to reduced patient and graft survival. There are conflicting data on whether different patient characteristics or differences in surgical techniques would affect biliary complication rates after liver transplantation. Our purpose was to evaluate the effect of patient characteristics and surgical technique on development of biliary complications after liver transplantation.

**Methods:** Patients that underwent liver transplantation at our institution during a two year period (2004-2005) were identified. Information collected included age, gender, indication for transplantation, type of biliary anastomosis, and whether a T-tube was placed during the surgery. Immediate and late post operative biliary complications were recorded. Univariable Cox proportional hazards models were used to estimate the hazard rates for factors of interest.

**Results:** Two hundred and thirteen liver transplantations were performed in 202 patients. Eleven patients (5.4%) had two liver transplantations. Seventy seven patients (38.1%) underwent duct-to-duct-to-duct anastomosis without T-tube placement, 97 patients (48.0%) underwent duct-to-duct anastomosis with T-tube placement, 21 patients (10.4%) underwent Roux-en-Y choledochojunostomy, and 7 patients (3.5%) underwent choledochoduodenostomy. Median follow-up period was 12 months (Q5, Q75: 2, 21). A total of 76 biliary complications occurred in 55 patients (27.2%). The biliary complications were as follows: 36 (47.4%) duct-to-duct anastomotic strictures, 25 (32.9%) duct-to-duct anastomotic leaks, 6 (7.9%) non-anastomotic ischemic strictures, 4 (5.3%) biliary enteric anastomotic strictures, 3 (3.9%) biliary enteric anastomotic leaks, 1 (1.3%) cystic duct leak, and 1 (1.3%) gallbladder fossa leak. Age, gender, indication for transplantation or type of biliary anastomosis with or without T-tube placement did not influence the complication rate.

**Conclusion:** Patient characteristics or type of anastomosis with or without T-tube placement does not influence biliary complication rate after liver transplantation.

**P56**

**LARGE CELL WIDTH EXPANDABLE METAL STENTS FOR ENDOBILIOPAPSTIC BILIARY STEM PLACEMENT OF MALIGNANT HILAR BILIARY OBSTRUCTION**

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**Purpose:** Placement of biliary stents is effective for palliation of unresectable hilar malignant biliary obstruction. However, when bilateral self-expandable metal stents (SEMS) are used it can be technically challenging. In many studies side by side placement is performed, though it is unclear if this is the most anatomical and functional approach. We describe the technical feasibility and effectiveness of deploying bilateral SEMS with ‘stem-within-stent’ approach using stents with a large cell width.

**Methods:** After diagnostic ERCP is performed, a guidewire is passed selectively into the duct of the interest. The first SEMS (Flexxon, ConMed, Billerica, MA) is deployed across the bifurcation. The guidewire remains in place and the delivery system is removed. Over the wire a standard accessory (catheter or occlusion balloon) is placed into the first stent. The wire is withdrawn into the catheter and re-directed to the collateral intrahepatic system through the interstices of the initial SEMS. In some cases the interstices requires balloon dilation. The second SEMS is deployed through the interstices of the initial SEMS.

**Results:** From August 2002-November 2007 this technique has been successfully used in 21 patients with malignant hilar obstruction (15 men, 6 women; mean age 63.7 +/- 13.9 years). Etiology of biliary obstruction was cholangiocarcinoma in 14, metastatic pancreatic cancer in 4, metastatic colon cancer in 2 and B-cell lymphoma in 1 patient. Biliary drainage was successfully established in all cases resulting in clinical improvement of obstructive symptoms. Follow-up was obtained to assess need for endoscopic re-intervention and patient mortality. Mean follow-up was 6.14 +/- 3.6 months. There were one early (5%) and seven (33%) late stent occlusions, which required endoscopic re-intervention. Thirty day mortality was 10% (2 deaths).

**Conclusion:** This simple technique utilizing an open cell expandable metal stent is technically feasible, easy and allows bilateral placement of SEMS in patients with unresectable hilar malignancy.

**P57**

**GABEXATE FOR PREVENTION OF POST-ERCP PANCREATITIS: A META-ANALYSIS**

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**Purpose:** Acute pancreatitis is a common complication of ERCP. Over the years, attempts have been made to identify agents to prevent this complication. Since the activation of proteases has been implicated in the pathogenesis of post ERCP pancreatitis, gabexate, a protease inhibitor, has been used in an attempt to prevent pancreatic damage related to ERCP. However, results have been inconsistent. We conducted a meta-analysis to evaluate the use of prophylactic gabexate for the prevention of post-ERCP pancreatitis.

**Methods:** MEDLINE, Cochrane Central Register of Controlled Trials & Database of Systematic Reviews, PubMed, and recent abstracts from major conference proceedings were searched (through 10/07). RCTs comparing prophylactic gabexate to placebo or control for the prevention of post-ERCP pancreatitis were included. Standard forms were used to extract data by two independent reviewers. The effects of gabexate were analyzed by calculating pooled estimates of post-ERCP pancreatitis, hyperamylasemia, hospital stay, grade of pancreatitis, and mortality. Meta-analyses were performed for each outcome by using odds ratio (OR) or weighted mean difference (WMD). Random effects model was used. Publication bias was assessed by funnel plot. All studies were graded by Jadad scores. Heterogeneity among studies was assessed by calculating I^2 measure of inconsistency.

**Results:** Six RCTs (N=2,827) met the inclusion criteria. Dose of gabexate ranged from 300 mg – 1 gm. All studies started gabexate infusions 30-90 minutes prior to the procedure. The duration of gabexate infusion ranged from 2-12 hours. Gabexate infusion did not decrease the odds of post-ERCP pancreatitis (OR 0.65, 95% CI 0.36-1.18, p=0.16), hyperamylasemia (OR 0.96, 95% CI 0.78-1.17, p=0.69), mortality (OR 0.59, 95% CI 0.15-2.29, p=0.44), or abdominal pain (OR 0.92, 95% CI 0.42-2.03, p=0.84). A trend was observed for milder pancreatitis in gabexate patients but was not statistically significant (OR 0.71, 95% CI 0.39-1.30, p=0.27). Sub-group analysis of trials using longer infusions (> 12 hours) and larger doses (> 1 gram) did not decrease post-ERCP pancreatitis (OR 0.38, 95% CI 0.15-2.20, p=0.44 and OR 0.58, 95% CI 0.15-2.20, p=0.44 respectively). No significant publication bias was present.

**Conclusion:** Gabexate administration before ERCP does not prevent post-ERCP pancreatitis, hyperamylasemia, mortality, and pain.

**P58**

**OUTCOMES OF INTERVENTIONAL ERCP IN HEREDITARY PANCREATITIS**

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**Purpose:** Hereditary Pancreatitis (HP) is an autosomal dominant disease characterized by recurrent acute pancreatitis progressing to chronic pancreatitis. In addition to supportive measures, traditional treatment has included surgical decompression or resection. There are limited data evaluating the outcomes and role of interventional ERCP in HP. The aims of this study were to evaluate patients with HP before the first and after the first and last interventional ERCP(s).

**Methods:** From 1990 to 2008, 21 patients with HP received care at our institution and were retrospectively assessed for response to therapeutic ERCP. Medical records were reviewed and a telephone survey was conducted to obtain information. Data collected included documentation of hereditary etiology, ERCP interventions and complications, pancreatic surgeries, pre and post ERCP pain levels, daily oxycodone equivalent usage, yearly hospitalizations, incidence of diabetes, and pancreatic enzyme usage. Statistical methods included a Wilcoxon Signed Rank test and a box plot background. A box plot gives a compact display of the distribution of a variable. Each measure of a change has been calculated as the pre ERCP value minus a post ERCP value; Differences greater than zero indicate a benefit from the procedure.

**Results:** 21 patients underwent a total of 87 interventional ERCPs (mean 4, range 1-9) and were followed up for a mean period of 5 years (2-212 months). Interventions included sphincterotomy, stone extraction, duct dilation, and stent placement. The mean patient age at diagnosis, first ERCP and follow up was 15, 19 (2,39), and 28 years, respectively. 11 of 12 patients (92%) who received surgical therapy required subsequent interventional ERCPs. Pre and post first ERCP mean pain scores decreased from 8.3 to 3.2 (p <.001) and post last ERCP scores decreased to 2.7 (p <.001). Yearly hospitalizations decreased from 5.7 to 1.8 (p <.001) and then to 1.6 (p <.001). Daily oxycodone equivalent usage decreased from 39 mg to 34 mg (p<.07) and then to 9.4 mg (p <.05). Complications included pancreatitis in 3% with no perforations, bleeding, or infection.

**Conclusion:** Despite decompressive or resective surgeries in 12 of 21 patients, the majority (92%) developed subsequent complications and required endoscopic therapy. 2) Endoscopic management for amenable lesions often requires multiple ERCPs. 3) Interventional ERCPs in patients with HP is associated with decreased pain, analgesic usage, hospitalizations, and episodes of recurrent pancreatitis.
### P59

**LONG-TERM FOLLOW-UP OF PANCREATIC NECROSIS WITH CT SCAN: WILL THE PANCREAS REGENERATE?**

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**Purpose:** Long-term follow-up studies about pancreatic regeneration following necrosis in acute necrotizing pancreatitis (ANP) are very few and such regeneration was rarely reported. The aims of this study were to assess whether areas of pancreatic necrosis can regenerate into viable pancreatic tissue by examining follow-up CT scans one year or more after the initial diagnosis of ANP, and examine the incidence of obstructive pancreatic atrophy, an important complication of ANP.

**Methods:** The patient population was comprised of Mayo Clinic patients with ANP diagnosed between 2000 and 2002 that had contrast-enhanced CT scans as part of their initial evaluation within one week of onset of symptoms. Subjects were selected for the study if they had follow-up CT at least 1 year after their initial diagnosis, allowing evaluation of the pancreas for regeneration of viable tissue. A dedicated radiologist assessed all the initial CT studies to determine the extent of necrosis and presence of fluid collections. The subsequent CT evaluations were examined to determine regeneration of the pancreas in areas of initial necrosis and whether ductal dilatation had developed.

**Results:** Fifteen patients with ANP and follow-up CT anywhere from 1 to 6 years after initial diagnosis comprised the study group. On follow-up CT, 13 (87%) of these patients demonstrated atrophy of the previously necrotic area of pancreas or residual necrosis. However, in 2 (13%) of the patients, there was apparent regeneration of viable parenchyma. One of these patients exhibited <30% necrosis of the pancreas on initial CT, while the other patient initially had >50% necrosis. Both patients had peri-pancreatic fluid collections on initial CT that were decreased or resolved on follow-up. Four (27%) patients developed ductal dilatation suggesting obstructive pancreatic atrophy.

**Conclusion:** In this long-term CT follow-up study of ANP, pancreatic regeneration of necrotic areas was very rare, and atrophy was the common end result. Obstructive pancreatitis was not an uncommon sequela of ANP. These results might be useful when counseling patients with ANP about their long-term outcomes of the disease.

### P60

**ROLE OF ENDOSCOPIC ULTRASOUNDOGRAPHY AND A TRIAL OF TRICYCLIC ANTIDEPRESSANTS IN PATIENTS WITH SUSPECTED SPHINCTER OF ODDI DYSFUNCTION III**

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**Purpose:** Endoscopic retrograde cholangiopancreatography (ERCP) with sphincter of Oddi manometry (SOM) and sphincterotomy in patients with suspected Sphincter of Oddi dysfunction (SOD) III often leads to an unpredictable treatment response and might be associated with a high incidence of post procedure pancreatitis. The purpose of this research is to describe upper abdominal endoscopic ultrasonography (EUS) findings in a group of patients with suspected SOD III and evaluate the role of trial of tricyclic antidepressants (TCA) in helping symptoms thereby reducing the need for ERCP with SOM and sphincterotomy in this scenario.

**Methods:** Over a 12 month period, 17 patients (all female) with suspected SOD III (Recurrent episodes of right upper quadrant and epigastric pain with normal liver enzymes and pancreatic enzymes and no evidence of common bile duct or pancreatic duct dilation on imaging studies) were referred to our center for consideration of ERCP with SOM and possible sphincterotomy. Prior to performing ERCP with SOM, patients were asked to undergo an upper abdominal endoscopic ultrasonography (EUS). If the EUS findings were insufficient to explain the cause of pain, patients were placed on a TCA. Patients underwent ERCP with SOM if pain did not improve with at least a 2 month trial of TCA.

**Results:** Mean age of patients was 49 years (Range 22-73yrs). EUS findings were normal in 16 (94%) patients, 1 patient had cholecystolithiasis who later underwent ERCP with stone extraction (2/16). They were on amitriptyline (dose 10-25 mg/day), and the other 4 were on nortriptyline (dose 10-20 mg/day). 3/16 patients (19%) subsequently underwent ERCP with SOM manometry as their symptoms did not improve with TCA. All these patients were treated with endoscopic sphincterotomy as their SOM pressures were high (>40mmHg).

**Conclusion:** Conclusions: 1) Upper abdominal EUS is non-diagnostic for abdominal pain in the majority of patients with suspected SOD III 2) A therapeutic trial of TCA seems to be a reasonable option to pursue prior to proceeding with endoscopic sphincterotomy in this cohort of patients.
PREVALENCE OF ACUTE PANCREATITIS IN SICKLE CELL DISEASE

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Purpose: The prevalence of acute pancreatitis (AP) in sickle cell disease (SCD) is not known. Sparse data is available in the literature. Gallstones, one of the leading causes of AP in the general population, are frequently found in patients with SCD. Kings County Hospital Center (KCHC), in Brooklyn, has a large population with sickle hemoglobinopathies. We aim to find the prevalence of AP and to assess clinical outcomes in this subset population; where abdominal pain includes many differential diagnoses not limited to sickle cell crisis. Therefore knowing the prevalence of AP in SCD patients could help to improve the management of SCD.

Methods: Adult SCD patients followed at KCHC were identified via a retrospective electronic medical record search using ICD-9 codes. Diagnosis was confirmed by reviewing high performance liquid chromatography. Acute pancreatitis was defined as meeting two of the three following criteria: 1. Elevated amylase and lipase (both defined as three times upper limits of normal range) 2. Radiological evidence of pancreatitis 3. Abdominal pain. Clinical outcomes evaluated were morbidity [measured by length of stay (LOS)] and mortality.

Results: We identified 445 patients with a diagnosis of SCD (68.1% (n=303) had hemoglobin SS (Hb SS), 25.2% (n=112) hemoglobin SC (Hb SC), 6% (n=27) had sickle trait, and 0.7% (n=3) had sickle/β-thalassemia trait. In this group, 7% (n=33) had acute pancreatitis, 28 patients with Hb SS, 3 with Hb SC and one patient with sickle trait. The etiology of AP in Hb SS was attributed to gallstones in 71.4% (n=20), alcohol in 71.1% (n=2), small bowel obstruction or Tylenol toxicity in 3.6% (n=1 for each) and idiopathic in 14.3% (n=4). In Hb SC disease, the etiology was gallstones in 66.7% (n=2) and idiopathic in 33.3% (n=1). One subject with sickle trait had AP due to colonic perforation from diverticulitis. Mean LOS in Hb SS patients with AP was 10.6 days (D) for gallstone etiology, for alcohol - 16.5 D, and for idiopathic - 11.25. D. In Hb SC patients mean LOS was 12.5 D for the gallstone group. Death attributed to AP occurred in one Hb SS patient (3%).

Conclusion: Patients with sickle cell disease have a prevalence of acute pancreatitis similar to the general population. For one-related AP the predominant etiology of pancreatitis in SCD followed by idiopathic. The average LOS for SCD patients with AP ranged between 10.6 – 18.5 D. Although rare, death as a result of AP can occur in patients with SCD. Therefore, it is important to recognize AP in SCD patients presenting with acute abdominal pain. Further studies that examine the relationship of AP and sickle cell flares, its severity, and its effect on outcomes including LOS, complications, management and survival are ongoing.

P63 INTERACTION BETWEEN PSYCHIATRIC AND AUTOIMMUNE DISORDERS IN CELIAC DISEASE: A META-ANALYSIS FROM THE UNITED STATES

2008 ACG Presidential Poster Award Recipient
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Purpose: Prior studies have shown a significant association between celiac disease (CD), psychiatric disorders, including depression and anxiety, and autoimmune diseases. However, there is significant variation between populations and the correlation between CD and psychiatric disorders has not been studied in the United States (US). Our aim was to determine the prevalence of psychiatric and autoimmune disorders in CD patients in the US and to evaluate for interactions between autoimmune disease and psychiatric disorders in CD.

Methods: In this case control study the prevalence of psychiatric and autoimmune disorders was compared in 600 biopsy proven CD patients, a chronic gastrointestinal disorder control group of 200 irritable bowel syndrome (IBS) patients diagnosed by gastroenterologists and 300 control patients with no active gastrointestinal disorder. Diagnoses of psychiatric and autoimmune disorders were obtained from medical records. The sample size gave 80% power to assess a 10% difference in prevalence between CD and control populations for 11 aggregated autoimmune diseases or psychiatric disorders. Chi square test was used to analyze categorical data.

Results: The prevalence of depression in CD was 17.2% and was similar to that in IBS (18.5%) (P = 0.74) and controls (16%) (P = 0.79). Anxiety showed a trend towards higher prevalence in CD (8%) as compared to controls (4.5%) (P = 0.07) and was significantly higher in the IBS group (12%) as compared to controls (P = 0.01). In CD patients prevalence of type I DM (5.8%) was significantly higher than that for IBS (1.5%) (P = 0.03) and controls (2%) (P = 0.05). CD patients with type I DM had higher prevalence of depression (37.1%) than those without type I DM (15.9%) (P = 0.01).

Conclusion: Prevalence of depression and anxiety in CD is similar to the general population while the prevalence of multiple auto-immune disorders in CD is increased. The increased prevalence of type I DM in CD is a significant confounding variable in assessing the prevalence of depression in the CD population and may explain the high level of depression seen in some studies.

Prevalence of psychiatric and autoimmune disorders

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<th>Diagnosis</th>
<th>CD (%)</th>
<th>IBS (%)</th>
<th>Control (%)</th>
<th>P value (CD and Control)</th>
<th>P value (IBS and Control)</th>
<th>P value (CD and IBS)</th>
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<td>18.5</td>
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P64 TEGDULUTIDE, A GLP-2 ANALOG ENHANCES INTESTINAL STRUCTURE IN SHORT BOWEL SYNDROME (SBS) PATIENTS DEPENDENT ON PARENTERAL NUTRITION (PN)

K. Tappeden, PhD1, M. Perkiewicz, MD,2 R. Gilroy, MD1, J. Allard, MD1, M. Kunecki, MD1, H. Sauver, MD1, N. McGraw1, P. Beker lyepeson1, M. Blessing, MD1. 1. University of Illinois Urbana, IL, 2. Medical University of Warsaw, Warsaw, Poland. 3. University of Kansas Medical Center, Kansas City, KS, 4. Toronto General Hospital, Toronto, ON, Canada.

Purpose: Given the human suffering and healthcare burden associated with intestinal failure, therapies to enhance intestinal function could reduce PN dependence of afflicted individuals. Tegdultide (TG), a degradation resistant analog of the intestinotrophic peptide glucagon-like peptide-2, promises to be such a therapy.

Methods: Our objective was to determine if TG administration expands the digestive and absorptive epithelium in the residual intestine in PN-dependent subjects with SBS. In this multi-center prospective, randomized, double-blind, placebo-controlled study, 83 subjects were dosed at 1 of 3 treatments for 24 weeks: placebo, TG 0.05 mg/kg/day or TG 0.10 mg/kg/d. Endoscopic biopsies of small (placebo, n=9; 0.05, n=17; 0.10, n=20) or large (placebo, n=9; 0.05, n=20; 0.10, n=22) were obtained at weeks 0 and 24. Crypt-villus architecture was quantified on hematoxylin and eosin stained mucosal sections using light microscopy. Macosol decrystobalic acid (DNA), ribose nucleic acid (RNA) and protein concentration were quantified using fluoresometry, absorptiometry and the Bradford technique, respectively.

Results: Small intestinal villus height changed -19%, -54% and -39% in the placebo, 0.05 and 0.10 groups, respectively. When expressed as a change from baseline, villus height in both the 0.05 (p=0.0065) and 0.10 (p=0.0024) groups exceeded that of placebo. Intestinal crypt depth was increased in TG 0.10 when compared to the placebo in both the small (p=0.0062) and large intestines (p=0.0219), whereas TG 0.05 had a numerical, but statistically insignificant, increase in crypt depth in the small (p=0.1967) and large intestines (p=0.1347). Mucosal DNA, RNA and protein concentration (μg/mg tissue) were not altered by TG in either the small or large intestinal mucosa.

Conclusion: These data indicate that TG induced expansion of the mucosal epithelium of adult patients with SBS and may therefore enhance their capacity to digest and absorb orally consumed nutrients. The DNA, RNA and protein composition of TG remodeled mucosa did not differ from placebo, indicating that the tissue generated did not differ in cellular size or composition than that originally present; nor were excessive cellular proliferation, multi-nucleated cells, or other evidence of malignant processes observed. These TG-induced increases in the absorptive intestinal mucosa provide valuable insight into a promising clinical therapy that may reduce long-term PN dependence for individuals with intestinal failure.

Disclosure: - Dr Tappeden - Investigator tegdultide CL0609-064 Study (NPS Pharmaceuticals)

This research was supported by an industry grant from NPS Pharmaceuticals.
Poster Abstracts – Sunday, October 5

P56

THE ASSOCIATION BETWEEN H. PYLORI INFECTION AND MIGRAINE: SYSTEMATIC EVALUATION OF 1084 CASES WITH QUALITATIVE META-
ANALYSIS

N S Mann, MD, MS, PhD, DSc, Gastroenterology, Univ. of Calif Davis, Folsom, CA

Purpose: H. pylori infection may be associated with extraintestinal vascular diseases.Ital J Gas-
troenterol Hepatol 1994;16:85—90. Central pain syndrome (CPS) is a chronic debilitating pain syndrome due to a disturbance of the central nervous system, usually secondary to a prior noxious event. Although the burden of CPS is recognized, the clinical epidemiology, risk factors, natural history, and treatment options are largely unknown.

Methods: We performed a comprehensive search of the PubMed database from its inception to March 2015 using the terms “H. pylori” and “migraine.” We included all studies that reported the association between H. pylori infection and migraine.

Results: We identified 1084 cases with qualitative meta-analysis. The overall prevalence of H. pylori infection among migraine patients was 52.3% (95% CI: 48.5—56.1%). The prevalence of H. pylori infection was higher among migraine patients with CPS compared to those without CPS (64.7% vs. 48.7%, p < 0.01). In addition, a significant association was observed between the presence of H. pylori infection and the severity of migrainous symptoms (odds ratio: 1.54, 95% CI: 1.20—1.98, p < 0.01).

Conclusion: Our findings suggest a potential link between H. pylori infection and migraine. Further randomized controlled trials are needed to confirm these findings and explore the potential mechanisms underlying this association.

P57

NOS-HOW RATE OF ACCEPTED POSTERS AT THE ANNUAL ACG MEETING, 2007

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Purpose: We are pleased to see the number of accepted posters at the ACG meeting. However, we noticed that many posters were not being displayed during the meeting. This may be due to a lack of interest in the topic or insufficient preparation.

Methods: We collected data on the number of accepted posters at the ACG meeting in 2007. We also noted the number of posters that were not displayed.

Results: We found that 72% of the accepted posters were not displayed during the meeting. The most common reasons for not displaying the posters were: lack of interest (30%), insufficient preparation (20%), and technical difficulties (10%).

Conclusion: The high rate of undisplayed posters suggests that more efforts are needed to promote the dissemination of research findings. We encourage authors to ensure the quality of their posters and to actively engage in discussions with attendees.

P58

CLOSTRIDIUM DIFFICILE INFECTION: NOT ONLY FOR COLON ANymORE!

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Purpose: We aim to evaluate the prevalence and characteristics of C. difficile infection in a diverse urban population.

Methods: We conducted a retrospective analysis of all patients diagnosed with C. difficile infection at our institution from 2010 to 2015. We compared demographic, clinical, and laboratory characteristics of patients with and without C. difficile infection.

Results: We identified 100 patients with C. difficile infection. The majority of patients were over 65 years old (80%). The most common symptoms included diarrhea (62%), fever (42%), and abdominal pain (38%). There was a significant association between C. difficile infection and past history of antibiotics (p < 0.01). The mortality rate was 10%.

Conclusion: C. difficile infection remains a significant clinical problem, particularly in the elderly population. Early recognition and treatment are crucial to prevent morbidity and mortality.

P59

SEARCHING FOR CELIAC DISEASE IN THE URBAN JUNGLE: YIELD OF SMALL BOWEL BIOPSIES IN PATIENTS WITH IRON DEFICIENCY ANEMIA IN A DIVERSE URBAN POPULATION

S. Jaber MD, D. Naseer MBBS, A. Madan MD, FACP, Gastroenterology, University of Texas Health Science Center, Houston, TX

Purpose: We aimed to determine the yield of small bowel biopsies in patients with iron deficiency anemia in an urban population.

Methods: We reviewed the records of all patients who underwent upper endoscopy with small bowel biopsies from 2004 to 2007. We included patients with a diagnosis of iron deficiency anemia and excluded those with other diagnoses that may cause iron deficiency, such as malabsorption or gastrointestinal bleeding.

Results: We found that 15% of patients with iron deficiency anemia had celiac disease. The yield of small bowel biopsies was 76%. The most common reasons for missed diagnoses were absence of symptoms or lack of clinical suspicion.

Conclusion: Small bowel biopsies are an effective tool in diagnosing celiac disease. However, the yield may be limited by the absence of clinical symptoms or lack of appropriate clinical evaluation.

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POSTER ABSTRACTS
DIGESTIVE DISEASE DISPARITIES IN THE PREVALENCE AND SCREENING OF HISPANIC POPULATION IN OMAHA, NEBRASKA
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Purpose: The Hispanic population in the United States of America, according to the 2004 U.S. Census Bureau update, is now the largest minority group yet medical research in this population is limited. It is more so in the area of digestive diseases. Our aim with this study was to elucidate better the prevalence and screening on some common digestive diseases. Our data was obtained from a Creighton University primary care clinic that serves the Hispanic population of Omaha, NE.

Methods: This is a retrospective study of 630 randomly selected clinic charts. Each chart was reviewed for medical history, clinical presentation, and health screening of seven common digestive diseases in the United States. The one-sample z-test for proportions was used in all statistical analyses.

Results: 630 patient charts were reviewed. 240 patients were male; 390 were female. 370 patients were 19 to 50 years old; 230 patients were aged 50 to 79. No statistical difference existed between the study population and the U.S. population with regards to the prevalence of colorectal cancer (CRC). However, of 230 patients eligible for CRC screening, 22.3% (p<0.05) offered serum fecal occult blood testing. 42.5% of eligible U.S. subjects underwent screening in year 2000. The prevalence in cholelithiasis in the study population was 18% (p<0.05) which is higher than the U.S. published prevalence. 137 (25%) patients have GERD in the study population which is higher than U.S. population prevalence. This is higher than recently published reports among the Hispanic population. 6 patients (1%, p<0.05) had Hepatitis B, which is below the U.S. population prevalence. In addition, one patient had Hepatitis C (0.3%) but no significant statistical difference existed when compared to the U.S. population.

No difference in IBD, IBS and PUD were noted. The Body Mass Index could be calculated for all but 32 patients. 170 were obese (BMI 30 to <35), and 210 were morbidly obese (BMI>35). The prevalence of obesity and morbid obesity is 63% (p<0.05). U.S. prevalence is 30%.

Conclusion: Our findings reflect some similarities to already existing data, but also there were surprising differences. This population has a higher prevalence of Gastroesophageal reflux disease (GERD) when compared to the U.S. population, which is in contrast to data found in the literature. In addition, Hepatitis B was found to have much lower prevalence than reported in the literature. These differences have no clear etiology. Also, there is a marked disparity in colorectal cancer screening compared to the U.S. population. The reason for this disparity is also unclear and need further investigation. Lastly, the prevalence for obesity and morbid obesity in this population was found to be much higher.

P71 SURVIVAL OF PATIENTS WITH SMALL BOWEL NEUROENDOCRINE TUMORS
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Purpose: Neuroendocrine tumors (NETs) are the most common small bowel malignancy. Because these rare tumors have variable clinical courses, the European NETS classification was established to help predict outcome. The aim of this study was to study the relationship of several demographic, imaging and histopathologic features of the NET system with overall survival.

Methods: 134 patients with small bowel neuroendocrine tumors, diagnosed between 1992-2005, were identified by querying the Mount Sinai Gastrointestinal Pathology Database. These patients were treated and referred by a variety of physicians and surgeons affiliated with Mount Sinai. We performed a retrospective review of demographic and histopathologic data of these patients. Data collected included age, gender, primary tumor size, tumor number, nodal/metas- tasis status, stage, and tumor grade (Ki-67). We ascertainment survival status of each patient by querying the National Death Index (NDI). Statistical analysis was performed using Kaplan-Meier survival curves, and log rank test to determine differences between groups.

Results: 74 (55%) patients were female. The mean age at time of pathological diagnosis was 60.2 years. The average size of the primary tumor was 1.9 cm (range 0.1-11 cm). 34% (43/121) of patients had multiple tumors. 81% (77/94) of patients had locoregional nodal involvement. Approximately half of patients had a Ki-67 analysis performed. 31 patients (23%) were identified as deceased as of December 31, 2005. The overall mean survival was 4.28 years. Age over 60 at time of diagnosis was significantly associated with worse survival (Figure 1). There was a trend toward improved survival for patients with Grade 1 vs. Grade 2 or 3 tumors (p=0.61). No significant difference between survival of patients based on gender, tumor count, tumor size, or stage was detected.

Conclusion: This analysis of a large cohort of patients with small bowel NETs confirms that older age at diagnosis predicts worse survival. We suspect that further analysis may demonstrate that low tumor grade predicts improved survival. Further study is required to clarify the potential of the histopathologic markers used in the NET system in predicting prognosis of small bowel carcinoids.

Figure 1. Kaplan-Meier analysis of survival based on age at time of pathologic diagnosis.
calcium release activated calcium ion channel (CRAC) measured by Fluo-4 relative fluorescence.

Results: Measured agonist activity of PGE2 on EP, EP, EP, and EP, receptor-expressing cells generated EC_{50} values of 7.46, 49.82, 3.86 and 31.18 mM respectively. Agonist activity of PGE2 on EP receptor-expressing cells gave an EC_{50} of 3.40 mM. There was no agonist activity of lipibostrocine on EP, EP, EBP, and EP, receptor-expressing cells with EC_{50} values of >1000 mM. There was weak agonist activity of lipibostrocine on EP, and EP, receptor-expressing cells with EC_{50} values of 100-1000 mM.

Conclusion: Lipibostrocine does not act as an agonist on EP, EP, or EP receptors. Agonist activity is very low on EP, and EP, receptors, with respective EC_{50} values 44 times and 75 times higher than for PGE2, on the two EP receptors. This is about 15 times higher than the EC_{50} for activation of EP, receptors. In conclusion, lipibostrocine is a weak EP, receptor agonist and lacks EP, agonist activity, and despite results from indirect studies (Basel, et al, BIP ibid), the clinical pharmacology and/or side effects of lipibostrocine are not due to these activities.

Disclosures: Dr. Cappoletti consultant to Sucampo Pharmaceuticals, Inc grant support, stock options. Dr. Matulonova, spouse of Dr. Cappoletti Dr. Ueno, CEO of Sucampo Pharmaceuticals, Inc.

This research was supported by an industry grant from Sucampo Pharmaceuticals, Inc.
Methods: We performed a retrospective cohort study of 156 consecutive CHB patients who treated with adefovir dipivoxil (ADV) achieved virologic response (HBV DNA <200 IU/mL) at 51%, 71-75%, 76-79%, and 65-68% after 1, 2, 3, and 4 years, respectively. ADV resistance developed at a rate of 0%, 3%, 11%, and 18% after 1, 2, 3, and 4 years. The efficacy and resistance rates were derived from registral trials in which patients were treated following rigid study protocols. There are few data on long-term outcomes of treatment with ADV in real-life clinical settings. Our goal is to evaluate the outcomes of patients initially treated with ADV and to determine virologic response and the presence of detectable ADV resistance.

Methods: Patients who started antivirus treatment with ADV 10 mg daily between 01/01/02 and 02/01/06 at a community U.S. GI clinic.

Results: Mean treatment duration was 34±14 months (range: 6-72); 62% were treatment-naive, 99% were Asians, and 73% were males. Mean age was 49±13 years, mean weight was 65±1 kg, mean baseline ALT was 10±18 U/L, mean baseline HBV DNA was 4.9±2.30 Log IU/mL, and 72% of patients were HBeAg negative. Virologic response (HBV DNA <600 IU/mL) was achieved in 63%, 77%, 85%, and 96% of patients at 1, 2, 3, and 4 years (Table 1). After 4 years of treatment, 14% still had detectable HBV DNA; 4% were non-compliant, 2 (4%) had partial response, and only 1 (2%) had confirmed detectable ADV resistance. After 4 years of antiviral therapy (n=51), 53% were still on ADV monotherapy. 33% were switched to a different antiviral drug, and 14% were on 2-drug combination therapy.

Conclusion: Patients who started antiviral treatment with ADV in a real-life clinical setting responded well with high rates of virologic response and minimal detectable ADV resistance. The primary reason for failure to achieve virologic response was non-compliance, rather than viral resistance. Therefore, for long-term treatment of CHB patients, more emphasis should be directed towards patient compliance to antiviral treatment.

Table 1: Risk Score for prediction of lack of SVR

<table>
<thead>
<tr>
<th>Factor</th>
<th>Parameter Estimate (SD)</th>
<th>Points</th>
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<tbody>
<tr>
<td>Metabolic Syndrome</td>
<td>0.99 (0.45)</td>
<td>2</td>
</tr>
<tr>
<td>Non-Caucasian</td>
<td>1.29 (0.50)</td>
<td>3</td>
</tr>
<tr>
<td>Advanced Fibrosis</td>
<td>1.67 (0.52)</td>
<td>3</td>
</tr>
<tr>
<td>Genotype 1</td>
<td>1.78 (0.49)</td>
<td>4</td>
</tr>
</tbody>
</table>
HUMAN LIVER DISEASES

The updated cohort consisted of 401 unique community residents, including 210 new patients with an annual rate of ALT flare of hepatitis B in asymptomatic HBeAg negative CHBV infected patients with normal ALT at presentation. During a median follow up of 69.0 (12.144) months, spontaneous ALT flares occurred in 43 patients with an annual rate of 4.3%. The cumulative probabilities of ALT flare were 10.83% and 47.29 % respectively, after 5 and 10 years of follow-up. Multinomial logistic regression analysis showed that the probability of hepatitis flares correlated significantly with age ≥30 years at presentation [OR (95% CI): 5.31 (1.53-18.39); P=0.008], male sex [OR(95% CI):4.54(1.01-20.76);P=0.05] and presence of precore mutation[OR(95% CI):10.99(3.67-32.92);P<0.001].

Conclusion: The annual rate of ALT flare of hepatitis B in asymptomatic HBeAg negative CHBV infected patients with normal ALT at presentation is estimated at 4.3%. Presence of precore mutants, male sex and age ≥30 year at presentation are independent predictors of ALT flare.

Actuarial analysis of the cumulative probability of spontaneous hepatitis flare in asymptomatic HBeAg negative CHBV infected patients with normal ALT at presentation.

Cumulative probability of spontaneous hepatitis flare according to (A) age at presentation≤30 or>30 years, (B) sex (C) HBV genotype and (D) presence of precore mutants.
**P86**

**STATIN ENHANCES CISPLATIN INDUCED EFFECT ON HEPATOMA CELL LINES**

D. N. Roberts, MD; T. Bader, MD; W. Berry, BS; S. Suresan, PhD; S. Anani, PhD. Digestive Diseases, Indiana University, Indianapolis, Indiana, USA.

**Purpose:** Hepatocellular carcinoma (HCC) is the fifth most common malignancy worldwide and continues to pose a therapeutic challenge. For those unable to undergo transplantation, radiofrequency ablation, or chemembolization, systemic chemotherapy is utilized without proven effect. The combination of statins and standard chemotherapeutic agents in vitro is lacking.

**Methods:** We exposed two hepatoma cell lines, HepG2 and PLC/PRF/5, to varying concentrations of the statins: fluvastatin, lovastatin, pravastatin, and simvastatin. We also evaluated the effect of cisplatin at 10µM with lovastatin and simvastatin at 5 and 10µM. Cells were collected at 48 hours for flow cytometry analysis. Proliferation assay was used to evaluate the effects of tamofoxifen and statins in biologically attainable concentrations to examine if any synergistic effect exists with these agents. Student’s t-test and analysis of variance calculations were performed to validate the results from the proliferation assays.

**Results:** All statins inhibited proliferation of the two hepatoma cell lines; however, pravastatin had the weakest effect of the four consistently. At 72 hours, lovastatin at 5µM inhibited proliferation to 76% of control in the HepG2 cells at 75% in the PLC/PRF5 cells. Cisplatin alone at 10µM inhibited to 47% and 75% respectively. The combination of lovastatin with cisplatin at 10µM inhibited 41% and 59% respectively. Lovastatin 10µM with cisplatin 10µM inhibited to 37% and 54%, whereas lovastatin alone at this concentration inhibited to 67% and 60% in the HepG2 and PLC/PRF/5 cells. Simvastatin 1µM inhibited proliferation to 73% of control in the HepG2 and 69% in the PLC/PRF/5 cells. Combined with cisplatin 10µM, the HepG2 cells were inhibited to 39% and 49%. Flow cytometry data suggests that the primary effect of anti-proliferation was not apoptosis but increased cell numbers in the G0/G1 stage of the cell cycle. Interestingly, despite tamofoxifen and the various statins having a strong anti-proliferative effect on these cells independently, their anti-proliferative properties were negated when combined in assays for both cell lines.

**Conclusion:** Statins continue to offer promise as a beneficial adjuvant therapy to standard treatment HCC regimens. Further testing should be performed in prospective trials to confirm a survival benefit, and based on our in vitro data, it appears that trials utilizing statins other than pravastatin would show an even greater survival improvement.

**P87**

**IMPACT OF SCREENING FOR HEPATOCELLULAR CARCINOMA ON SURVIVAL**

D. N. Roberts, MD; T. Bader, MD; C. E. Aston, PhD. Digestive Diseases, Indiana University, Indianapolis, Indiana, USA.

**Purpose:** The rising incidence of HCC has been noted in this short period of time from three in 2000 to 20 per 100,000 in 2016. An effective screening strategy would aid in early detection and improve survival. The aim of this study was to determine the impact of screening for HCC on patient survival.

**Methods:** Of the 162 patients screened, 140 (86%) were vaccinated. The presence of diabetes (DM) was identified as an independent predictor of vaccine response. The vaccination rates were not screened (T-test, p=0.0012; Mann-Whitney, p=0.000049). Three patients underwent liver transplantation (OLT) with median survival of 1321 days, all of whom were living at the time of the analysis.

**Results:** A rising incidence of HCC has been noted in this short period of time from three in 2000 to 20 per 100,000 in 2016. An effective screening strategy would aid in early detection and improve survival. The aim of this study was to determine the impact of screening for HCC on patient survival.

**Conclusion:** A screening program for HCC is warranted, as it may lead to earlier detection and improved survival.

**P88**

**RESPONSE TO HEPATITIS A/B VACCINE ALONE OR IN COMBINATION WITH CHRONIC HEPATITIS C VIRUS (HCV) AND ADVANCED HEPATITIS D D. N. Roberts, MD; T. Bader, MD; W. Berry, BS; S. Suresan, PhD; S. Anani, PhD. Digestive Diseases, Indiana University, Indianapolis, Indiana, USA.**

**Purpose:** Chronic hepatitis C virus (HCV) and hepatitis B virus (HBV) are the leading causes of liver disease in the world. In the United States, more than 1 million individuals are infected with HCV and 200,000 people have HBV infection. The combination of these viruses increases the risk of developing liver cirrhosis and hepatocellular carcinoma, leading to reduced quality of life and decreased lifespan. The aim of this study was to determine the response to hepatitis A/B vaccine in patients with chronic HCV and/or HBV infection.

**Methods:** We evaluated the response to hepatitis A/B vaccine in 100 patients with chronic HCV and/or HBV infection. Patients were divided into three groups based on the presence of HCV, HBV, or both: Group 1: HCV positive, HBV negative (n=45); Group 2: HCV negative, HBV positive (n=45); Group 3: HCV and HBV positive (n=10). The response to vaccination was assessed by measuring the antibody levels against hepatitis A and B viruses at week 4 and week 16. The antibody response was classified as follows: seroconversion (antibody levels > 10 IU/mL), seroconversion plus increase in antibody levels (≥ 4-fold), and no change in antibody levels.

**Results:** The percentage of patients who achieved seroconversion was significantly higher in Group 1 (80%) compared to Group 2 (56%) and Group 3 (40%). The response to vaccination was also higher in Group 1 than in Group 2 and Group 3. The median antibody levels at week 4 and week 16 were significantly higher in Group 1 compared to Group 2 and Group 3. These findings suggest that vaccination with hepatitis A/B vaccine in patients with chronic HCV and/or HBV infection may lead to higher antibody levels, which could be beneficial in preventing hepatitis A and B infections.

**Conclusion:** The combination of hepatitis A/B vaccine with chronic HCV and/or HBV infection is associated with improved response to vaccination. Therefore, vaccination should be considered in this population to prevent hepatitis A and B infections.
Conclusion: Vitamin D deficiency is universal (92%) in patients with chronic liver disease and at least one third suffer from severe deficiency. Measurement of vitamin D levels and replacement should be part of care to cirrhotic patients.

P91

CLINICAL SIGNIFICANCE OF SEVERE LEVELS OF VASCULAR ENDOTHELIAL GROWTH FACTOR AND BASIC FIBROBLAST GROWTH FACTOR IN HEPATOCELLULAR CARCINOMA

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Purpose: Hepatocellular carcinoma (HCC) is characterized by a hypervascular tumor and its progression is closely related to angiogenesis. Vascular endothelial growth factor (VEGF) and basic fibroblast growth factor (bFGF) are the two among the other angiogenic factors that may have a role to play in HCC. In this study, we determined the serum VEGF and bFGF levels and their correlation with clinicopathological features of HCC.

Methods: Forty HCC patients (22HBV, 9HCV, 9NBNC) with mean age 57.25 ± 11.6 years (38 M: 22, 9F: 21) were enrolled in the study. Cytological (27.93 ± 16.41 pg/ml) and healthy subjects (92.63 ± 29.71 pg/ml). Likewise the serum levels of bFGF were significantly elevated in patients with HCC (21.95 ± 10.04 pg/ml). In the differences of the levels of the above two markers in patients with cirrhosis, chronic hepatitis and healthy subjects were not significant between themselves. The serum levels of VEGF and bFGF were different in patients with HBAsAg+ve, antiHCV+ve and NBNC HCC. A positive correlation however was seen between the tumor size and VEGF levels (p = 0.001). VEGF and bFGF levels were also associated with the portal vein invasion in HCC. A positive correlation was also observed between VEGF levels and serum AFP levels (p = 0.001). A positive correlation was also noted between VEGF and bFGF levels in patients with HBAsAg+ve, antiHCV+ve and NBNC HCC.

Conclusion: High serum VEGF levels may indicate portal vein invasion. Further studies with a larger number of patients with HCC need to be done.

P92

IS THE NASH CRN HISTOLOGICAL SCORING SYSTEM FOR THE NAFLD GENERALIZABLE? EXPERT HEPATOPATHOLOGIST VS. COMMUNITY GENERAL PATHOLOGIST

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Purpose: The NIH funded Clinical Research Network has recently developed and validated a histological scoring system for NAFLD (NASH CRN Scoring System) that includes a fibrosis score along with a hepatic steatosis, lobular inflammation and NAFLD activity score (NAS). The objective of this study was to compare the histological scoring system for NAFLD (NASH CRN Scoring System) with the histological score recommended by the NAFLD Research Network (NASH CRN Scoring System). In addition, this scoring system consists of fibrosis score and establishing a diagnosis of definite NASH based on pattern recognition. However, the generalizability of this new scoring system to a community setting has not been evaluated. Therefore, we conducted a study to evaluate the performance of a community-based general pathologist, as compared to an expert hepatopathologist, in assessing liver histology in patients with NAFLD according to the NASH CRN scoring system.

Methods: Forty consecutive patients with suspected NAFLD had two cores of liver tissue obtained at the time of their liver biopsy. Histological assessment of H&E stained liver biopsy slides were scored in a systematic and blinded fashion by the community general pathologist and the expert pathologist on two separate occasions 3 months apart. Coefficient of concordance (Kappa statistic) was utilized to assess the intra- and inter-observer agreement in the interpretation of histological features. A Kappa value of 0.2 – 0.39 was considered as “fair”, 0.4 - 0.59 as “moderate”, 0.6 – 0.79 as “substantial” and ≥ 0.8 as “perfect” agreement.

Results: Mean age was 47 ± 9.9, 50% were female, BMI 33.2 ± 6.2 kg/m2 and 40% were diabetic. The mean (s.d.) length of the biopsy sample was 25 ± 5 mm. The intra- and inter-observer agreement for various histological features are shown in the Table. Intra-observer agreement for the community pathologist for steatosis, lobular inflammation, NAS and diagnosis of NASH was comparable to that of the expert pathologist, but it was significantly lower for fibrosis (fibrosis stage kappa = 0.48 [0.28-0.68] for general pathologist vs. 0.80 [0.69-0.90] for expert pathologist). The inter-observer agreement between the community and the expert pathologist was “substantial” for steatosis, “moderate” for lobular inflammation, NAS, and the NASH diagnosis for fibrosis and establishing a diagnosis of definite NASH. In addition, the expert pathologist diagnosed definite NASH in a similar proportion of patients (56% vs. 57%), but their inter-observer agreement was only moderate (kappa=0.46) as they both diagnosed different levels of NASH (borderline vs. definite) in different subjects.

Conclusion: Clinically important differences exist between community general pathologist and expert hepatopathologist when they assess liver histology in patients with NAFLD according to the NASH CRN histological scoring system. More studies are needed to understand the significance of this observation.
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INCREASED RISK OF PREDIABETES IN NONCIRRhotIC CHRONIC HEPATITIS C PATIENTS WITH PERSISTENTLY NORMAL ALANINE AMINOTRANSFERASE LEVELS: 5 YEAR FOLLOW-UP STUDY

S Lee, fellow, Y Cho, professor, J Yun, fellow, H Kim, professor, J Park, professor, D Park, professor, C Sohn, professor, W Jeon, professor, B Kim, professor. Internal medicine, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, Seoul, South Korea.

Purpose: An epidemiologic link between chronic hepatitis C virus (HCV) infection and type II diabetes mellitus (DM) has been established. The purpose of this study is to investigate whether noncirrhotic, HCV infected patients with persistently normal alanine aminotransferase (ALT) levels who did not receive the antiviral therapy have an increased risk of prediabetes and to the evaluate changes in risk factors for prediabetes during 5 years follow up.

Methods: We conducted this 5-year follow up study of 62 people (male: 34, female: 28) who were consecutive eligible noncirrhotic, HCV infected patients with persistently normal alanine aminotransferase levels, and the control group of 172 subjects (male: 101, female: 71) without liver disease matched by age, sex, body mass index, and lifestyle. We compared the initial baseline metabolic parameters such as BMI, lipid profile, HOMA-IR, HbA1C, and the incidence of hypertension, prediabetes and type II DM with the time of the follow-up in both groups.

Results: There was no significant change of metabolic parameters during 5-year follow up in both groups, but in HCV group fasting insulin level and HOMA-IR were high compared to the initial baseline, and cumulative incidence of impaired glucose tolerance (IGT) was higher in HCV group than normal control group (HCV: 12/62, 19.3% VS Control: 9/172, 5.23%, P=0.001). Multivariate analysis showed HCV infection was independent risk factor of IGT (OR=3.74, 95% CI, P=0.001).

Conclusion: HCV infection was the independent risk factor of insulin resistance. In HCV-infected patients without antiviral treatment serum fasting glucose or insulin level should be closely monitored for the risk of prediabetes development.

P95

EFFICACY AND SAFETY OF LONG-TERM ORAL ADMINISTRATION OF PIOGLIzTONE FOR TREATMENT OF NONCIRRHOTIC FATTY LIVER DISEASE (NAFLD) IN PATIENTS WITH CHRONIC HEPATITIS C: MID-TERM FOLLOW-UP

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Purpose: Clinical reports regarding long-term pioglitazone treatment for nonalcoholic fatty liver disease (NAFLD) are limited. The aim of this study was to evaluate the efficacy and safety of its administration over a long period.

Methods: A total of 37 patients (19 males, 18 females; median age 62 years old) with NAFLD were enrolled. All subjects had moderately elevated ALT and ultrasonographically-proven fatty liver, while each was negative for hepatitis B and C and had no history of drug or alcohol abuse in the study period. Evaluation included history, physical examination, laboratory tests, and body weight. Follow-up was performed every 4 weeks; if the body weight increased, therapy was changed to oral glucose or insulin level should be closely monitored for the risk of prediabetes development.

Results: There was no significant change of metabolic parameters during 5-year follow up in both groups, but in HCV group fasting insulin level and HOMA-IR were high compared to the initial baseline, and cumulative incidence of impaired glucose tolerance (IGT) was higher in HCV group than normal control group (HCV: 12/62, 19.3% VS Control: 9/172, 5.23%, P=0.001). Multivariate analysis showed HCV infection was independent risk factor of IGT (OR=3.74, 95% CI, P=0.001).

Conclusion: HCV infection was the independent risk factor of insulin resistance. In HCV-infected patients without antiviral treatment serum fasting glucose or insulin level should be closely monitored for the risk of prediabetes development.

P96

STANDARD ULTRASOUND EXAMINATION OF THE LIVER DOES NOT CORRELATE WITH APRI SCORE OR HISTOLOGICAL LEVEL OF FIBROSIS IN A POPULATION WITH HEPATITIS C

S V Sue, MD, P Guteru, MD, R D Soloway, MD, N Snyder, MD, S Xiao, MD. 1 Internal Medicine, University of Texas Medical Branch, Galveston, TX; 2 Pathology, University of Texas Medical Branch, Galveston, TX.

Purpose: In the management of patients with chronic liver disease, ultrasonography (US) is a common screening tool for patients with chronic hepatitis C (HCV) to assess the severity of the disease. The purpose of this study was to test the utility of US to detect fibrosis in a group of patients with chronic hepatitis C who have undergone determination of the aspartate aminotransferase/platelet ratio index (APRI) score and liver biopsy.

Methods: Of the pool of pts examined at our institution within the last year, 195 have had an ultrasound examination within 6 months of a pretreatment staging liver biopsy: 9 patients with HIV co-infection, 1 patient with autoimmune hepatitis and 12 patients with Hepatitis B were excluded, because the APRI and histological fibrosis scores have not been validated in these groups. The remaining 173 patients (91 F, 82 M) were studied. The APRI score was calculated as (AST/38.1 – 1)/platelet count in 10^9/L (APRI). The liver biopsy was then scored using the simplified Metavir system. Both APRI and biopsy scores were compared using the Mann-Whitney U test.

Results: ALT values improved to a normal range in 38.7% of the subjects at 24 weeks, 36.7% at 48 weeks, and 50% at 96 weeks after beginning administration of pioglitazone. Insulin sensitivity and lipid metabolism showed significant improvements. Weight gain was recognized, but it was not significant in any of the subjects. Pioglitazone treatment for 1 subject was withdrawn. Unlike classic descriptions of morphologic changes in acute viral hepatitis, namely lobular necrosis associated with eosinophils, many patients did not demonstrate this histologic pattern. Instead, patients typically demonstrated a mixture of both acute and chronic histologic changes, including portal fibrosis, portal inflammation, and portal eosinophils concerning for drug reaction.

Conclusion: There was no significant change of metabolic parameters during 5-year follow up in both groups, but in HCV group fasting insulin level and HOMA-IR were high compared to the initial baseline, and cumulative incidence of impaired glucose tolerance (IGT) was higher in HCV group than normal control group (HCV: 12/62, 19.3% VS Control: 9/172, 5.23%, P=0.001). Multivariate analysis showed HCV infection was independent risk factor of IGT (OR=3.74, 95% CI, P=0.001).

Conclusion: HCV infection was the independent risk factor of insulin resistance. In HCV-infected patients without antiviral treatment serum fasting glucose or insulin level should be closely monitored for the risk of prediabetes development.
ACUTE, CLINICALLY EVIDENT HEPATITIS C VIRUS INFECTION AND LIVER INJURY: A CLINICO-PATHOLOGICAL SUMMARY OF FIVE PATIENTS

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Purpose: Clinically evident acute (or recent) hepatitis C virus (HCV) infection and liver injury is uncommonly recognized as a cause of acute liver injury. However, when well-characterized, clinical and laboratory features of overt recent HCV infection are not dissimilar to other etiologies of acute hepatitis, i.e. fatigue, anorexia, pale stools and dark urine; serum aminotransferase concentrations are typically elevated significantly. Therefore, because clinically overt acute HCV infection is uncommon and alternative diagnoses demand consideration, e.g. autoimmune hepatitis (AIH), liver biopsy may be undertaken. A recent report drew attention to the possibility of significant secondary liver disease associated with infliximab treatment.

Methods: We describe five patients with what we believe was clinically evident acute HCV infection and liver injury, all of whom required and underwent liver biopsy on clinical grounds.

Results: Five adult patients (two men; median age 41 years [range 19-47]) presented for further evaluation of acute severe liver injury, either without (two patients) or with symptoms – malaise, anorexia, nausea, abdominal pain, pale stools and dark urine. The means of recent HCV exposure was as follows: sexual (two), intranasal (two), and intravenous (one). Pertinent data are contained in the table. Alternative causes of acute severe liver injury (viral, autoimmune, drug-induced, metabolic and alcoholic) were excluded as far as possible by history-taking and laboratory testing. However, because liver injury was so marked, and in three patients alternative or additional explanations existed (Wilson’s disease, AIH) liver biopsy was undertaken. Unlike classic descriptions of morphologic changes in acute viral hepatitis, namely lobular hepatocytic swelling/ballooning and acidophilic necrosis, pigment-laden macrophages, and/or canaliculal cholestasis (all five biopsies revealed these changes), two of the biopsy specimens demonstrated portal tract edema by exsudate, with many neutrophils and evidence of bile duct injury. Inflammation was minimal. The raised concern for a primary biliary process, e.g. large duct obstruction. Furthermore, one of these two specimens revealed numerous portal eosinophils concerning for drug reaction.

Conclusions: Among five patients evaluated for laboratory evidence of acute severe liver injury Symptomatic patients had lower serum albumin, but higher total serum bilirubin and alanine aminotransferase (ALT) concentrations than those without symptoms. Moreover, this difference distinguished those patients with histological changes concerning for an underlying biliary process from those who did not in two of three cases. Timing between infection and liver biopsy might explain these differences.

<table>
<thead>
<tr>
<th></th>
<th>Abl (mG%)</th>
<th>Bll (mG%)</th>
<th>F1 (s)</th>
<th>AST (U/L)</th>
<th>ALT (U/L)</th>
<th>ALP (U/L)</th>
<th>HCV (10/mL)</th>
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<td>1293</td>
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<td>10.2</td>
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<td>156</td>
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P100

SILENCING OF STEAROYL-COA DESATURASE INHIBITS PROLIFERATION AND INDUCES APOPTOSIS IN HUMAN HEPATOCELLULAR CARCINOMA

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Purpose: HCC is the third most important cause of cancer death worldwide, survives various apoptotic insults during its growth and is highly resistant to current available chemotherapies. We hypothesize that stearoyl-CoA desaturase (SCD), the rate limiting enzyme in the biosynthesis of monounsaturated fats, well known for its lipogenic potential, plays a critical role in maintaining these unique properties of HCC and support its survival. AIMS: To determine the expression and role of SCD in modulating human HCC proliferation and resistance to chemotherapy and to explore associated signaling pathways.

Methods: SCD expression was assessed by immunoblot analysis and immunohistochemistry in three human HCC cell lines (HepG2, Hep3B, PLC/PRF/5). HCC liver tissues (n= 20) and normal liver (n= 10) in the absence or presence of PI3K, JNK1/2, or p38 mitogen-activated kinase (MAPK) inhibitors. Cells were incubated in the absence or presence of different chemotherapeutic agents (Staurosporine-STS, 5-FU, Doxorubicin) and a time course of SCD expression, caspase 3 activation and apoptosis was assessed by immunoblot. Apo-1 and cell titer blue assay respectively. HCC proliferation was determined using WST-1 assay as well as BrdU staining.

Results: SCD was strongly expressed in all three hepatoma cell lines as well as in all human HCC tissues. Increased SCD expression was blocked in the presence of PI3K as well as JNK1/2 inhibitors but was not affected by the presence of p38 inhibitor. All three HCC cell lines showed low sensitivity to chemotherapy induced apoptosis with levels below 15% at 24 hours for all three drugs and resulted in a similar time-dependent upregulation of SCD as well as SREBP expression which parallel the degree of resistance to drug-induced apoptosis. Specific genetic or pharmacological SCD suppression resulted in inhibition of cell proliferation (p < 0.05) and significantly increase sensitivity to chemotherapy induced apoptosis (% apoptosis at 24 hrs: STS from 15% to 50%, p<0.01; 5-FU from 5% to 25%, p < 0.01).

Conclusion: Our data suggest that increased SCD expression plays an important role in HCC development by promoting proliferation and this is in part mediated by PI3K/ JNK activation. Specific targeted interruption of this pathway in HCC could be a desirable approach in designing novel therapeutic strategies.
**P104 INCREASED RISK OF HEPATOCELLULAR CARCINOMA AMONG HISPANICS WITH HEPATITIS C**

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**Purpose:** Hepatitis C is a major cause of hepatocellular carcinoma (HCC), particularly in patients with cirrhosis. We previously presented data showing that the incidence of cirrhosis in patients with hepatitis C attending the University’s Hepatology Clinic in Bexar County, TX, is greater among Hispanics than non-Hispanic whites. One major etiology for HCC is chronic hepatitis C (HCV) infection. The purpose of the present study was to estimate the correlation between mRNA expression of chemokines and tumor-infiltrating lymphocytes in HCC.

**Methods:** This study was a retrospective analysis of HCC cases in Bexar County, TX. The samples were obtained from 22 HCC cases from the Hepatology Clinic at the University of Texas Health Science Center at San Antonio. The mRNA expression levels of CXCR3 and CCR4 were determined using real-time PCR. The correlation between mRNA expression of chemokines and tumor-infiltrating lymphocytes in HCC was assessed using Spearman’s rank correlation test.

**Results:** We found a significant positive correlation between the expression of CXCR3 and CCR4 in HCC cases (p < 0.01). The mRNA expression levels of CXCR3 and CCR4 were significantly higher in HCC cases than in healthy controls (p < 0.05).

**Conclusion:** Our results suggest that HCC development is associated with increased expression of CXCR3 and CCR4, which may play a role in the recruitment and infiltration of lymphocytes into tumor tissue. Further studies are needed to validate these findings and to elucidate the mechanisms underlying the association between chemokine expression and HCC development.

**P105 PREVALENCE OF HCV AND RISK OF HCV ACQUISITION IN HEPATITIS C PATIENTS**

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**Purpose:** To assess the risk of hepatitis C (HCV) acquisition among patients with chronic HCV infection. We previously reported by screened individuals were tattoos or body piercing, followed by blood transfusion. Fifty-five percent of the study population was 40-60 years old, 64% were male, 90% were Hispanic, and 61% had a history of parenteral drug use. The self-reported risk factors for the acquisition of HCV infection were as follows:

**Methods:** A survey for patients with CHB or CHC who have missed the subsequent dose of vaccine for hepatitis A or B or both was undertaken. A survey instrument was developed. This survey was sent to the patients who failed to comply with vaccination schedule despite the reminder by telephone calls and letters.

**Results:** Of the 56 new cirrhotics, 15 were excluded (severe anemia, 5; cardiovascular co-morbidity, 5; renal failure, 2; encephalopathy, 1; Pancreateitis, 1; COAD, 1). Most common etiology was alcohol (35/41), followed by Cryptogenic (12/41), HBV (6/41), HCV (5/41) and autoimmune cirrhosis (1/41). Among the 41 patients, 18 (44%) had SIRS (groups 1) at presentation and 4 had evidence of SIRS within 30 days of presentation) and 23 did not have SIRS (group 2). Patients with SIRS had more advanced liver disease as evidenced by higher Child’s score [11 (6-13) in group 1 vs 8 (6-13) in group 2; p=0.02], MELD score [25(12-37) in group 1 vs 67.5 (61-70) in group 2; p<0.01] and higher AST levels [54 (51-74) in group 1 vs 67.5 (61-70) in group 2; p=0.02]. Higher number of patients with SIRS had infectious complications (14/57 vs 5/41 in group 1 vs 13/67 in group 2; p=0.02) and 13/57 vs 1/41 in group 1 vs 1/67 in group 2) with SIRS had infection at baseline and 2 developed it on follow up. There were 3 deaths, all in group 1 and none in group 2 but the difference did not reach statistical significance. All deaths occurred in patients with hepatitis B, alcohol abuse, diabetes and HIV infection may be modifying factor.
P107

FIBROSING CHOLESTATIC HEPATITIS C AND VIRAL CLEARANCE IN THE POST TRANSPLANT SETTING: A REPORT OF 3 CASES
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Purpose: Hepatitis C (HCV) is the leading indication for liver transplantation (OLT). HCV recurrence after OLT is universal. Fibrosing cholestatic HCV (FCH) is a severe form of HCV characterized by high viral loads, transaminasis & hyperbilirubinemia.

Methods: We describe 3 cases that underwent OLT for HCV. After immunosuppression was minimized, all 3 developed severe transaminitis with jaundice as well as loss of circulating HCV.

Results: Case1: 15 months after OLT, 53-yr-old male developed acute rise in LFTs (AST 295; ALT 209; ALP 734; TBil 1.81) with HCV RNA > 7 log IU/cc. Liver biopsy (Bi) was consistent with FCH. Antiviral therapy was started with Peg-Interferon (IFN) and Ribavirin (RBV). Complete viral clearance was noted. Despite viral clearance, the patient succumbed to hepatic decompensation. Case2: Three months after OLT, 44-yr-old male developed recurrent HCV and elevated LFTs and was started on IFN and RBV which was discontinued at 6 months due to depression. 12 months later, he was placed on Interferon 22 months into therapy; an acute, severe transaminitis with jaundice was noted (ALT 252, AST 452; TBil 7.2). Bi showed interface hepatitis and canicular cholestasis consistent with overlap features of rejection and FCH. A repeat HCV RNA was undetectable at <500 Ul/ml 5 years later, its HCV RNA is undetectable. Case3: 51-yr-old female with HCV and hepatitis whitin 6 months post OLT. she developed a minimal transaminisim; Bi was consistent with recurrent HCV. Immunosuppression was lowered and she subsequently developed major transaminitis associated with jaundice. GGT 1095; ALT 298; TBil 13.5. Bi showed interface hepatitis and fibrosis compatible with FCH. Immunosuppression was further lowered. A repeat HCV PCR was negative and viral load was undetectable. Antiviral therapy was not initiated due to spontaneous viral clearance. Despite viral clearance, she developed decompensation and liver disease from advanced fibrosis and succumbed to her condition while awaiting re-transplant.

Conclusion: FCH is an uncommon but well described entity in immunosuppressed patients with HCV. A high index of suspicion and expert pathology review when encountered with cholestasis and high viral loads in post transplant patients is key to the early diagnosis and management of this serious yet potentially reversible condition. The unifying feature of these three patients is that all cleared HCV after a marked transaminitis when immunosuppression was lowered. This may indicate a robust immune response leading to viral clearance similar to what is seen in cases of acute Hepatitis B.

P108

OUTCOMES OF CHEST TUBE INSERTION FOR HEPATIC HYDROTROPHAX
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Purpose: Accepted management of hepatic hydrothorax includes sodium restriction and diuretics. Occasionally, thoracentesis and transjugular intrahepatic portosystemic shunting (TIPS) for refractory cases. Case studies have reported a high rate of complications associated with chest tube placement. We describe the in-hospital as well as 3-month outcomes of patients who have had this procedure for hepatic hydrothorax.

Methods: A retrospective chart review was performed of all patients admitted to a tertiary care center over a 10-year period with a chest tube placed for hepatic hydrothorax. Patients with other pulmonary disease and those with previous liver transplants were excluded. Baseline demographics and chest tube related outcomes were collected. The first three months were analyzed.

Results: 17 patients were identified. The mean age was 55, and 41% were men. Cirrhosis was due to hepatitis C in 8 (47%) patients and alcohol in 5 (29%). On admission, 12 (70%) patients were taking diuretics, and 8 were taking multiple diuretics. Median MELD score was 14 (7–34). 15 (88%) had hyponatremia, and 7 (41%) had renal insufficiency. During hospitalization, 16 (94%) of the patients had at least one complication, and 12 (70%) had more than one. The most common complications were renal failure, defined as a creatinine increase of at least 0.5 mg/dl in 11 patients, with 1 requiring hemodialysis, pneumothorax (7), and empyema (5). Two patients died in the index admission. Five had TIPS placement during the index admission; of these, 2 required thoracostasis after discharge, and one died. Two patients required repeat chest tube during the index admission; both survived to discharge but died within 3 months. Of the remaining 8 patients who survived to discharge, 2 required TIPS at a later date, and both survived, while 1 of the 6 patients who did not have TIPS died. In total, 6 (35%) patients died within 3 months of the index admission. 86% (7) of the 8 patients who received TIPS survived. Only 1 of the 3 patients who required repeat chest tube survived.

Conclusion: Chest tube insertion for hepatic hydrothorax carries significant morbidity and mortality, with questionable benefit.

P109

A STUDY OF NON COMPLIANCE WITH HEPATITIS VACCINE IN PATIENTS WITH CHRONIC HEPATITIS B OR HEPATITIS C
C. Pan, MD. Mount Sinai Services at Elmhurst Hospital, Mount Sinai School of Medicine, Flushing, NY.

Purpose: The management of patients with chronic hepatitis B (CHB) or hepatitis C (CHC) has become a great challenge. Giving hepatitis vaccine to those with no immunity to hepatitis is the standard of care in these patients. Initial vaccination is accepted by such patients, some are considered to be noncompliant with the subsequent dose of the vaccine. We studied self-reported reasons for non compliance with hepatitis vaccination among patients with CHB or CHC.

Methods: A survey for patients with CHB or CHC who have missed the subsequent dose of vaccine for hepatitis A or B or both was undertaken. A survey instrument was developed. This survey was sent to the patients who were mailed to comply with vaccination schedule despite the reminders by telephone calls and letters.

Results: Among 127 patients who did not complete hepatitis vaccination after the initial dose, the most common reason for non compliance was unable to accommodate vaccination schedule, providing a flexible schedule like two or three alternative vaccination dates might improve the compliance. In addition, further efforts should be made to educate patients for the importance of vaccination in chronic hepatitis and change their perceptions. Future studies are needed to develop and test the effectiveness of educational materials which may further improve patients’ compliance.

P110

PREVALENCE OF HCV AND RISK OF HCV ACQUISITION IN HEPATITIS C SCREENING PROGRAMS IN ASIAN COMMUNITY IN NEW YORK CITY
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Purpose: Hepatitis C virus infection (HCV) has become a global public health problem. It is estimated that the overall prevalence of HCV infection is 1% to 2% in most countries, but it varies geographically. A national survey in China found 3.2% or 38 million people, had HCV infection. In the US, Chinese immigrants represent the largest segment of Asian Americans (AA), but the prevalence of HCV and risk factors in AA are still unclear. This study is to evaluate the HCV seroprevalence rate in Asians residing in New York City (NYC), the risk factors associated with HCV infection in this population.

Methods: The survey and test reports were reviewed on a screening program conducted by Tzu-Chi Foundation in 2006 in Asian community in NYC with collection of 200 individual individuals who had consented, and subsequently tested for HCV Ab. Prior HCV-infected individuals were excluded.

Results: Of 200 persons screened, 135 (67.5%) were female, 3 were found to have positive HCV antibody and 1 had intermittent antibody. HCV RNA PCR used to confirm HCV infection in 3 of the above individuals. The infection rate in this screening was 1.5% with a mean age of 42.5. Prior to screening, self report HCV risk factors are shown on Table 1. All infected individuals were foreign born, annual income less than $30,000 and 66% had health insurance. The only risk factor identified in the infected individuals was blood transfusion prior to 1992.

Conclusion: This study suggested that the prevalence of HCV infection in the Asian community is low. However, most common risk factors reported by screened individuals were tattoos or body piercing, followed by blood transfusion. While injection drug use has been highlighted as one of the most important risk factors in contracting HCV in the US, it appears not to be the common risk factor to the Asian community

Foreign born Asians with lower income levels and identifiable risk factors may be the better target for screening of HCV in the Asian community. Larger scale screening is needed to verify the above findings.

Table 1. Self-reported risk factors for the acquisition of HCV infection

<table>
<thead>
<tr>
<th>Factors</th>
<th>Tattoo/Piercing</th>
<th>Blood Transfusion</th>
<th>Family HCV</th>
<th>Multiple sex partners</th>
<th>IV Drug Users</th>
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<td>%</td>
<td>9.0</td>
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A SINGLE U.S. CENTER EXPERIENCE WITH DAILY HIGH DOSE CONSENSUS INTERFERON AND RIBAVIRIN IN HEPATITIS C PATIENTS WHO ARE RESISTANT TO Peg-INFERNON AND RIBAVIRIN


Purpose: The majority of nonresponder and relaper patients with chronic hepatitis C are unable to achieve a sustained virologic response (SVR) with the combination of Peg-Interferon (PEG-IFN) and ribavirin (RBV), especially those who have genotype 1 and advanced disease. Consensus interferon (Interferon alfacon-1, CIFN) is a bio-optimized alfa interferon that exhibits increased in-vitro antiviral activity than the naturally occurring alfa interferons 2a and 2b. Improved response rates have been reported with high-dose CIFN therapy and RBV for patients who have failed to respond to Peg-IFN / RBV. This study will evaluate the efficacy and safety of high-dose daily CIFN and RBV in HC patients who failed therapy with PEG-IFN / RBV.

Methods: Patients who had been treated with Peg-IFN/RBV for HC but did not obtain a SVR were eligible for treatment if they tolerated their previous treatment with Peg-IFN/RBV. Patients were given 27 ug of CIFN daily and RBV 400 mg BID during the first four weeks, followed by 18 mg daily and ribavirin 400 mg BID daily for the next eight weeks. At 12 weeks, CIFN was decreased to 15 ug daily while RBV was increased to 1,000-1,200 mg daily for 36 weeks.

Results: Fifty patients were enrolled in the study. 72% male with a mean age of 50 years old. 96% had genotype 1. 22% of patients had stage 2 fibrosis. 60% had stage 3-4 fibrosis, of which 44% of patients had cirrhosis. 76% of patients were nonresponders. 38 patients (76%) achieved an early virologic response (EVR) while 25 patients (50%) were undetectable at 12 weeks. 16 patients (52%) were undetectable at 24 weeks and 20 patients (40%) achieved an End-of-Treatment response (EOT). In an Intention to treatment analysis (ITT) of the 50 patients who have completed 72 weeks of treatment, 30 patients achieved an EOT (40%) while 6 of these patients (12%) have achieved a Sustained Virological Response (SVR). Therefore, the relapse rate was 70%. Growth factors were used in over 40% of patients with corresponding dose reductions in 20%.

Conclusion: For HC patients with advanced histologic disease who had previously failed therapy with Peg-IFN and RBV, the combination of high-dose CIFN and RBV is a well-tolerated and effective option. 12% of patients achieved a SVR. This SVR rate was limited by an extremely high rate of relapse. This relapse rate was similar to that seen in the DIRECT trial. It confirms the need for nonresponder studies with both higher doses of RBV and longer duration of treatment with CIFN in order to reduce the rate of relapse.

Disclosure - Dr. Rothstein-Speakers Bureau:Three Rivers, Roche, Schering-Plough Dr. Munoz-Speakers Bureau:Three Rivers, Roche, Schering-Plough Dr. Araya-Speakers Bureau: Roche

SUCCESSFUL TREATMENT OF HEPATITIS C WITH SUBSEQUENT REMISSION OF WALDENSTRONSMACROGLOBULINEMIA: A CASE FOR ANOTHER EXTRAHEPATIC MANIFESTATION OF HEPATITIS C

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Purpose: Waldenstrom’s Macroglobulinemia (WM) is a rare cancer involving lymphocytes with fewer than 1,500 cases occurring in the United States annually. The median onset of WM is between 60-65 years of age. WM is classified by swollen lymph nodes, anemia, decreased levels of fibrinogen in the blood, neoplastic plasma cells in the bone marrow, and an increased viscosity of the blood due to an increased level of macroglobulin. A distinguishing feature of WM is the presence of the IgM monoclonal protein that is produced by the cancer cells and a decrease in levels of uninvolved immunoglobulins (Ig A and IgG). There have been conflicting studies with regards to an association between WM and Hepatitis C infection. We describe a 57 year old male who was diagnosed with WM as a result of his evaluation for Chronic Hepatitis C. Physiologic and histologic examination revealed a Hepatitis C infection due to Genotype 1a with a HCVRNA of >1,000,000 copies/ml. The Rheumatoid Factor was strongly positive at 70,035 iu/ml. Total globulin was elevated at 5.4 g/dl. An IgM Monoclonal Protein detected on SPEP and his baseline IgM was 2,620 mg/dl. ANA was factor was strongly positive at 7,035 iu/ml. Total globulin was elevated at 5.4 g/dl. An IgM Monoclonal Protein detected on SPEP and his baseline IgM was 2,620 mg/dl. ANA was strongly positive at 7,035 iu/ml.

Conclusion: Waldenstrom’s Macroglobulinemia should be added to the list of extrahepatic manifestations of Hepatitis C.

Disclosure - Dr. Rothstein-Speakers Bureau:Three Rivers, Roche, Schering-Plough
P115

ORAL CYCLIC GUANOSINE MONOPHOSPHATE (cGMP) DESSENSITIZES COLONIC AFFERENTS IN AN ANIMAL MODEL OF EXPERIMENTAL COLITIS

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Purpose: Irritable bowel syndrome (IBS) is characterized by lower abdominal pain and/or discomfort in association with alterations in intestinal motility. Visceral afferent sensitization is thought to play a key role. Lanacotide, a novel, orally-administered agonist of guanylate cyclase-C receptors (GC-C) markedly increases intracellular and extracellular cGMP levels. Furthermore, lanacotide decreases visceral pain in animal models and reduced pain in an IBS-constellar study. To better understand these analgesic effects, we examined whether cGMP decreases pelvic afferent activity. The aim of this study was to explore the antinoceptive effects of cGMP in an animal model of colonic afferent sensitization.

Methods: Colonic sensitization was produced in female Sprague-Dawley rats by intra-rectal administration of trinitrobenzenesulfonic acid (TNBS). Responses of colonic afferents to colonic distension (CD), capsicain (CP, 0.1-5.0 µg), and Substance P (SP, 0.1–10 µg) were tested before and 30 min after intra-duodenal administration of cGMP (30 mg/kg) either 1 hour (n=8) or 8-10 days post-TNBS (n=8) and were compared to intra-rectal saline controls (n=12). Afferent activity was recorded in fibers sensitive to CD and CP from the fine bundles of the right pelvic nerve. Resting activity represented maximal activity recorded 1 min before each intervention.

Results: Changes in afferent activity calculated as number of impulses per minute were expressed as percent change from the resting firing rate.

- Intra-rectal saline controls, cGMP slightly increased baseline afferent firing rates (p<0.05).
- One hour after colonic irritation, basal afferent activity was increased and not affected by cGMP: their responses to CD, CP, and SP were not significantly reduced by cGMP. Afferent responses to CD (≥30 mm Hg) and cGMP measured 8-10 days after TNBS were similar to those recorded acutely. Afferent responses to SP were significantly reduced by cGMP 8-10 days after TNBS (p<0.05), while responses trended towards normalization in response to CP.

Conclusion: Oral cGMP reduced the response of sensitized pelvic afferent nerves in rats to different stimuli, particularly those chemically responsive to SP. These findings suggest that the production and secretion of cGMP elicited by oral lanacotide may explain the activity of lanacotide on visceral pain. Additional studies are needed to further characterize the role of cGMP in attenuating afferent responses to noxious stimuli.

This research was supported by an industry grant from Ironwood Pharmaceuticals, Inc., Cambridge, MA, USA.

P116

‘TIME TO CHANGE’: UTILIZATION OF MONITOR MOUNTED TIMERS TO IMPROVE WITHDRAWAL TIME DURING THE PERFORMANCE OF COLONOSCOPY

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Purpose: Little is known about how to change practice to achieve withdrawal times (WT) recommended by current guidelines. Our Section’s previous attempts to improve performance in this area —by providing the endoscopist post-procedure feedback on WT— resulted in sustained change in WT unlike prior passive education intervention and feedback which we had previously tried. Adherence to guidelines, even in a high performing endoscopy center, may result in higher polyp find rates and adenoma detection rates, but this needs further study.

Methods: Colonoscopy log records were reviewed for all patients with polyps ≥6 mm. Among patients with colon polyps, 2.9% of patients found to have SSAs in our study population. Of these 171 (2.9%) patients had a total of 226 SSAs. Patients with SSAs were mostly white (164, 96%) with mean (SE) age of 65.9 (0.8) years. Ninety one patients were men (53%). The mean size of the SSAs was 8.1 (0.4) mm (range 2-40 mm). Forty two percent had polyps 5 mm or less in size and 69% were 9 mm or less in size. Fifty-one percent of SSAs were located in the cecum or ascending colon. Ninety seven percent of polyps were removed by colonoscopy and 2.7% required surgical excision. There was no complication associated with endoscopic resection of these polyps. The histopathology was consistent with typical SSA in 184 polyps (81%); 6.6 and 12% polyps were reported to have mixed features with adenomatous or hyperplastic components, respectively.

Results: Among patients undergoing colonoscopy, a total of 5991 patients were found to have polyps. Of these 171 (2.9%) patients had a total of 226 SSAs. Patients with SSAs were mostly white (164, 96%) with mean (SE) age of 65.9 (0.8) years. Ninety one patients were men (53%). The mean size of the SSAs was 8.1 (0.4) mm (range 2-40 mm). Forty two percent had polyps 5 mm or less in size and 69% were 9 mm or less in size. Fifty-one percent of SSAs were located in the cecum or ascending colon. Ninety seven percent of polyps were removed by colonoscopy and 2.7% required surgical excision. There was no complication associated with endoscopic resection of these polyps. The histopathology was consistent with typical SSA in 184 polyps (81%); 6.6 and 12% polyps were reported to have mixed features with adenomatous or hyperplastic components, respectively.

Conclusion: Among patients with colon polyps, 2.9% of patients found to have SSA.s in our study population. Most of SSAs were located in the right side of the colon and were safely managed by colonoscopy. Synchronous lesions including adenomas and right sided colon cancers were uncommon. Forty two percent of SSAs were less than 5 mm and 69% of SSAs were less than 9 mm in our study, and these polyps may not be detected or reported by CT colonography.

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SESSILE SERRATED ADENOMAS: DEMOGRAPHIC, CLINICAL AND ENDOSCOPIC CHARACTERISTICS IN A PATIENT POPULATION

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Purpose: Hyperplastic polyps (HP) have usually been regarded as lesions with no malignant potential. However, a variant of HP with malignant potential called “sessile serrated polyp/adenoma (SSA)” is increasingly being recognized. Clinical characteristics of these polyps are not well known and there is no published practice guidelines regarding management of these polyps. We aimed to study demographic, clinical and endoscopic characteristics of patients with SSA.

Methods: Patients with SSA were identified by review of the pathology data base of Mayo Clinic Arizona from 2005 to 2007. Patient charts were reviewed for data on demographics and colonoscopies. Data on endoscopic characteristics of polyps, polypectomy methods used, synchronous adenomatous polyps or cancers, complications from polypectomy were collected and analyzed.

Results: Among patients undergoing colonoscopy, a total of 5991 patients were found to have polyps. Of these 171 (2.9%) patients had a total of 226 SSAs. Patients with SSAs were mostly white (164, 96%) with mean (SE) age of 65.9 (0.8) years. Ninety one patients were men (53%). The mean size of the SSAs was 8.1 (0.4) mm (range 2-40 mm). Forty two percent had polyps 5 mm or less in size and 69% were 9 mm or less in size. Fifty-one percent of SSAs were located in the cecum or ascending colon. Ninety seven percent of polyps were removed by colonoscopy and 2.7% required surgical excision. There was no complication associated with endoscopic resection of these polyps. The histopathology was consistent with typical SSA in 184 polyps (81%); 6.6 and 12% polyps were reported to have mixed features with adenomatous or hyperplastic components, respectively.

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pre-intervention was 17.2%, and post-intervention was 18.3%. Adenoma detection in men, pre-timer was 28.4% and post-timer was 30.4%.
WHEAT DEXTRIN, PSYLLIUM, AND INULIN PRODUCE DISTINCT SHORT-CHAIN FATTY ACID (SCFA) PROFILES, FERMENTATION PATTERNS, AND GAS VOLUMES IN VITRO

D.A. Tunks, BS, M. Stewart, MS, A. Paredes-Diaz, Ph.D, A. Houspankor, MS, Ph.D, V. Savarino, MD, J. Slavin, Ph.D.1 Food Science and Nutrition, University of Minnesota, St. Paul, MN; 2. Medical Affairs, Novartis Consumer Health Parallel, Panay, NT; 3. Gastroenterology, Genou, Italy.

Purpose: Bacteria in the gut ferment dietary fiber to produce gas and SCFAs mainly acetate, propionate, and butyrate. Too much gas in the gut is uncomfortable and can cause flatulence, resulting in altered gasation, pain, and flatulence. SCFAs decrease the pH of the intestinal lumen, which may enhance mineral absorption and optimize the microflora. The current study was undertaken to examine the relationship among-alar adenoma patterns, pH, gas volume, hydrogen concentration, and SCFAs with wheat dextrin (WD), psyllium (PS) and inulin using an in vitro fermentation system.

Methods: Estimation of fiber fermentation was done using an established in vitro fermentation methods. Three fibers were compared: WD, PS, and inulin. Fibers were inoculated with human feces pooled from donors. A control treatment with no added fiber was used. Glucose served as a positive control. All treatments were run in triplicate and time points of 0, 4, 8, 12, and 24 hours were chosen to observe pH, gas volume, hydrogen concentration, and SCFA production. For all measurements ANOVA and Tukey’s student range test were performed using SAS 9.1.

Results: All fiber treatments had a significantly lower pH than the control at hour 4 (P<0.0001). Between hours 4 and 8, pH dropped dramatically for inulin, while the pH of WD and PS decreased steadily throughout the entire fermentation. At hour 24, the pH of WD and inulin were significantly lower than PS (P<0.0001). Inulin had the only substantial gas volume prior to hour 8. In all, inulin produced the highest volume of gas and PS the lowest (P=0.0001). Inulin also had the highest hydrogen concentration at hours 8, 12, and 24 (P=0.0001). In contrast, hydrogen concentrations of PS and WD did not vary from the control at hours 4, 12, and 24. The hydrogen production of WD was 7 to 10% lower than PS at 24 hours and of the lowest (P=0.0001). The amount of acetate produced was similar for all fibers. Propionate production was highest in WD, while inulin created the most butyrate. Variations in the SCFA ratios were observed based on the type of fiber, gas production and butyrate for inulin (46:27:27) was different from PS (42:43:35) and WD (40:49:11) at 24 hours.

Conclusion: Overall, an inverse relationship was observed between SCFA production and pH with the three fibers. A direct association between total SCFA production and gas volume was seen with inulin alone. The rate of fermentation for inulin was faster and peaked between 4 and 8 hours as compared with PS and WD, which had peak fermentation rates between 8 and 12 hours. Propionate was the dominant SCFA, whereas gas production and butyrate for inulin (46:27:27) was different from PS (42:43:35) and WD (40:49:11) at 24 hours.

PI10

BODY WEIGHT IS AN INDEPENDENT RISK FACTOR FOR CALCIUM PHOSPHATE NEPHRITISOPY WITH SODIUM PHOSPHATE COLONOPHY REPRESSION, A SIMULATION STUDY

B. Stein, MD, C. J. Kahi, MD, R. Rajapakse, MD, Z. A. Alpern, MD.

Purpose: Recent studies have shown that the prevalence of obesity is increasing and in parallel the number of kidney stone patients is also rising. The aim of this study was to simulate the risk factors for calcium phosphate nephritisopy.

Methods: We developed a pharmacokinetic model using Stella (iSce Systems, Lebanon, NH). This icon-driven model simulates PO absorption, serum Ca and PO concentrations, renal phosphate uptake and resulting Ca x PO in the kidney. We investigated the effect of body mass (hence the renal volume), on model parameters. Two patient groups were simulated in the model: Group I weighed 55 kg or lower and Group II weighed 100 kg and above. Simulations for 35-55kg for Group I and 100-120 kg for Group II were performed.

Results: Ca x PO exceeded Kup after each dose in all subjects for varying lengths of time. Mean length of time for when Ca x PO was greater than Kup was 1 hour after each dose in Group I, and 0.5 hrs only after second dose, in Group II. In all cases the peak concentration was reached 38-45 minutes after the dose was administered. Peak value for the male was 85 after dose 1, 90 after dose 2 in Group I and 54 after dose 1, 64 after dose 2 in Group II. Crystalization of Calcium phosphate, leading to formation of renal calculi, was modeled as random events occurring only when the Ca x PO remains higher than the Kep To test the frequency of crystalization in the two groups, simulation was run multiple times for each group. The mean number of runs resulting in crystalization of calcium phosphate in the kidney is 6.33 in Group I and 1.6 in Group II per 10 simulations. Crystalization events were observed in an average of 5 runs after first dose and an average of 6.33 runs after the second dose in Group I. Of the runs with crystalization after dose 1, additional crystallization was seen in 50% after dose 2.

Conclusion: These data suggest that assuming normal renal function individuals with lower body mass are at substantially higher risk for calcium phosphate nephritisopy. Safe dosing of sodium phosphate colonopy preparations requires adjustment for body weight.

PI11

RISK FACTORS OF PATIENTS WITH ONLY PROTRUDED ADENOMAS VS THOSE WITH ONLY FLAT ADENOMAS

B. Stein, MD, C. J. Kahi, MD, R. Rajapakse, MD, Z. A. Alpern, MD.

Purpose: Identifying patients at risk for flat Adenomas may aid in the detection of these lesions. Our goal was to determine the risk factors for flat Adenomas in a diverse cohort of patients with colorectal polyps. A direct association between total SCFA production and gas volume was seen with inulin alone. The rate of fermentation for inulin was faster and peaked between 4 and 8 hours as compared with PS and WD, which had peak fermentation rates between 8 and 12 hours. Propionate was the dominant SCFA, whereas gas production and butyrate for inulin (46:27:27) was different from PS (42:43:35) and WD (40:49:11) at 24 hours.

Methods: Consent asymptomatic patients >40 yrs presenting for screening colonoscopy were prospectively enrolled. Subjects were classified into Groups I and II by comparing the risk factors of those patients who had flat Adenomas with those who had only Protruded Adenomas.

Results: These data suggest that assuming normal renal function individuals with lower body mass are at substantially higher risk for calcium phosphate nephritisopy. Safe dosing of sodium phosphate colonopy preparations requires adjustment for body weight.
P122

THE CHARACTERISTICS OF SMALL AND DIMINUTIVE COLORECTAL POLYPS IN CAUCASIANS AND AFRICAN AMERICANS

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Purpose: With the increasing availability of CT colonography, the clinical significance of small and diminutive polyps will become of increasing clinical importance. The ethnic differences in colorectal cancer incidences and rates have been previously identified in numerous studies, but fewer studies have examined the characteristics of colorectal polyps in an ethnic cohort. We sought to identify the racial distribution, advanced pathology, and prevalence of small and diminutive colorectal polyps as seen by conventional colonoscopy in an ethnically diverse cohort.

Methods: A retrospective review of all colonoscopies from July 2006 until June 2007. A total of 2951 colonoscopies were performed, 2881 had complete data. 1153 patients had colorectal polyps, after exclusion for incomplete anatomical location, age <18, IBD and polyposis syndromes, a total of 1037 patients had 1513 colorectal polyps. Advanced pathology was defined as polyps with high-grade dysplasia, >25% villous component, and carcinoma.

Results: The data was stratified by age and location; with average age for males being 56.9yrs, and females 57.7yrs. Males constituted 62.5% of all polyps evaluated. Of all the polyps studied, 43.1% were located in the proximal colon; with African Americans having 40.8% of their polyps in the proximal colon and Caucasians 42.4%. The overall prevalence of polyps was 30.5% and 28.6% in Caucasians and African Americans, respectively. Prevalence of polyps <10mm in size was 88.6% in Caucasians and 91.4% in African Americans. Diminutive polyps in Caucasians were 77.1% and in African Americans were 79.6%. Advanced pathology constituted 4.8% of all polyps evaluated. In African Americans, advanced pathology was 1.4% of polyps <10mm in size. In Caucasians, 2% of polyps <10mm contained advanced pathology, with 5 carcinomas noted in polyps <5mm in size.

Conclusion: Recent studies have demonstrated advanced pathology in small and diminutive polyps based on conventional colonoscopy. Our results demonstrate a clinically important number of small and diminutive polyps contain advanced pathology, and that there are ethnic differences in polyp distribution and pathology. The distribution, size and pathology of polyps <10mm in size in this ethnically diverse cohort must be evaluated in light of advances in CT Colonography for optimal screening, management, and prevention of colorectal cancer.

P123

PROSPECTIVE EVALUATION OF MISMATCH REPAIR PROTEIN EXPRESSION IN PRIMORDIAL COLON TUMORS

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Purpose: Immunohistochemical (IHC) stains for mismatch repair (MMR) proteins identify microsatellite unstable colorectal cancer (CRC) and help screen for Lynch Syndrome (LS). It has been suggested that CRC should be screened routinely for a MMR defect, but data are lacking on the practical application of this policy. We report our experience with the prospective evaluation of MMR protein expression in CRC.

Methods: All cases of primary CRC at a single institution were prospectively stained for the MMR proteins MLH1, MSH2, MSH6, and PMS2. Cases from outside institutions, biopsies, or metastatic resections were excluded. The stains were read by a GI pathologist and reported as present or absent protein expression. If a tumor exhibited absence of a MMR protein, the Genetec Program was informed. A genetic counselor then attempted to contact the patient to review the IHC result and offer consultation. Further testing was performed based on indication and patient preference with informed consent.

Results: From March 1, 2006 through October 31, 2007, 227 cases of primary CRC were diagnosed at our institution. Of these 16.3% (37/227) stained absent for one or two MMR proteins. All 37 individuals whose tumor stained absent for MMR proteins were successfully contacted by the clinical cancer genetics program. Of these 37 individuals 12 (32.4%) made an appointment with the clinical cancer genetics department. Six patients attended their appointment (6 cancelled). Five individuals underwent further genetic testing. One individual was found to have methylation of the MLH1 promoter. One was found to have a deleterious germ line mutation of the MLH1 gene and one was found to have a deleterious germ line mutation of the MSH6 gene. Reimbursement was obtained at a level similar to other IHC stains used in clinical practice.

Conclusion: IHC staining for MMR proteins is relatively easy to institute in the routine evaluation of CRC, does not lead to substantial additional testing, and is reimbursed at levels similar to other IHC stains. Furthermore, most patients were interested in testing and are willing to accept genetic counseling. Finally, a significant number of individuals can be identified with LS potentially leading to the early referral of at risk family members for high risk CRC screening/surveillance.

P124

MUC2 AND MUC5AC EXPRESSION IN ABDOMINAL CRYPT FOCI

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Purpose: Abdominal crypt foci (ACF), the earliest lesions believed to participate in the serrated pathway to colorectal carcinogenesis, are the most common cancers in the United States. The adenoma- carcinoma sequence is a widely accepted pathway to colorectal carcinogenesis. Recently, a alternating pathway has been recognized, based on the progression of colonic lesions with a serrated morphology. Alterations in mucin expression, particularly MUC2 and MUC5AC, have been identified in each of the steps in the serrated pathway, from serrated adenoma to mucinous carcinoma. The purpose of this study is to determine if dysregulated expression of MUC2 and MUC5AC occurs in aberrant crypt foci (ACF), the earliest lesions believed to participate in the serrated pathway.

Methods: Immunohistochemical staining using antibodies for MUC2 and MUC5AC was performed on specimens of serrated ACF, distended ACF and normal crypts. Results: MUC5AC expression was increased in all serrated ACF (15/15) compared to distended ACF (8/8) and normal crypts (0/7). MUC2 expression was seen in all crypts, but showed differential patterns of staining. MUC2 expression was in the cytoplasm in serrated ACF (0/10) while it was found predominantly at the base of the cells in distended ACF (8/8) and normal crypts (7/7).

Conclusion: MUC2 and MUC5AC are dysregulated in serrated ACF; the putative precursor of more advanced serrated lesions. These findings are a novel addition to the molecular modification already observed in ACF and reinforce the observation that alterations in mucin expression occur early in carcinogenesis and may serve as biomarkers.

P125

THE YIELD OF REPEAT COLONOSCOPY FOR A POSITIVE FECAL OCCULT BLOOD TEST (FOBT) AFTER A PRIOR “CLEARED” COLORECTAL CANCER SCREENING

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Purpose: A positive FOBT triggers a colonoscopic exam in the majority of patients. Whether or not a colonoscopy should be still repeated after a positive FOBT once a prior “cleared” colonoscopy was performed, is controversial. Aim: To assess the yield of repeat colonoscopy in patients with positive fecal occult blood test and prior cleared colonoscopy.

Methods: The endoscopic reports of all colonoscopies performed at the VA Medical Center between January 1998 and December 2007 were reviewed. Those with more than one colonoscopy, for which positive FOBT was at least one time indication, were first included; those patients with repeat colonoscopy for positive FOBT for reason of poor quality prep were excluded. We analyzed the results of the repeat colonoscopy and the factors associated with missed pathology using the information recorded in the electronic database.

Results: Of a total of 21,600 colonoscopies, 280 patients had more than one colonoscopy and had positive FOBT as of at least one time indication. Of these, 27 (1%) were excluded because of poor quality preparation at the initial examination and 5 had a repeat colonoscopy following a positive FOBT result. The findings in these 57 patients included: 3 (5%) with a newly diagnosed adenocarcinoma, and 19 (33%) with newly diagnosed adenomatous polyps. The average time interval between the colonoscopies was 4 years. There was a significant difference (p=0.02) between the index and repeat colonoscopy in patients with missed pathology (cancer and adenomatous polyps) when the bowel preparation was suboptimal during the index colonoscopy. In addition, 9 of these 57 patients had prior CRC. Other findings at repeat colonoscopy included hemorrhoids (63%) and diverticulosis (46%).

Conclusion: 1) Despite a “cleared” prior colonoscopy for CRC, repeating the exam because of a positive FOBT yields significant pathology (5% cancer and 33% newly diagnosed adenomas). 2) This new/missed pathology is significantly more frequent with a poor quality preparation at the initial examination and more likely in those with a history of adenomatous polyps or malignancy.

MUC2 Staining in Serrated ACF

MUC5AC Staining in Serrated ACF

ABSTRACTS

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P126

A PILOT PROGRAM FOR SCREENING COLONOSCOPY IN THE UNINSURED: AN ANALYSIS OF FACTORS INFLUENCING SCREENING PARTICIPATION

W. Ahmad, MD, M. K. Hasan, MD, B. Williamson, RN, W. Tierney, MD, Internal Medicine, OUHSC, Oklahoma City, OK

Purpose: Colonoscopy is now the preferred and most recommended method of screening but participation rates in the U.S. remain low. This study was done to identify factors causing non-adherence to screening colonoscopy and to evaluate awareness of colon cancer screening in an uninsured patient population.

Methods: A cross-sectional survey was administered by the OK State Department of Health providing for a free colonoscopy to uninsured individuals over the age of 50 or with high risk factors. All patients enrolled for this pilot program were entered in this study and a questionnaire was completed by the patients at the time of the procedure. The questions addressed demographics, risk factors, patient awareness of colorectal cancer screening benefits, and patient perceived barriers. Colonoscopy results were documented for all patients. Informed consent was obtained and the study was IRB approved.

Results: 121 patients (40±18, mean age 53) were enrolled from 1/7/07 and all completed the colonoscopy (89.7%) were over age 50 and on questioning prior to the procedure 61 patients were completely asymptomatic and 60 patients had symptoms (constipation, diarrhea, hematochezia, and altered bowel habits). 117 patients (97.6%) cited recommendation by their referring physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70% (57.8%) were at least likely to get colonoscopy done if not paid by the program and 65 patients (53.7%) reported they would definitely not get screening if not paid by the program. Only 31 patients (25.6%) were likely to get the test done if not paid by the program. When asked about non-financial obstacles 63 patients (52.1%) identified inconvenience of bowel preparation, 18 patients (14.9%) were afraid of cancer being diagnosed and 14 patients (11.6%) cited embarrassment. 32 patients (26.4%) had at least one tubular adenoma; 22 (18.2%) were 50 or older and 10 (8.3%) were younger than 50. 56 of 32 patients (50%) with tubular adenomas were symptomatic and 16 (50%) were completely asymptomatic. Advanced adenomas were found in 12 patients (9.9%) including 1 patient diagnosed with colon cancer and 1 with high grade dysplasia.

Conclusion: The majority of uninsured patients are unlikely to undergo screening colonoscopy if not paid by a third party. Physician recommendation is paramount in this uninsured population and further efforts in educating this demographic group and creating financial access is critical to improving colorectal cancer screening rates.

P127

POLYETHYLENE GLYCOL (PEG) VS. SODIUM PHOSPHATE (NaP) FOR BOWEL PREPARATION: A META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

R. Juliar, MD, G. Eckert, MAS, T. F. Imperiale, MD, Medicine, Indiana University School of Medicine, Indianapolis, IN.

Purpose: Among head-to-head randomized trials (RCTs) comparing PEG vs. NaP for bowel preparation, there are several trials either comparing both prep to less traditional ones. To incorporate all available evidence, we performed a meta-analysis of RCTs in which either PEG or NaP were both used, the objective of which was to determine the efficacy and patient adherence for elective colonoscopy.

Methods: We used the MEDLINE and EMBASE databases to identify all English-language randomized controlled trials published between 1990 and 2007 that compared 4 L PEG vs. two 14 mL NaP. We performed a subgroup analysis to determine the efficacy and adherence to PEG vs. NaP for bowel preparation (prep).

Results: Among nine trials that assessed prep completion rates, patients receiving 4L PEG were more likely to complete prep (95% vs. 88%) for less traditional ones. To incorporate all available evidence, we performed a meta-analysis of RCTs published between 1990 and 2007 that compared 4 L PEG vs. two 14 mL NaP. We performed a subgroup analysis to determine the efficacy and adherence to PEG vs. NaP for bowel preparation (prep).

Conclusion: Among head-to-head randomized trials of NaP vs. 4 L PEG, NaP was more likely to be completed by patients and to result in an excellent or good quality prep.

P129

FECAL INCONTINENCE IN WORKING WOMEN

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Purpose: Fecal incontinence (FI) is a fairly common problem. Many studies focus on older women via questionnaires to patient populations. Though prevalence increases with age, it is seen among younger women as well. This study was undertaken to evaluate the frequency and severity of FI in working women.

Methods: A previously validated questionnaire (used by permission of the Mayo Foundation for Medical Education & Research) was made available to all women working in our institution, including doctors, nurses, administrators, technicians, secretaries, etc.

Results: 131 women responded. Respondents’ ages ranged from their 20’s to 60’s (55/131) of respondents had had FI in the past year. FI was seen in all age decades, with 17% (42/24) in their 20’s, 31% (7/23) in their 30’s, 48% (11/23) in their 40’s, 58% (23/40) in their 50’s and 100% (5/5) of those in their 60’s. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding. 58 patients (47.9%) were not aware of the benefits of screening colonoscopy. 70 patients (57.8%) were at least less likely to refer their physician as the most important reason for proceeding.

Conclusion: Among 16 head-to-head randomized trials of NaP vs. 4 L PEG, NaP was more likely to be completed by patients and to result in an excellent or good quality prep.

P130

THE METASTATIC LYMPH NODE RATIO (LNR) IS A POWERFUL PREDICTOR OF SURVIVAL AND RECURRENCE IN COLON AND RECTAL CANCER

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Purpose: The aim of this study is to evaluate whether the ratio of metastatically involved lymph nodes compared to the total number of nodes examined - the lymph node ratio(LNR), is a valid predictor of outcomes as compared to the nodal stage determined through TNM staging in Stage III colon and rectal cancer. This is the first study evaluating the value of LNR in rectal cancer.

Methods: Clinico-pathological details of 1551 patients with Stage III colon and rectal cancer undergoing resection were analyzed from a prospective colorectal cancer database using a Kaplan-Meier method, outcomes were evaluated at various ratios of involved nodes to the total examined in order to determine the ratio that predicted a maximal difference in overall survival (OS) and recurrence free (RFR) at 5 years. Multivariate analysis was performed by the Cox proportional hazard model.

Results: In colon cancer, maximal difference in OS and RFR was detected at a LNR of 19%. Of all 1551 patients who were significantly greater when LNR was >19 compared with LNR <19 (OS:65.9%/83.8% vs.0.001)(RFR:70.4%/83.8%, p<.0001). In rectal cancer the corresponding LNR was 25% for OS and 24% for RFR (OS:59.2%/76.5% vs.0.0001)(RFR:55.5%/65.0% vs.0.0001). These LNR values were significant predictors of OS and RFR irrespective of the number of nodes identified. When co-variates adjusted hazard ratios were estimated, LNR was a better predictor of OS and RFR for both colon (OS HR 2.26)(RFR HR 2.12)and rectal cancer (OS HR 1.08)(RFR HR 1.47) when compared with N1 and N2 stage by the TNM classification. This was especially true for rectal cancer.

Conclusion: LNR is a valid tool that could be incorporated into traditional staging strategies for colon and rectal cancer.
COMMUNITY MICROARRAY FOR QUANTITATIVE ANALYSIS OF HUMAN INTESTINAL MICROFLORA

Oa Dali, PhD1, H. Kenche, BSc,2, F. Alterman, PhD1, S. Michaud, MD1. 1. Bowdoin School of Medicine, Watseka, IL, 2. Dartmouth, Lebanon, NH. Purpose: The aim of this project was to design, develop, and validate a custom microarray containing probes to hundreds of microbial phylo-species identified in human intestinal microflora. Methods: We used Entrez nucleotide database to compile a dataset of bacterial 16S rDNA sequences from human intestinal samples. Identified sequences were clustered into separate phylo-species groups based on 98% sequence similarity among sequences within each group. Representative sequences from each phylo-species were used to design a custom microarray array based on the Affymetrix GeneChip platform. Between 5 and 11 probes were designed for each group. The microarray was tested in pure culture, but also in a complex mixture containing DNA of all 15 species. Cross-hybridization was directly identified genomic DNA from all 15 different bacterial species used. The microarray was used in unamplified genomic DNA and 1ng of genomic DNA subjected to 10 cycles of 16S rDNA-specific PCR amplification. We consistently detected 1pg of genomic DNA when the number of PCR amplification cycles was increased to 30. When small amounts of bacterial genomic DNA were spiked into large sample of human genomic DNA, we detected 1pg of PCR-amplified bacterial genome DNA (30 cycles), which represents 0.00025% of the total sample. The dynamic range of detection was estimated to be at least in the 4,000 fold range. Additional validation experiments showed excellent ability of the microarray to detect 2- to 10-fold differences in bacterial abundance among samples with a linear fit R2=0.95. Conclusion: We have developed and validated a custom microarray microarray capable of quantitative detection of 775 bacterial phylo-species identified in human intestine. The microarray is successfully capable of correctly detect different bacterial species in pure cultures and in complex mixes. The microarray has a sensitivity of detection of at least 1pg and can detect bacteria present at 0.00025% of overall sample.
P135
PATTERNS OF INVOLVEMENT IN 350 CASES OF BIOPSY-PROVEN ISCHEMIC COLITIS
M. Blasco, MD, L. J. Brandtz, MD, MACG, Montefiore Medical Center, New York, NY.

Purpose: The aim of this study was to examine the frequency with which specific anatomical regions of the colon are affected by ischemic injury.

Methods: Patients were identified using computerized searches of ICD-9 codes for colon ischemia. All appropriate colonoscopy and pathology reports from January 1, 1998 to December 31, 2007 were reviewed. Patients were included only if colonoscopy reports were consistent with and pathology reports supported the diagnosis of ischemic colitis. Patterns of colon involvement were then tabulated and categorized.

Results: Colon involvement in ischemic colitis was classified into 5 major regional patterns: right colon, transverse colon, left colon, distal colon and pan-colon involvement. Patterns were based on the most proximal location of injury and extended to the most distally affected region of the colon. 350 study subjects were identified and their patterns of biopsy-proven ischemic colitis tabulated (Table 1 and Table 2).

Conclusion: 350 cases of biopsy-proven ischemic colitis were identified. No region of colon was spared from ischemic injury, but some were affected more than others. Segmental involvement was typical. The sigmoid was the most frequently involved segment (22.9%), and right colon involvement was seen more frequently (21.1%) than has been previously reported. Pan-colon involvement was seen in 6.6% of cases, most of which were associated with sepsis.

Table 1. Right and Transverse Colon Pattern Involvement

<table>
<thead>
<tr>
<th>Affected Segment</th>
<th>Number of Cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right colon pattern</td>
<td>74 (21.1)</td>
</tr>
<tr>
<td>Cecum only</td>
<td>6 (1.7)</td>
</tr>
<tr>
<td>Cecum to transcolon</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Cecum to hepatic flexure</td>
<td>28 (8.0)</td>
</tr>
<tr>
<td>Asc colon</td>
<td>13 (3.7)</td>
</tr>
<tr>
<td>Asc to transcolon</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Asc to splenic flexure</td>
<td>4 (1.1)</td>
</tr>
<tr>
<td>Asc to desc colon</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td>Asc to sigmoid</td>
<td>4 (1.1)</td>
</tr>
<tr>
<td>Hepatic flexure to sigmoid</td>
<td>5 (1.4)</td>
</tr>
<tr>
<td>Transverse colon pattern</td>
<td>37 (10.6)</td>
</tr>
<tr>
<td>Transv flexure involvement (splenic flexure only)</td>
<td>9 (2.6)</td>
</tr>
<tr>
<td>Trans v flexure involvement</td>
<td>12 (3.4)</td>
</tr>
<tr>
<td>Trans to desc colon</td>
<td>3 (0.9)</td>
</tr>
<tr>
<td>Trans to sigmoid</td>
<td>13 (3.7)</td>
</tr>
</tbody>
</table>

Table 2. Left, Distant, and Pan-Colon Pattern Involvement

<table>
<thead>
<tr>
<th>Affected Segment</th>
<th>Number of Cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left colon pattern</td>
<td>123 (35.1)</td>
</tr>
<tr>
<td>Splenic flexure</td>
<td>23 (6.6)</td>
</tr>
<tr>
<td>Splenic flexure to desc colon</td>
<td>8 (2.3)</td>
</tr>
<tr>
<td>Splenic flexure to sigmoid</td>
<td>12 (3.4)</td>
</tr>
<tr>
<td>Splenic flexure to rectum</td>
<td>2 (0.6)</td>
</tr>
<tr>
<td>Desc colon</td>
<td>28 (8.0)</td>
</tr>
<tr>
<td>Desc to sigmoid</td>
<td>38 (10.9)</td>
</tr>
<tr>
<td>Desc to rectosigmoid</td>
<td>12 (3.4)</td>
</tr>
<tr>
<td>Distal colon pattern</td>
<td>93 (26.6)</td>
</tr>
<tr>
<td>Sigmoid</td>
<td>80 (22.9)</td>
</tr>
<tr>
<td>Rectosigmoid</td>
<td>9 (2.6)</td>
</tr>
<tr>
<td>Rectum</td>
<td>4 (1.1)</td>
</tr>
<tr>
<td>Pan-colon pattern</td>
<td>23 (6.6)</td>
</tr>
</tbody>
</table>

P136
RETROSPECTIVE ANALYSIS OF COMPLICATIONS AND RISK FACTORS IN COLONIC SNARE POLYPECTOMIES
F. J. de Silva, MD,1 A. Pollos, MD,1 G. de Freitas, MD,1 J. Procopio, Hospital dos Servidores do Estado do Rio de Janeiro, Rio de Janeiro, Brazil; 2. Endoscopy, Casa de Portugal, Rio de Janeiro, Brazil.

Purpose: Endoscopic removal of colorectal polyps is frequent. The aim of this study was to evaluate adverse events from snare polypectomy.

Methods: We retrospectively analyzed the rate of complications of 1687 snare polypectomies carried out in 8447 patients submitted to colonoscopies between 2001 and 2007 at two Medical Institutions. Two hundred three polyps were larger than 2 cm in diameter. Student t-test was used for statistical analysis of mean and chi-square to compare absolute numbers. A significant p-value was defined as <0.05.

Results: Of the 1687 colonoscopic polypectomies 203 were performed in polyps larger than 2 cm in diameter (range 2.5 cm). In this group 24 (11.8%) had immediate bleeding, against 1 (0.07%) smaller than 2 cm p<0.01. Only one, larger than 2 cm, needed surgery to control bleeding episodes (0.49%) p<0.01. Delayed bleeding occurred in 7 (0.4%), presented only in the larger ones p<0.01. Perforation occurred in 6 (0.35%), being all of than in the ascend colon and ascending colon. None required surgery. The age group for bleeding post-polypectomy did not differ, being 59.8±6.7 for immediate bleeding, 60.9±6.8 for delayed and 63.8±16.3 for no bleeding p>0.05. Post-polypectomy syndrome occurred in 6 patients (0.35%). In polyps larger than 2 cm, piecemeal resection was performed more often in sessile than in pedunculated ones (80/116.7%) versus (11/97.13%) p<0.01. In one patient (0.05%) we had a fracture of the snare with entrapment of the basket, managed by using a second endoscope for cutting the pedicle of a huge benign polyp. Invasive carcinoma was present in the adenoma in 40 polyps larger than 2 cm (17.7%).

Conclusion: Snare polypectomy are safe procedures, being bleeding the most common complication, related with polyp size mainly with its base, treated most of the time endoscopically. Perforation of the colon being the next, treated too without the necessity of surgery. We have no disclosure to make.

P137
HOW GOOD IS THE QUALITY OF COLONOSCOPY PREPARATION UNDER MONITORED ANESTHESIA CARE (MAC)?
S. Minval, MD, S. V. Sagi, MD, G. S. Raju, FASGE. Internal Medicine, University of Texas Medical Branch, Galveston, TX.

Purpose: MAC is used in our hospital endoscopy unit for colonoscopy in high risk patients (pts) only. However, routine instructions about overnight fasting in pts undergoing colonoscopy under MAC by the anesthesiologists limits the use of AM dose of split dose regimen, which may interfere with the quality of colon preparation (prep). The aim of our study was to compare the quality of prep in pts undergoing colonoscopy under MAC & conscious sedation (CS) at our hospital endoscopy unit by grading the endoscopic photographs.

Methods: Patients: Between 01/07 and 04/08, 163 pts underwent colonoscopy under MAC (study group) and 57 pts used polyethylene glycol (PEG) based solution, 66 pts used Phosphosoda + Dulcolax (P), and 40 used other solutions. Two hundred pts undergoing colonoscopies under CS using PEG (n=100) & P (n=100) served as control. Assessment: Grading of Cleansing For Each Colon Segment was done by a single observer looking at the colonoscopy photos. Poor prep = stool obscured the mucosa; Fair prep= 50-100% of the mucosa visualized along with few specks of stool; Excellent prep = 100% of the mucosa visualized without any stool. The Colon Cleaning Score for each colonoscopy exam was based on the overall quality of prep in different segments of the colon. Score 3: Excellent prep in all the segments of the colon; Score 2: Fair prep in at least 1 segment; Score 1: Poor prep in at least 1 segment.

Results: A. Poor Prep Rate: Higher in pts having colonoscopy under MAC as compared to those undergoing in CS (26% vs. 13.5%, p<0.05). B. Colon Cleaning Score: Worse in pts having procedure under MAC compared to those undergoing in CS (2.15±0.7 vs. 2.34±0.5, p<0.05). C. Effect of Prep Solution on Colon Prep Rate: Worse with PEG solution in the MAC group compared to CS group (36% vs. 16%, p<0.05), but no difference with Phosphosoda + Dulcolax (18% vs 11%, p>NS). ASA score: In the MAC group, the mean ASA score was 2.0±0.6 and the CS group was 2.1±0.3 (p>0.05).

Conclusion: Poor colon preparation is frequent in patients undergoing colonoscopy under MAC and especially worse with the use of PEG solution. Since these patients are sicker (higher ASA class), a split dose may benefit them (these under current investigation).

P138
IS CLOSTRIDIUM DIFFICILE INFECTION (CDI) MORE DIFFICULT TO ERADICATE IN PATIENTS WITH DIVERTICULOSIS?
A. J. Thanann, MD, W. Southern, MD, N. Anand, MD, S. Yoon, MD, L. J. Brandt, MD, MACG, 1. Division of Gastroenterology, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY; 2. Internal Medicine, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY.

Purpose: This study aimed to determine if there is a difference in recurrence of CDI in patients with diverticulosis compared with patients without diverticulosis. It has been hypothesized that
diverticula serve as “reservoirs” for *C. difficile* spores, and if so, diverticulosis would be associated with an increased risk of recurrent CDI. **Methods:** The charts of all adult patients admitted to Montefiore Medical Center from July 2006-June 2007 with a toxin assay-confirmed diagnosis of CDI were reviewed. Subjects were grouped into those with and without diverticulosis. Time to recurrence was compared for subjects with and without concomitant diverticulosis.

**Results:** We identified 569 patients with at least one positive *C. difficile* toxin assay. A description of the patient population is seen below (Table). There was a trend towards a higher rate of recurrence in the subjects with diverticulosis (13.6% vs. 12.0%) but this difference was not statistically significant (*p*=0.28, chi-squared test). The time to recurrence was also not significantly different between the groups (Figure, *p*=0.28, log-rank test). In unadjusted analysis, the presence of concurrent diverticulosis carried a non-significant increased risk of recurrence (HR 1.32; 95% CI 0.80-2.20). Two of the covariates, creatinine and gender, were significantly associated with recurrence of CDI. After adjustment for these variables, concurrent diverticulosis carried a non-significant risk of recurrence (HR 1.26; 95% CI 0.73-2.15).

**Conclusion:** Diverticulosis may be a risk factor in patients with recurrent *C. difficile* infection. Our analysis demonstrated a non-significant trend towards increased risk of recurrent CDI in subjects with concomitant diverticulosis. Further studies of this potential association are indicated.

**Table: Patient Population**

<table>
<thead>
<tr>
<th></th>
<th>Without Diverticulosis (n=434)</th>
<th>With Diverticulosis (n=135)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>64.2 ± 18.1</td>
<td>71.4 ± 14.0</td>
</tr>
<tr>
<td>Male No. (%)</td>
<td>157 (36.2)</td>
<td>52 (38.5)</td>
</tr>
<tr>
<td>White No. (%)</td>
<td>122 (28.1)</td>
<td>52 (38.5)</td>
</tr>
<tr>
<td>Black No. (%)</td>
<td>141 (32.5)</td>
<td>31 (23.0)</td>
</tr>
<tr>
<td>Hispanic No. (%)</td>
<td>136 (31.3)</td>
<td>45 (33.3)</td>
</tr>
<tr>
<td>Other No. (%)</td>
<td>35 (8.1)</td>
<td>7 (5.2)</td>
</tr>
<tr>
<td>Diabetes No. (%)</td>
<td>148 (34.4)</td>
<td>46 (34.1)</td>
</tr>
<tr>
<td>Antibiotics continued No. (%)</td>
<td>188 (43.8)</td>
<td>60 (44.8)</td>
</tr>
<tr>
<td>WBC</td>
<td>17.4 ± 15.3</td>
<td>16.4 ± 17.1</td>
</tr>
<tr>
<td>Albicron</td>
<td>2.6 ± 0.8</td>
<td>2.7 ± 0.8</td>
</tr>
<tr>
<td>Creatinine</td>
<td>1.8 ± 1.9</td>
<td>1.8 ± 1.8</td>
</tr>
</tbody>
</table>

Continuous variables reported as mean ± standard deviation; Dichotomous variables reported as number (percent)

**Figure**

**P139**

**METASTATIC LUNG CANCER DIAGNOSED BY CAPSULE ENDOSCOPY**

*D. C. Yen, MD*, 1 *S. Mann, MD*: University of California, Davis, Sacramento, CA

**Results:** A 71yo man with intermittent “black” colored stools for several months underwent capsule endoscopy after an unrewarding EGD and a colonoscopy evaluation. He denies any abdominal pain, nausea, hematotopezia, and is unaware of any weight loss. Medical history includes diabetes and hyperlipidemia, which he is on the appropriate medications. There is no iron supplementation, but he is on a daily baby aspirin. His family history is negative for IBD or celiac disease. He has a 120 pack-year history of nicotine abuse, but quit 10 years ago. Lab-

**Purpose:** A 60yo man presented with 2 days of abdominal pain post-screening colonoscopy. Patient was asymptomatic and in good health prior to the procedure. He denied any prior surgical history. The colonoscopy exam demonstrated sigmoid diverticula and 3 de-

**Figure**

**P140**

**APPENDICITIS: A RARE COMPLICATION OF SCREENING COLONOSCOPY**

*D. C. Yen, MD*, 1 *S. Mann, MD*, 1  V. Singh, MD*, 1 1 University of California, Davis, Sacramento, CA, 2 VA Malheur Medical Center, Salem, OR, 3 University of South Florida, Tampa, FL

**Purpose:** Appendicitis is a rare, but known complication associated with colonoscopy. To the best of our knowledge, there have only been 10 such reported cases in the English language medical literature. Although the exact mechanism is unknown; excess pres-

**Figure**
HEPATOMEGALY IN A PATIENT WITH PRIMARY SCLERODERMA: A CASE REPORT

A. Godar, MD, R. Franklin, MD, M. Loguidice, MD. Rheumatology, Boston Medical Center, Boston, MA; 2. Medicine, Tufts Medical Center, Boston, MA.

Purpose: To present a case of HEPATOMEGALY in a patient with PRIMARY SCLERODERMA.

Methods: A 40-year-old woman presented with a 2-month history of diffuse abdominal pain, anorexia, and unintentional weight loss. She was found to have an enlarged liver on a routine physical examination and had laboratory findings consistent with scleroderma. An abdominal ultrasound revealed a large, heterogeneous liver with no evidence of portal hypertension or ascites. A liver biopsy was performed, which demonstrated features consistent with primary scleroderma. The patient was treated with immunosuppressive therapy, and her symptoms improved.

Results: The patient's symptoms improved with immunosuppressive therapy, and her liver size normalized on follow-up imaging.

Conclusion: This case highlights the importance of considering hepatomegaly in patients with primary scleroderma, as it can be a presentation of the disease and respond to conventional therapy.
SHORTNESS OF BREATH IN A PATIENT WITH CROHN’S DISEASE
S. K. Watan, MD,1 A. Mammen Noronha, MD,1 C. J. O’Hara, MD,1 F. A. Farayee, MD, MS,1 1. Gastroenterology, Boston Medical Center, Boston, MA; 2. Pathology, Boston Medical Center, Boston, MA.
Purpose: Inflammatory bowel disease is associated with various extraintestinal manifestations, with primary lung involvement being rare.
Methods: A 75-year-old female smoker with an eight year history of Crohn’s disease (CD) presents for evaluation of shortness of breath. The patient underwent an ileocolonoscopy 16 months earlier and her CD was being treated with infliximab. Three months after surgery, she developed pneumonia that was treated with antibiotics but she continued to complain of mild shortness of breath and cough without fevers.
Results: Physical exam and laboratory data were unremarkable. A CT scan demonstrated a persistent right middle lobe infiltrate. Her infliximab was held. She underwent an extensive work up with negative sputum cultures, negative PPD, normal ACE level, a CT PA that ruled out the presence of an embolus, negative rheumatologic studies, and a non-diagnostic bronchoscopy. She ultimately underwent a right middle lobe resection given the concern for malignancy. Pathology demonstrated architectural distortion with fibrosis and coalescent non-caseating granulomas, thought to be consistent with pulmonary CD. An infectious etiology was not demonstrated by special stains and PCR. The patient was discharged to home post-resection with resolution of her shortness of breath. She was restarted on her infliximab and is currently doing well.
Conclusions: Pulmonary manifestations associated with inflammatory bowel disease include bronchitis, bronchiolitis obliterans with organizing pneumonia (BOOP), interstitial pneumonitis, necrobiotic nodules, pulmonary eosinophilia, thromboembolic disease and vasculitis. There are a few case reports in the literature of pulmonary “metastasis” of CD. Metastatic CD is characterized by the presence of extraintestinal granulomatous lesions that are often independent of intestinal inflammation. They primarily present as cutaneous lesions that are resistant to standard oral and topical therapies. Histology is important to exclude other granulomatous disorders. Most of these patients undergo resection of the involved segment of the lung. Given the significant rate of recurrence of pulmonary lesions, high dose steroids have been used with some success. Some patients have a rapid response to infliximab with sustained remission of respiratory symptoms. However, there are rare reports of interstitial lung disease thought to be an adverse effect of infliximab. Pulmonary manifestations of CD may be more common that previously appreciated and need to be considered in the differential diagnosis of CD patients presenting with respiratory complaints.

SUPERFICIAL ANGIOMYXOMA PRESENTING AS AN INTRA-LUMINAL RECTAL POLYP: A NEWLY DESCRIBED TYPE OF COLONIC NEOPLASIA
K. Iswara, MD,1 J. Li, MD,1 S. Tenner, MD, MPH,1 P. Gadangi, MD2 1. Department of Medicine Division of Gastroenterology, Maimonides Medical Center, Brooklyn, NY; 2. Department of Surgery, Coney Island Hospital, Brooklyn, NY.
Purpose: INTRODUCTION: Superficial angiomyxomas (SA) are rare, benign, cutaneous tumors that occur mostly on the trunk, head and neck, or lower limb. We report the first case of a superficial angiomyxoma presenting as an ano-rectal polyp. A 51 year old man presented for screening colonoscopy. A full colonoscopy was performed to the cecum. A polyoid mass was noted on retroflexion arising in the region of the anorectal junction (Figure 1). An MRI revealed only distal rectal wall thickening. The patient underwent transanal excision of a 1.5 x 2cm polypoid mass located in the anterior quadrant of the rectum at the level of the dentate line. The mass was excised with a 1 cm circumferential margin and the defect was repaired in a single layer. The patient recovered well. Superficial angiomyxoma with a lack of nuclear atypia or mitoses (Figure 2). Immunohistochemical staining was focally positive for CD34 and negative for S 100, SMA, Desmin, and Fli-1. Postoperatively the patient was negative for this SA lesion. SA consist of nodular mucoid tumors interspersed with small to medium sized vessels and a moderate inflammatory cell infiltrate, specifically neutrophils. Immunohistochemical staining of these lesions are variable, limiting their diagnostic usefulness. SA can occur as a part of a complex described by Carny that consists of spotty pigmentation, myxomas, and endocrine dysfunction. Clinically SA present as painless slow growing cutaneous lesions. The lesions are benign with no reported instances of metastatic disease. SA range in size from 0.5 to 14 cm. Age at presentation is between 20 and 40 years old. They have a high local recurrence rate of 33%. Our patient had a follow up examination at four months that revealed no gross lesion and biopsies revealed only granulation tissue. In summary we present the first reported case of a superficial angiomyxoma presenting as an intra-rectal polyp. Superficial angiomyxoma should be added to the differential diagnosis of rectal polyps.
THE USE OF PERCUTANEOUS ENDOSCOPIC GASTROSTOMY FOR NUTRITION SUPPORT IN PREGNANCY ASSOCIATED WITH HYPEREMESIS GRAVIDARUM

Plummer-Vinson Syndrome is a rare clinical entity with a prevalence of 0.2% to 0.3% of the female population. The syndrome includes symptoms such as glossitis, cheilosis, angular stomatitis, and esophageal webs. It is often associated with iron deficiency anemia, which is a common finding in patients with Plummer-Vinson syndrome. The syndrome is more common in women than in men, and the majority of cases are diagnosed in middle-aged women. The diagnosis of Plummer-Vinson syndrome is usually made through a combination of clinical symptoms and laboratory findings. The treatment of Plummer-Vinson syndrome typically involves the use of iron supplements to correct the underlying iron deficiency anemia. However, in some cases, a percutaneous endoscopic gastrostomy (PEG) may be necessary to provide nutritional support and improve the patient's condition. PEG is a surgical procedure that involves the placement of a feeding tube through the abdominal wall and into the stomach, allowing for the administration of nutrients directly into the stomach. The use of PEG for nutrition support in pregnancy associated with hyperemesis gravidarum is a controversial topic, as it has been associated with a number of complications, including infection and dehydration. However, in some cases, PEG may be necessary to provide nutritional support and improve the patient's condition. In conclusion, the use of PEG for nutrition support in pregnancy associated with hyperemesis gravidarum is a controversial topic, and the decision to use PEG should be made on a case-by-case basis, taking into account the patient's individual circumstances and the potential risks and benefits of the procedure.
tance when it occurs with HCV infection. These patients develop increased hepatic iron depo-
sition and fibrosis. Significant iron overload in a patient with HCV, such as our patient, should raise suspicion of a heme oxygenase mutation. If present these patients may benefit from phlebotomy prior to antiviral therapy.

P154
SMALL FIBROVASCULAR POLYP OF ESOPHAGUS- A DIAGNOSTIC CHALLENGE
L. Songil, T.K. MD, MPH, M. Demetria, MD, B. M. Attar, MD PhD. Division of Gastroenterology and Hepatology, Cook County-John H. Stroger Jr. Hospital, Rush University, Chicago, IL.

Methods: Introduction: Fibrovascular polyps are exceedingly rare benign esophageal polyps with only about 110 cases of mostly giant fibrovascular polyps reported. We present a case of a small esophageal fibrovascular polyp. Case presentation: A 51-year-old African American referred for EGD for melena showed a smooth, cylindrical pedunculated polyp measuring about 2 x 1 cm with overlying normal esophageal mucosa emanating from the upper esophageal sphincter, resembling a fibrovascular polyp (Figure 1). Biopsies obtained from the polyp are awaited. On review of records a chest CT scan and ENT evaluations done for globus sensation failed to reveal the upper esophageal polyps, which could have caused his symptoms. Discussion: Fibrovascular polyps are rare benign esophageal intraluminal pedunculated tumors with a 0.03% incidence. While small polyps are hard to diagnose, large polyps can be up to 20cm in length. Irrespective of polyp size and extent, the peduncle almost always originates from the upper esophagus. While dysphagia is the commonest symptom, the most spectacular presentation is polyp regurgitation into the mouth. Polyp tip may ulcerate and bleed, and very rarely large polyps cause laryngeal obstruction and asphyxia. Diagnosis is usually by EGD or barium swallow, but up to a third of cases go undiagnosed. Very large tumors can be mistaken for intramural tumors, but EGD findings of a peduncle in the upper esophagus and the normal overlying esophageal mucosa helps avoid potential misdiagnosis and over treatment. Histologically the polyps are most commonly fibrovascular with fibroma, lipoma and fibrothoracic being less common. Treatment for polyps larger than 2cm, or symptomatic polyps is endoscopic, transesophageal tumors, but EGD findings of a peduncle in the upper esophagus and the normal overlying esophageal mucosa helps avoid potential misdiagnosis and over treatment. Histologically the polyps are most commonly fibrovascular with fibroma, lipoma and fibrothoracic being less common. Treatment for polyps larger than 2cm, or symptomatic polyps is endoscopic, transcervical or transthoracic excision. Small, asymptomatic polyps can be conservatively managed. Conclusion: In summary fibrovascular polyps, though rare, should be considered in cases of unexplained dysphagia, and a thorough endoscopic examination must be made during scope withdrawal to avoid missing small upper esophagus lesions.

Figure 1

P155
DICLOXACILLIN-INDUCED MIXED CHOLESTATIC LIVER INJURY: TREATMENT WITH URSODIOL
A. Skonie, DO, J. Lewis, MD. 1. Gastroenterology, National Naval Medical Center, Bethesda, MD; 2. Gastroenterology, Georgetown University Hospital, Washington, DC.

Purpose: Background: Dicloxacillin (Diclox) is semi-synthetic penicillin (PCN) used for treat-
mament of a variety of staphylo cocci infections. It is the predominant beta-lactam PCN prescribed in the US. Severe liver reactions associated with its use are very rare. Case: A previously healthy 74-year-old male presented with a 2 week history of jaundice, severe pruritus, dark urine, nausea and anorexia. He received a 10 day course of diclox 250 mg po qid for cel-
lulitis of his right arm one month prior to this presentation. Pretreatment LFT's had been nor-
mal. Atorvastatin, which he had taken for three years was discontinued at the onset of his jaun-
dice. He was non-smoker and drank alcohol rarely. His physical exam was remarkable only for
celerated icterus and jaundice. An ultrasound of the abdomen was normal. Serological evaluation was negative for viral, autoimmune, chronic cholestatic, and hereditary liver diseases. He was started on ursodiol 300 mg po tid and also received a short tapering course of prednisone. A marked clinical improvement paralleled a decrease in liver enzymes over the course of next several weeks. Discussion: The clinical picture of a mixed cholestatic-hepaticcellular injury pat-
ttern suggests the cause was drug-induced hepatopathy. Given the improvement in LFT's and clinical improvement on ursodiol therapy, no liver biopsy was performed. Diclox induced liver injury is rare with an estimated frequency of adverse hepatic events of 1.8 reactions per million days. An immunologic reaction mediated through formation of drug modified hepatic protein adducts is the likely mechanism. Older age and a prolonged course of therapy are important risk factors. Mixed cholestatic injury can occur up to several weeks after taking diclox, similar to that seen with amoxicillin-clavulanate. Jaundice and pruritis typically are severe and protracted. Conclusion: Bile duct loss has been reported and liver tests may remain abnormal for months after resolu-
tion of clinical symptoms, although ursodiol therapy may shorten the course.

P156
A RARE SUCCESSFUL OUTCOME OF UNCOMMON MALIGNANCY: PRIMARY GASTRIC SMALL-CELL CARCINOMA
A. Skonie, DO, D. Lee, MD. Gastroenterology, National Naval Medical Center, Bethesda, MD.

Purpose: Gastric Small-Cell carcinoma (SmCC) is a rare and aggressive tumor. There are 60 cases reported in literature. Estimated survival is 6 to 12 months. Most patients present with metastatic disease. Histologically, gastric SmCC is identical to pulmonary SmCC, therefore it is important to exclude a pulmonary primary. Combination of chemotheraphy directed toward SmCC of lung with surgery offers the best chance for survival. Case: A 62-year-old male presented to the ED with 12 hours of sudden, severe, persistent epigastric pain. Prior to this, the patient was asymptomatic. Past medical history included coronary artery disease, gastro-
ophageal reflux disease, hypertension and hyperlipidemia. Medications included clopidogrel, aspirin, ramipril, simvastatin, rabeprazole. The patient had a 20 pack-year history of tobacco use and reported rare alcohol use. Physical exam was remarkable only for mild tenderness to palpation in the epigastrium with no rebound or guarding. Data Blood counts and chemistries were normal. Abdominal CT demonstrated a large gastric mass measuring 8.5 cm x 5.7 cm with no invasion to adjacent organs or pathological lymph nodes. PET scan demonstrated no evi-
dence of metastatic disease. A CT of the chest, abdomen and pelvis did not show a lung pri-
mary or metastatic disease. EGD visualized a large mass in fundus of stomach. The patient un-
derwent a total gastrectomy. The gross specimen included a 10 cm tumor with negative margins and the lymph nodes were negative for malignancy. The tumor was sent to the Armed Forces Institute of Pathology (AFIP) for a second opinion. Histologically, the tumor consisted of poorly differentiated small cells with hyperchromatic nuclei, high nucleus to cytoplasm ratio, nuclear molding, prominent necrosis and a high mitotic rate. Immunohistochemical stains were positive for CD 56, CD 117 and synaptophysin. AFIP concluded that the histologic and immu-
nonphenotypic profile supported the diagnosis of primary gastric SmCC. Discussion: Gastric SmCC is a rare disease with less than 10% long-term survival. Diagnosis is based on histologi-
cal and immunohistochemical characteristics and the exclusion of a primary lung cancer. They are classified as pure-type or composite-type tumors. The TNM system is used for staging. Eth-
ology is unclear, but most patients are men, smokers, use alcohol, and are of Japanese descent. Treatment is based on small retrospective series. The only chance for cure is total gastrectomy with lymph node dissection in combination with post-operative chemotherapy. Our patient re-
ceived this treatment and remains disease free, 2 years after diagnosis. This case represents a rare successful outcome of uncommon malignancy.

P157
SODIUM PHOSPHATE COLONOSCOPY PREPARATION UNMASKING CELIAC DISEASE
M. A. Sotulande, MD, C. Berktelhamer, MD, FACC. Internal Medicine, University of Illinois, Oak Lawn, IL.

Purpose: Introduction: Sodium phosphate bowel preparation can occasionally cause a mild de-
crease in serum calcium secondary to transient hyperphosphatemia. This is rarely of clinical significance except in renal insufficiency. We describe a patient with normal renal function who developed symptomatic hypocalcemia after sodium phosphate colonoscopy bowel prepara-
tion. Further evaluation of hypocalcemia revealed her underlying diagnosis of celiac disease. Case: A 66 year old female complained of numbness and tingling of her face, arms and legs when she presented for a screening colonoscopy after taking sodium phosphate bowel prepa-
ration. She had a history of osteoporosis and was on alendronate. Baseline calcium, 25-hydroxy vitamin D, parathyroid hormone, magnesium and creatinine were normal. She had taken the standard doses consisting of 45 mls of sodium phosphate the evening before and the morning of her colonoscopy. On presentation for colonoscopy her calcium was 7.5 mg/dl, albumin 3.8 gm/dl and phosphorus 7.8 mg/dl. To further evaluate her hypocalcemia an upper endoscopy was performed which revealed classic features of celiac disease (mossy pattern of the duode-
num and notching of duodenal folds). Small bowel biopsies confirmed marked villous atrophy. Tissue transglutaminase antibody (IgA) was markedly elevated at 200 units (negative <20 units). Discussion: Celiac disease can itself predispose to hypocalcemia. The sodium phosphate load during colonoscopy preparation can precipitate hypocalcemia in susceptible individuals. Decreased mobilization of calcium from bone by alkalization may also have been contribu-
tory. Conclusion: Celiac disease should be considered in patients with normal renal function who present with hypocalcemia after sodium phosphate colonoscopy preparation.

Poster Abstracts – Sunday, October 5
P158 SUPERCILIOUSLY ULCERATING LYMPHOMA OF DISTAL ESOPHAGUS MIMICKING EROSIVE REFLEX ESOPHAGITIS

A 38 year old male with intermittent uveitis and back pain was found to have a similar clinical presentation. For steroid sparing effect 6-MP was initiated. No pseudomembranes; biopsies: acute and chronic transmural colitis, focal cryptitis, crypt abscesses, and proximity of the UES to the fistulas were critical considerations mandating a proximal resection. 61% of stent complications are related to the placement, a wider stent (23mm x 12cm) was replaced under direct endoscopic visualization to ensure precise positioning.

P161 UNUSUAL COMPLICATION OF SMEAR TUMPE

Purpose: To report a case of an unusual complication associated with an oesophagectomy (OGT).

Methods: A 65 year old man with Hepatitis C, HIV, rectal squamous cell carcinoma status post radiotherapy was electively admitted for abdomino-perineal resection because of recurrent cancer. Post operatively, he was being maintained on mechanical ventilation. He was receiving a chronic regimen for sedation, a mucosal desquamation for pain management and enteral nutrition via OGT for nutritional support. On day 6, the patient had a self-limiting episode of hematemesis. The decontaminated was discontinued and he was put on intravenous esomprazole.

Endoscopic investigation was deferred as the patient was febrile, hemodynamically stable and a malignancy, clotting factor deficiencies, or mesenteric vein involvement should be anticoagulated. We report a case of pancreatitis and cholecystitis secondary to enteral feeding in a critically ill patient with Crohn’s disease.

P165 RESOLUTION OF CHLOROQUINE INDUCED PERNICIOUS ANEMIA FOLLOWING INITIATION OF ESSENTIAL FISH OILS

Purpose: To report a case of resolution of pernicious anemia following the initiation of essential fish oils.

Methods: The patient was a 67 year old female who presented with severe fatigue, postural dizziness, and black stools on presentation. The patient was initiated on fish oils (2g/day) and had a marked improvement in her symptoms.

P166 ANGINA PECTORIS MIMICKING ESOPHAGITIS

A 65 year old male with history of coronary artery disease and hypertension presented with chest pain. On presentation, the patient had a normal chest X-ray, ECG, and laboratory workup. The patient was initiated on a trial of low dose aspirin and showed a significant improvement in his symptoms.

P167 RUMINATION SYNDROME: A DIAGNOSIS OF THOROUGH HISTORY

Rumination Syndrome is a highly under-diagnosed entity in the adult population. Patients with Rumination Syndrome usually present to multiple internists, gastroenterologists and surgical specialists. The diagnosis is often missed due to its atypical presentation.

Rumination Syndrome was diagnosed in a 67 year old female who presented with recurrent episodes of regurgitation and emesis. The patient had no history of nausea, vomiting, or belching. Upper endoscopy and esophageal manometry were normal. A trial of low dose metoclopramide was initiated and the patient’s symptoms improved significantly.

Conclusion: Rumination Syndrome is a highly under-diagnosed entity in the adult population. A thorough history is essential to establish the diagnosis.

P170 ANOMALOUS MAMMARY GLAND

Anomalies of the mammary gland are rare and can be divided into congenital and acquired abnormalities. Congenital anomalies include accessory breasts, mammary remnants, and polycystic disease. Acquired anomalies include fibroadenoma, cystosarcoma phylloides, and inflammation.

Conclusion: Anomalies of the mammary gland are rare and can be divided into congenital and acquired abnormalities. Congenital anomalies include accessory breasts, mammary remnants, and polycystic disease. Acquired anomalies include fibroadenoma, cystosarcoma phylloides, and inflammation.

P172 ACUTE ABDOMEN IN A SLEEPY PATIENT

A 45 year old man with history of atrial fibrillation presented with a history of sudden onset lower abdominal pain. The patient had no history of nausea, vomiting, or rectal bleeding. Physical exam revealed a soft abdomen with diffuse tenderness and rebound. Laboratory workup was unremarkable. A trial of prn pain medication was initiated and the patient’s symptoms improved significantly.

Conclusion: Acute abdominal pain can be a challenging diagnosis, especially in patients with a history of atrial fibrillation. A thorough history and physical exam are essential in establishing the diagnosis.

P175 ANOMALOUS MAMMARY GLAND: A CLINICAL OBSERVATION

Anomalies of the mammary gland are rare and can be divided into congenital and acquired abnormalities. Congenital anomalies include accessory breasts, mammary remnants, and polycystic disease. Acquired anomalies include fibroadenoma, cystosarcoma phylloides, and inflammation.

Conclusion: Anomalies of the mammary gland are rare and can be divided into congenital and acquired abnormalities. Congenital anomalies include accessory breasts, mammary remnants, and polycystic disease. Acquired anomalies include fibroadenoma, cystosarcoma phylloides, and inflammation.
Sandar Saha, MD

Finally, MAC infection should be considered in the differential diagnosis of chylous ascites. Additional dietary management such as medium chain triglyceride or total parenteral nutrition can facilitate the evaluation of ascitic fluid for the possibility of chylous ascites or superimposed bacterial infection. After that, the patient deteriorated again with a significant hemoglobin drop. Exploratory laparotomy with right hemiepigastric and primary anastomosis was performed. Pathology revealed an irregular 3 cm dark blue discoloration under the mucosa of the ascending colon. Histology demonstrated dilated and distorted vessels lined by endothelium with scantly smooth muscle in the submucoea consistent with AD. The patient received multiple units of blood transfusion for his massive lower GI bleeding. His postop period was complicated by anastomotic leak and he became septic for which he had to undergo reconstruction of aoeoscopic anastomosis and diverting loop ileostomy. He was also given Xiglu for the severe sep-sis. He then developed bleeding from ileostomy site. Xiglus was discontinued and the bleeding was resolved. Ileooscopy revealed punctate hemorrhages but no fresh or old blood was noted. Capsule endoscopy was essentially normal. Results: The patient had no more bleeding episode and feeling well at his 2 month follow up visit.

Conclusion: Massive bleeding from AD in the young is very rarely described. Our patient not only had significant bleeding from AD requiring multiple units of blood, but he also presented with melena rather than hematochola. We hope this case report will remind us that those pre-sentations alone are few but usually implying upper GI bleeding can also indicate bleeding from the lower GI tract. Lastly, bleeding from AD should be in the differential diagnosis of lower GI bleeding even in the young.

P164

CHYLIOUS ASCITES DUE TO MYCOBACTERIUM AVIUM INTRACELLULARE COMPLEX (MAC) PERITONITIS

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Methods: A 41 year old male with advanced AIDS, a CD4 count of 34 and recurrent MAC infection was brought to the ER with blood loss through a colostomy bag and a 10 pound weight loss over 3 weeks. He was non-compliant with his anti-HIV medications. He had no history of liver disease and denied drinking alcohol. He was afibrate but appeared cachectic with a distended abdomen. Abnormal laboratory values included a white blood cell count (WBC) of 22 x 10^9/L, albumin 1.4 g/dL, and alkaline phosphatase 350 U/L. Viral hepatitis serologies were negative. Echocardiogram was normal. Computed Tomography (CT) of the abdomen and pelvis revealed diffuse ascites with thickening of the portal and mesenteric adenopathy. Paracentesis revealed cloudy ascitic fluid with WBC 1880/mm3 (73% neutrophil), albumin 1 g/dL, total protein 3.5 g/dL and negative cytology. His spumum, blood, ascitic fluid cultures and stool concentrate smear were all positive for MAC. The patient was started on ethambutol, amikacin, ciprofloxacin and azthromycin for treatment of MAC. Repeat paracentesis four weeks later demonstrated resolving peritonitis (WBC 19/mm3) but the ascitic fluid appeared milky. The ascites triglyceride level was 780 mg/dl. He had been on a low fat diet but continued to gain weight despite additional intensive MAC treatment. The patient's overall general condition improved and he was discharged to a short term facility to complete treatment for MAC infection.

Results: A 6-month follow up CT scan revealed complete resolution of ascites.

Conclusion: Our case highlights the point that paracentesis should be performed in all patients with ascites for fluid analysis and further management. In patients with MAC peritonitis, if ascites does not improve with MAC therapy and diuretics, paracentesis should be repeated to re-evaluate the ascitic fluid for the possibility of chylous ascites or superimposed bacterial infection. Even though the long term prognosis for patients with chylous ascites is poor, complete resolution of chylous ascites can be achieved as in our case with aggressive MAC therapy and additional dietary management such as medium chain triglyceride or total parenteral nutrition. Finally, MAC infection should be considered in the differential diagnosis of chylous ascites.

P165

THE OTHER CAMPYLOBACTER SPECIES: CAN CAMPYLOBACTER FETUS ALSO BE LINKED TO GASTROINTESTINAL MANIFESTATIONS?

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Purpose: To better understand the role of Campylobacter fetus as a causative agent of gastrointestinal symptoms and to review the literature on associated clinical manifestations.

Methods: A healthy 23 year old male presented to the emergency room after passing 9 episodes of black stools associated with crampy abdominal pain and dizziness. There was no nausea, vomiting or fever. Physical exam was significant for a palpable, tender, right lower quadrant. He denied drinking alcohol or taking any medication. Nasogastric lavage was negative. Rectal examination revealed melanoctic stool. His labs showed hemoglobin of 7.8 g/dL with normal coagulation profile. He was immediately resuscitated with intravenous fluid and 3 units of packed red blood cells without much improvement. Esophagogastroduodenoscopy was normal. Colonoscopy was attempted but it was terminated because of poor visualization due to a large amount of blood. On further bleeding sources a brown fluid was observed near the ileocecal valve. His bleeding scan angiography revealed early venous filling and active extravasation in the proxim-al ascending colon. Colon biopsy of the feeding vessel was attempted with achievement of hemostasis. After that, the patient deteriorated again with a significant hemoglobin drop. Exploratory laparotomy with right hemiepigastric and primary anastomosis was performed. Pathology revealed an irregular 3 cm dark blue discoloration under the mucosa of the ascending colon. Histology demonstrated dilated and distorted vessels lined by endothelium with scantly smooth muscle in the submucoea consistent with AD. The patient received multiple units of blood transfusion for his massive lower GI bleeding. His postop period was complicated by anastomotic leak and he became septic for which he had to undergo reconstruction of aoeoscopic anastomosis and diverting loop ileostomy. He was also given Xiglu for the severe sep-sis. He then developed bleeding from ileostomy site. Xiglus was discontinued and the bleeding was resolved. Ileooscopy revealed punctate hemorrhages but no fresh or old blood was noted. Capsule endoscopy was essentially normal. Results: The patient had no more bleeding episode and feeling well at his 2 month follow up visit.

Conclusion: Massive bleeding from AD in the young is very rarely described. Our patient not only had significant bleeding from AD requiring multiple units of blood, but he also presented with melena rather than hematochola. We hope this case report will remind us that those pre-sentations alone are few but usually implying upper GI bleeding can also indicate bleeding from the lower GI tract. Lastly, bleeding from AD should be in the differential diagnosis of lower GI bleeding even in the young.

P166

EARLY ENTERAL FEEDING AND ANTICOAGULATION IN PYLEPHLEBITIS WITH HEPATIC DYSFUNCTION

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Purpose: Pylephlebitis is a rare complication of certain inflammatory processes in the gastroin-testinal tract and offers few many challenges for gastroenterologists. The issues of anticoagulation and enterostomy are frequently discussed. The issue of feeding in patients with pylephlebitis is rarely published. Our patient’s favorable course and prompt recovery provides anecdotal evidence that enteral feeding is not contraindicated in this condition.

Methods: A 41 year-old man presented with complaints of vomiting 10-30 minutes after meals for three years. Past history included SLE and sleep apnea. The patient had an extensive workup consisting of CT scans (head and abdomen), upper endoscopy, push enteroscopy, colonoscopy and a gastric emptying scan; none of which explained his symptoms. He had also undergone a “celiac release” procedure one year prior without sustained relief. Systemic steroids for SLE entered us did alleviate the symptoms. Physical exam and laboratory data were unremarkable. A detailed history revealed that our patient suffered from vomiting with out antecedent nausea, retching, weight loss, abdominal pain, or altered bowel habits for three years. He would often re-chew and re-swallow the vomited material.

Results: Given the clinical scenario and lack of findings on multiple radiological and invasive tests, rumination syndrome was diagnosed. This syndrome, also termed mercym was defined as regurgitation of partially digested food particles, followed by expulsion or re-swallowing without or with re-chewing. Clinical typical clinical features are adequate for diagnosis without extensive testing. Features include repetitive, effortless regurgitation of gastric contents within minutes of every meal. Regurgitation is not preceded by nausea. Mild weight loss and postprandial gas troesophageal reflux may be witnessed. Though the mechanism is unclear, it is accepted in pedi atric and adult literature that no abnormalities in the structure or motility of the GI tract exist. Many have suggested that regurgitation is triggered by the M. Teres Minor muscle which is a forced inspiration against a closed glottis. Manometric studies in ruminators have revealed spike waves corresponding to increased intra-abdominal pressure and relaxation of the lower esophageal sphincter but is not necessary to make the diagnosis. Psychological factors have also been suggested. Despite the benign nature of rumination syndrome, significant functional disability occurs secondary to frequent visits to physicians and hospitalizations in search for a diagnosis. The many medical tests that our patient endured to rule out other conditions supports the fear that their symptoms are not properly understood. The patient was started on cimetidine and had not had any of his symptoms return. He lost his fear of re-chewing and the patient has not had any further episodes of heartburn or regurgitation.

Conclusion: Patients with Rumination Syndrome usually present to multiple internists, gastroenterologists, and hospitals in search of their diagnosis. This report highlights the importance of a thorough history in an often-overlooked diagnosis.
PATIENTS: A 22 year old Vietnamese immigrant in Canada for 16 years presented with a 5 month history of abdominal pain, weight loss and diarrhea. History was negative for medical problems, medication and drug use, smoking, alcohol, gastrointestinal bleeding, constitutional symptoms, infectious contacts, recent travel and extraintestinal manifestations of inflammatory bowel disease (IBD). Family history was negative for tuberculosis, IBD and colon cancer. Physical exam showed a pale, cachetic, afibrile, hypertensive (184/54) man with no postural drop. There was mild subcutaneous tenderness and no lymphophatody. Lab investigations revealed hemoglobin 117 g/L, white blood cell count 20.6 x 10^9/L, neutrophil count 16.9 x 10^9/L, mean corpuscular volume 79.1 fL and serum albumin 29 g/L. Rectal examination revealed multiple rectal friable, yellow, liver colored polyps, lower TSH were within normal limits. Serum endogenous antibody and stool testing were negative. Colonoscopy showed a fistulous opening at the base of the cecum, marked mucosal nodularity with multiple pseudopolyps, deep ulcers and areas of denudation in the cecum, ascending and mid-transverse colon. Corticosteroid therapy was deferred due to possibility of tuberculosis.

Intestinal biopsies showed moderate acid-fast bacilli with necrotizing granulomas. Nucleic acid amplification test was positive for Mycobacterium tuberculosis complex. The patient’s gastrointestinal symptoms improved on treatment with azithromycin with a 1 month history of recurrent abdominal pain. Past medical history was significant for vitamin B12 deficiency and iron deficiency anemia. A 5 year history of alcohol and drug use, gallstone disease, constitutional symptoms and medication use: Lab work was unremarkable. Abdominal CT showed extensive calcification within the head, body and tail of the pancreas and dilated pancreatic ducts. Endoscopic retrograde cholangiopancreatography (ERCP) showed a pancreatic duct stricturing in the neck of the pancreas. Stent placement did not relieve pain. Repeat ERCP revealed multiple cleared stones with a large stone in the head of the pancreas causing obstruction. Endoscopic shock wave lithotripsy (ESWL) and ERCP were attempted for stone retrieval but were unsuccessful. Surgical debridement of the head was performed.

Discussion: Our case illustrates three important principles in the diagnosis and treatment of gastrointestinal tuberculosis (GI TB). First, tuberculosis infection should be considered in patients with clinical, endoscopic, radiological and histopathological features of Crohn’s disease, especially where there is a predominance of ileal and colonic involvement. Immigration from a country with endemic tuberculosis is an important risk factor, even if immigration is a remote event. Non-specific symptoms of GI TB include fever, right upper quadrant swelling, weight loss, abdominal pain and diarrhea. Diagnosis of GI TB is based on detection of acid-fast bacilli in tissue or stool. Second, it is important to exclude the possibility of tuberculosis before the commencement of continuous anti-tuberculous therapy was used in the treatment of IBD, since corticosteroid therapy will increase morbidity of the patient with GI TB. Third, treatment of IBD is primarily medical and although complications such as fistula formation, perforation and hemorrhage may require surgical intervention, it is possible to treat gastrointestinal fistula due to tuberculous successfully with medical therapy alone.

P170 ISOLATED SPLENIC VEIN THROMBOSIS IN A PATIENT WITH POLYCYTHEMIA VERA
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Purpose: Polycythemia vera (PCV) is a known cause of hypercoagulable states; however, isolated splenic vein thrombosis associated with PCV is rarely reported. We report a case of the unusual onset of a splenic vein thrombosis presenting as an upper gastrointestinal bleed in a patient with PCV. Case: A 46 year old white female presented to the emergency room with complaints of melena for four days. She denied vomiting and abdominal pain associated with the melena. Her history was significant for polycythemia vera for which she was treated with phlebotomy in her physical year. She reported intermittent phlebitis in the past. She denied non-steroidal anti-inflammatory use. Hemodynamics were significant for orthostasis, and presenting labs revealed a hematocrit of 6.9 gm/dL. Abdominal examination was normal. After volume resuscitation, an esophagogastroduodenoscopy was performed. This revealed a normal esophagus and duodenum but multiple large, gastric varices with red marking signs in the gastric fundus. The finding of intragastric varices prompted an evaluation for a splenic vein thrombosis. An ultrasound Doppler exam revealed patent portal veins and a patent splenic vein at the level of the duodenum but multiple large, gastric varices with red marking signs in the gastric fundus. The patient had a full recovery. This case highlights the importance of maintaining a high level of suspicion for the consequences of thrombosis in unusual locations in patients with hypercoagulable states. This case also demonstrates the relative lack of sensitivity of extracorporeal ultra-sound for the diagnosis of splenic vein thrombosis.
P174 COLITIS CYSTICA PROFUNDA OF THE RIGHT COLON MIMICKING COLONIC POLYPYOSIS
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Purpose: To report a case of CCP of the right colon referred for further management of colonic polyposis.

Methods: 50 year-old woman with no prior PMHx underwent screening colonoscopy. She was found to have multiple sessile growths in the right colon. She was referred for further management of colonic polyposis.

Results: CCP was characterized by the presence of mucin-filled cysts confined to the submucosa most frequently seen in the distal colon. CCP is most often seen in the 3rd and 4th decades of life and has equal predilection for men and women. It is often associated with solitary rectal ulcers and rectal prolapse as well as defecation disorders. CCP has also been seen in patients with inflammatory bowel disease, ulcerative colitis and radiation colitis. While several theories have been proposed, it is believed that trauma or chronic inflammation most likely leads to the production of these cysts. The cysts can appear as ulcerated (57%), polyloid (25%), or flat (18%). The majority of lesions are found in the distal colon, often between 5 and 12 cm from the anal margin on the anterior wall. However, the cysts can be found through the colon and even, rarely, in the small intestine and the stomach. It can also have a segmental distribution or, less frequently, it can present as polyclinids. The lesions seen in CCP have often been mistaken for adenomatous polyps and even adenocarcinoma. Histopathologic analysis can demonstrate mucin pools with flattened epithelial lining within the submucosa. In patients with minimal symptoms, conservative treatment is indicated. The treatment is aimed at reducing straining during defecation by retraining habits, as well as high fiber diets and bulk laxatives. These measures have been demonstrated to cause complete regression within a 6-9 month period in various studies. When rectal prolapse is the cause, surgical correction is indicated to correct the problem.

Conclusion: Isolated right colon CCP is rare and should be considered in the differential diagnosis of multiple polyposis syndromes.

P175 SUCCESSFUL ENDOSCOPIC CLOSURE OF A GASTRO-GASTRIC FISTULA WITH ENDO-CLIPS
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Purpose: Roux-en-Y gastric bypass (RYGB) is a mainstay of bariatric surgical therapy. A Gastro-Gastric Fistula (GGF) is an infrequent but potentially serious complication of gastric bypass, and clinicians often have difficulty establishing the diagnosis. We report a novel endoscopic technique of successful management of GGF using APC and endo-clips.

Methods: A 31-year-old woman with a BMI of 44 underwent a laparoscopic divided ante-colic Roux-en-Y gastric bypass (RYGB), with creation of a 30-cc gastric pouch. Her immediate post-operative course was unremarkable. She was discharged home on the 6th post-operative day. Two months later, she complained of persistent post-gastric nausea and emesis. An upper GI series performed revealed a GGF, with preferential flow into the bypassed stomach (Fig 1). Despite this finding, she has achieved a 70% excess weight loss. The patient had elected not to pursue revisional surgery. Upper Endoscopy was performed and multiple ulcerations noted. GGF was identified at the cardia. Twice daily PPI's did not improve her symptoms. Two weeks later repeat endoscopy was performed. A guide-wire was placed through the fistula. Fluoroscopy confirmed the position of the cannula in the gastric pouch. A fill of 11.2 g/kg of absolute alcohol was infused. The tract was done. Two Boston Scientific Resolution Clips were used to close the fistula after APC of the tract. The patient was sent home on twice daily PPI. Her symptoms improved. Repeat upper endoscopy was repeated 8 weeks after closure confirming the closure.

Results: Although a gastro-gastric fistula is currently an uncommon complication of RYGB, historically GGF was one of the most common complications after undivided RYGBP, occurring in 6-9% of patients. This complication rapidly declined with the introduction of laparoscopic gastric bypass with an incidence ranging from 0-6%. Multiple factors likely to play a role in the formation of a GGF. Failure to completely transect the gastric pouch from the bypassed portion of the stomach, anastomotic leak, anastomotic stricture or marginal ulceration, and ob- stuction of the Roux-limb distal to the anastomosis is of the few causes of formation of GGF. In patients with a clearly identifiable GGF on contrast study and/or endoscopy who demon-
P178
PORTAL VEIN THROMBOSIS AFTER GASTRIC BYPASS SURGERY
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Purpose: INTRODUCTION - Portal vein thrombosis is a very rare complication of gastric bypass surgery. We present a case of a young lady who presented with post-operative portal vein thrombosis after Roux-en-Y gastric bypass surgery. Subsequent angiographical evaluation of portal system was performed, suggesting thrombosis of portal vein.

Methods: A 27 y/o woman presented with 6 months of mild epigastric discomfort and fatigue. A CT scan suggested ascites, splenomegaly and nodular liver. There was an initial concern for possible cirrhosis. Liver biopsy was performed using a transjugular approach. The biopsy suggested minimal iron overload with no evidence of cirrhosis. The Doppler study was non-diagnostic. The patient underwent surgery and was treated with oral antibiotics and advised to follow-up in surgery clinic. The patient now presents with abdominal pain.

Results: Her past medical history included hypertension and depression, for which she was taking antidepressants. She had a history of obesity, congenital absence of right kidney and endometriosis. She underwent a Roux-en-Y gastric bypass surgery. A couple of weeks later, she presented with abdominal pain. Initially, there was suspicion of pancreatitis but was not confirmed. She was later diagnosed with portal vein thrombosis. A CT scan was done and patient referred to the hemato-oncologist for further therapy.

Conclusion: Portal vein thrombosis is an extremely rare complication of gastric bypass surgery. The data-base is very limited in terms of management and prognosis of patients with portal vein thrombosis after bariatric surgery. The purpose of this paper is to present a case of a young lady post-Roux-en-Y gastric bypass surgery who presented with portal vein thrombosis. She underwent angiographical evaluation of portal system. The surgical options were limited. Since then, she has been managed with beta-blockade and periodic EBL. She has not had any further bleeding episodes in the last 6 months. Her anecdotals has resolved but thrombocytopenia and splenomegaly have persisted. DISCUSSION: Portal vein thrombosis is an extremely rare complication of gastric bypass surgery. The data-base is very limited in terms of management and prognosis of patients with portal vein thrombosis after bariatric surgery. The purpose of this paper is to present a case of a young lady post-Roux-en-Y gastric bypass surgery who presented with portal vein thrombosis. She underwent angiographical evaluation of portal system. The surgical options were limited. Since then, she has been managed with beta-blockade and periodic EBL. She has not had any further bleeding episodes in the last 6 months. Her anecdotals has resolved but thrombocytopenia and splenomegaly have persisted.

P179
PRESENTATION OF METASTATIC LEIOMYOSARCOMA OF THE UTERUS AS UPPER GI BLEEDING
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Purpose: The uterine leiomyosarcoma (LMS) is a rare sarcoma arising from the smooth muscle cells found within the myometrium. Smooth muscle is found in most hollow organs and the walls of blood vessels, but LMS most commonly occur in the uterus and gastrointestinal tract. Uterine LMS represent 25-35% of uterine sarcomas and 1% of all uterine malignancies. The uterine leiomyosarcoma (LMS) is a rare sarcoma arising from the smooth muscle cells found within the myometrium. Smooth muscle is found in most hollow organs and the walls of blood vessels, but LMS most commonly occur in the uterus and gastrointestinal tract. Uterine LMS represent 25-35% of uterine sarcomas and 1% of all uterine malignancies. We present a case of LMS metastasis to the duodenum, which is very rare.

Methods: A 46 y/o Guatemalan female was admitted with complaints of weakness, palpitation, diaphoresis, and fatigue for 2 weeks. The patient also reported new weight loss of about 10 lb after she started passing dark stool. The patient had a significant past surgical history of hysterectomy 3 years prior secondary to uterine leiomyosarcoma, as well as hypertension. She had a family history of digestive disorders which includes colon cancer and breast cancer.

Results: On physical examination, a cachexic appearance with pale mucosal membrane was observed. Abdomen was soft, non-tender, non-distended without evidence of hepatomegaly or splenomegaly. A healed surgical scar was noted on lower abdomen. Examinations of the rest of the systems were normal. Stool guaiac was positive. Laboratory evaluation revealed microcytic anemia. Serum chemistry and liver function tests were normal. Since patient had history of stool blood testing, we sent a stool guaiac test, which showed blood contour within the stool. It was noted that the patient had anemia due to anemia of chronic disease.

Conclusion: Diagnosis of uterine LMS carries a poor prognosis due to the high rate of recurrence and metastases. The common sites of metastases of uterine LMS are the lungs, kidney, and liver. LMS can develop anywhere along the gastrointestinal tract, including the stomach, rectum and large and small intestines. Around fifty percent of intestinal LMS cases present in the ileum, the least part of the small intestine. Upon review of the literature, this case represents only the third other published report of uterine LMS metastasis to the duodenum.

P180
AN ENIGMATIC ENTITY - IDIOPATHIC GRANULOMATOUS APPENDICITIS
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Purpose: Granulomatous appendicitis (GA) is a rare condition occurring in 0.1% to 2% of all appendectomies. Possible etiologies of GA include Crohn’s disease (CD), sarcoidosis, foreign body reaction, inflammatory bowel disease, and tuberculosis. Appendectomy is performed to exclude complications such as abscess formation, wall perforation, and bowel obstruction. Idiopathic granulomatous appendicitis (IGA) is an extremely rare condition with unknown etiology. We present a patient with idiopathic granulomatous appendicitis who underwent successful appendectomy.

Methods: A 72 y/o woman presented with 6 months of mild episodic dysentery and fatigue. A CT of the abdomen revealed a 6.0 x 3.7 cm mass at the base of the pancreas with central low attenuation, interpreted as possible necrotic change. This was suspicious for a pancreatic head mass. Colonoscopy revealed a thick-walled aneurysm-like lesion at the splenic flexure, and a similar lesion in the transverse colon, which revealed a smooth, round, centimeter-sized submucosal lesion at the splenic flexure, with a few smaller similar-appearing lesions adjacent to it. These were soft when probed. EUS revealed anechoic masses, and air was aspirated from them.

Conclusion: We present a case of an isolated lesion in an asymptomatic patient. Endoscopists should be aware of the typical features of pneumatosis coli to avoid misdiagnosis and unnecessary treatment. EUS can be a useful diagnostic tool in diagnosing pneumatosis coli.

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IDIOPATHIC PNEUMATOSIS COLI PRESENTING AS AN ISOLATED SUBMUCOSAL MASS CONFIRMED BY ENDOSCOPIC ULTRASOUND
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Purpose: Pneumatosis coli, also known as pneumatosis cystoides intestinalis (PCI), is a rare condition involving gas in the bowel wall. Primary, or idiopathic, PCI is an uncommon form, comprising 15% of all cases of PCI. We present a case of a patient with idiopathic, isolated PCI was misdiagnosed in the community and referred to our institution, where we made the diagnosis with endoscopic ultrasound.

Results: A 54 y/o Caucasian man underwent average-risk colon cancer screening colonoscopy at a community endoscopy center. Colonoscopy revealed a 10mm submucosal lesion at the splenic flexure, and two much smaller similar-appearing lesions adjacent to it (see figure 1). A few biopsies were taken with each endoscope. The remainder of the colon and distal terminal ileum appeared normal. Histologic analysis revealed benign mucosal tissue and mildly disordered glandular architecture. He was referred to our institution for evaluation with EUS for suspicion of lipoma versus submucosal nodules. The patient denied any GI or respiratory symptoms. His past medical history included hypertension and depression, for which he was taking antidepressive and antidepressant medications. Two months later at our institution, the patient underwent a fiber-optic lower endoscopy to the transverse colon, which revealed a smooth, round, centimeter-sized submucosal lesion at the splenic flexure, with a few smaller similar-appearing lesions adjacent to it. These were soft when probed. EUS revealed anechoic areas in the submucosa with air shadows. A sclerotherapy needle was inserted into two of the masses, and air was aspirated from them.

Conclusion: Idiopathic pneumatosis coli can present as an isolated lesion in an asymptomatic patient. Endoscopists should be aware of the typical features of pneumatosis coli to avoid misdiagnosis and unnecessary treatment. EUS can be a useful diagnostic tool in diagnosing pneumatosis coli.

Figure 1: EUS image of tumor at head of pancreas.
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RARE ASSOCIATION OF LEUKOCYTOCLASTIC VASCULITIS AND CROHN’S DISEASE
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Purpose: We present a patient with cutaneous leukocytoclastic vasculitis during a flare of Crohn’s disease, an association that has been reported rarely in the literature.

Results: A 30 y/o African-American man with a history of Crohn’s colitis for 11 years presented to the emergency room over 2 weeks of bloody loose stools 15-20 times a day and abdominal cramping. He had been taking 60-80 mg of prednisone a day for several days with no benefit. His prednisone dose was increased to 100 mg a day and sent home. His colitis improved over the next two days, with 5-10 slightly bloody and formed stools a day. He then developed a pruritic, slightly raised, violaceous skin eruption over all his extremities (see image). Plaque were 2-3 cm in size. He returned to the ED, where a punch biopsy was taken. Keflex and Benadryl were started. Lab tests were significant for a white count of 16.2; the remainder of the CBC and chemistry were normal. Anti-streptolysin-O antibody, hepatitis C, ANA, HIV, serum and urine electrophoreses, serum complement, and cryoglobulins were negative. Hepatitis B surface antibody and core antibody were positive. Histologic analysis of the skin lesion revealed leukocytoclastic vasculitis. A colonscopy several days later revealed moderate colitis from the hepatic flexure to the rectum, with diffuse erythema and a nodular appearance. The right colon and terminal ileum were normal. There were multiple pseudopolyps and punctate ulcers in the descending colon. Random biopsies taken throughout the colon were significant for mild-moderate chronic inflammation in the left colon. No granulomas or dysplasia were seen. Over the next several days, his colitis symptoms completely resolved. In addition, the cutaneous lesions over his upper extremities resolved, and his lesions over his lower extremities decreased in size, resolving completely after 2 months.

Conclusion: We present a very rare case of biopsy-proven cutaneous leukocytoclastic vasculitis following an acute flare of Crohn’s colitis. This lends further support to the possible important role of circulating immune complexes theorized to be important in inflammatory bowel disease and cutaneous vasculitis.

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DUODENAL CARCINOID TUMORS: A REVIEW OF FIVE CASES
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Purpose: Duodenal carcinoid tumors are rare, accounting for 2% of gastrointestinal carcinoid tumors. We review five cases of duodenal carcinoid tumors diagnosed at our institution from 2004-2008.

Results: Of the five cases, there were four men and one woman, with ages ranging from 50 to 73. Three patients were asymptomatic and discovered incidentally, and two presented with painless jaundice. None manifested symptoms of carcinoid syndrome. Two carcinoid tumors were located in the duodenal bulb, two in the periampullary area, and one in the second portion of the duodenum. The two periampullary carcinoid cases presented with symptoms of obstructive jaundice, and the others were asymptomatic. At the time of diagnosis, two patients had metastases. One of them presented with painless jaundice and was found to have a periampullary carcinoid and positive lymph nodes. The second patient had carcinoid in the second portion of the duodenum and liver metastases but was asymptomatic. EUS with fine needle aspiration was performed on three patients and findings were accurate for carcinoid in all three. The three smallest tumors were removed endoscopically. These tumours ranged from 6 to 19 mm in greatest diameter. There were post-EMR (endoscopic mucosal resection) bleeding complications associated with one of the three cases, the 15-15 mm carcinoid in the duodenal bulb. Two EGDs over the next few days performed for acute GI bleeding revealed a clot over the resection site, and no intervention was performed. Of the two patients with large periampullary tumors, one patient without any metastases had a curative pylorus-preserving pancreaticoduodenectomy. The other patient had positive lymph nodes and it was decided that surgical intervention was contraindicated due to the patient’s portal hypertension from end-stage liver disease thought to be due to alcoholic liver disease. One patient who had EMR was lost to follow up. The two other patients with EMR were asymptomatic after 9 and 19 months of follow-up. The patient who had a pylorus-preserving Whipple was asymptomatic after 12 months. The patient who had a periampullary carcinoid with metastases to lymph nodes but no surgical treatment has been doing well on treatment with octreotide alone after 28 months. His ALT was slightly elevated at 56. This clinical course is reflective of the usually indolent course of carcinoid tumors. EMR was performed on three patients and findings were accurate for carcinoid in all three. Duodenal carcinoid tumors are classified into three groups: those that arise from the duodenal bulb, those that arise in the duodenal bulb, and those that arise in the periampullary area.

Conclusion: Duodenal carcinoid tumors are rare, and can be discovered incidentally or with symptoms, such as obstructive jaundice when the ampulla is involved. The growth is typically indolent, and the presence of metastases and co-morbidities can determine appropriate intervention. EUS is a useful diagnostic tool for suspected duodenal carcinoid tumors.

P185

RECURRENT ESOPHAGEAL CANDIDIASIS: CONSIDER THYMOMA
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Purpose: Introduction: We report a newly diagnosed thymoma in a patient with recurrent candidal esophagitis.

Methods: Case Presentation: A 60 year-old white woman presented to her gastroenterologist for evaluation of dysphagia to solid foods. There was no personal history of diabetes mellitus, HIV, scleroderma, achalasia, recent use of glucocorticoids or antibiotic use. Physical exam was unremarkable. EGD examination revealed Candidal esophagitis. A CBC was noted for lymphopenia prompting a detailed immune evaluation. This evaluation revealed normal numbers and percentages of CD4 and CD8 T cells, serum chemistries, thyroid function, quantitative immunoglobulins, CRP and ESR. ANA was weakly positive. TGT and Gliadin antibody were normal. HIV testing was negative. Delayed hypersensitivity testing showed anergy to Candida species. Chest CT showed an anterior mediastinal mass suspicious for thymoma. A stage II thymoma was subsequently removed. Her post-operative course has been complicated with recurrent candidal esophagitis and new onset myasthenia gravis.

Results: Discussion: Esophageal candidiasis may present with substernal pain, dysphagia, odynophagia or often, without any symptoms at all. The finding of esophageal candidiasis should warrant an investigation for an underlying etiology (Table). A thorough history and physical should be sought. Routine laboratory tests should be ordered to rule out common predisposing diseases for candidal esophagitis, such as diabetes and HIV. In our patient the history did not reveal any past infections. A review of her medication list was noted only for a previous course of acid suppression therapy for her peptic ulcer disease. Her physical exam did not reveal any stigmata of macucutanous candidiasis EGD revealed normal surface. Routine laboratories ruled out HIV, diabetes, and endocrinopathies; however, CBC showed lymphopenia. The immunologic evaluation suggests an underlying T cell defect, as the patient had normal numbers of T cells and quantitative immunoglobulins, yet an anergic response to delayed hypersensitivity testing to Candida. Part of the work up in evaluating a patient with obvious thyromye defect is a chest CT to rule out thymoma, as confirmed in this case.

Conclusion: In summary esophageal candidiasis is normally related to a predisposing condition. The clinician generally should identify first whether one is immunocompetent or immunodeficient. In the immunocompetent individual, medications should be considered and structural abnormalities of the esophagus should be ruled out. Classifying a patient as immunodeficient may not be as obvious as, expected, as in such case, one can have a seemingly normal immunologic evaluation.

Risk Factors for Candidal Esophagitis

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<th>Dysmotility/Structural Abnormalities</th>
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<td>Lithotripsy</td>
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SICKLE CELL-INDUCED HEPATOPATHY WITH FULMINANT HEPATIC FAILURE. SUCCESSFUL TREATMENT WITH PLASMA EXCHANGE.

M. W. Meyer, M.D., E. J. Levine, M.D., F.A.C.G., Gastroenterology, Hepatology, and Nutrition, The Ohio State University Medical Center, Columbus, OH.

Purpose: To introduce Sickle cell hepatopathy as a useful term to describe liver dysfunction occurring in the sickle cell patient. We describe a patient with hemoglobin SS who presented with fulminant liver failure, successfully treated with plasma exchange.

Methods: Case report. Subject: A 15 year old African American male with a history of SS sickle cell anemia who was transferred to our facility with worsening liver function. Ten days prior to transfer, she was admitted to an outside hospital in sickle cell crisis. While undergoing treatment for her sickle crisis, she developed liver dysfunction and a severe coagulopathy associated with hepatic encephalopathy. She was transferred for further evaluation and to be considered for possible liver transplantation. She denied a previous history of liver disease. On admission to our facility the patient was somnolent with marked asterixis (Stage 3 hepatic encephalopathy). She was deeply jaundiced with an enlarged, tender liver. Admission labs included: WBC 31,300/mm3, hemoglobin 7.8 g/dL, platelets 250,000/mm3, LDH 524 IU, total bilirubin 52.1 mg/dL, ALT 232 IU, AST 498 IU, PT INR 17.7 (see Table). Urine toxicology was positive for cocaine and negative for acetylsalicylic acid, anti-HCV, HBsAg, anti-HBc, anti-HAV, IgG and IgM. Abdominal ultrasound with Duplex Doppler revealed hepatomegaly, no ascites, normal flow in the portal and hepatic veins.

Results: The patient was admitted to the ICU and treated for hepatic encephalopathy; she was not considered to be a transplant candidate. Exchange transfusion was initiated on hospital day 2 and continued for 4 days. Over the next few days her bilirubin and creatinine continued to rise, while the ALT, AST, and portal flow of encephalopathy improved. She was discharged home on day 12.

Conclusion: Our patient presented with fulminant hepatic failure associated with severe sickle cell intraphatic cholestasis. While concomitant cocaine ingestion may have contributed to the severity of her liver injury, the pattern of injury and clinical course were not consistent with cocaine hepatotoxicity. Her dramatic response to exchange transfusion reinforces the success of this treatment in patients with intraphatic cholestatic sickle cell hepatopathy, including those presenting with fulminant hepatic failure. These patients can be treated in a general medical facility capable of performing exchange transfusions, and are rarely, if ever, liver transplant candidates. Thus, initiation of exchange transfusion should not be delayed while attempting to transfer these patients to liver transplant centers.

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*: Patient received exchange transfusion

Critical care physicians are often faced with the challenge of caring for patients with hemoglobin SS sickle cell anemia. These patients can present with a wide range of complications, including hepatic failure. Exchange transfusion is a treatment option that can be lifesaving in these cases. The case presented highlights the importance of early recognition and prompt intervention. Continued research is needed to better understand the pathophysiology of sickle cell hepatopathy and to improve outcomes for this patient population.
P190
AGENESIS OF THE DORSAL Pancreas WITH ASSOCIATED UNICORNUATE UTERUS: A CASE REPORT
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Purpose: We describe a patient previously known to have unicornuate uterus and fertility difficulties leading to in vitro fertilization who was later found to have agenesis of the dorsal pancreas presenting with recurrent acute pancreatitis.
Methods: Retrospective review of a single case
Results: A 40 year old woman presented as an inpatient with recurrent acute pancreatitis without evidence of immediate etiology. She had no significant alcoholism and no biliary disease. She had normal calcium levels, normal triglycerides, no history of traumatic injury or family history of disease. Abdominal CT scan showed inflammation of the pancreatic head with non-visualization of the body and tail. She was supported through the acute episode with resolution of symptoms and normalization of laboratory values ERCP was performed at a later date and was significant for a short, dilated ventral pancreatic duct with extensive side branching. There was no extension of dye across the midline on pancreatogram prompting search for an accessory ampulla give the possibility for pancreas divisum. After extensive searching, the accessory ampulla was not found and thought likely to be congenitally absent. MRCP was performed and confirmed the suspicion for agenesis of the dorsal pancreas.
Conclusion: Agenesis of the dorsal pancreas is a rare congenital anomaly. It is even less likely to present with acute pancreatitis as it is typically asymptomatic and found incidentally on imaging studies. There have been no reports of associated congenital anomalies with agenesis of the dorsal pancreas, while abnormalities of the urogenital system have been described with pancreas divisum. While the Mullerian ductal system is of mesodermal origin, it is possible that this tubular structure shares embryonal transcription factors with the pancreatobiliary system. This could represent a potential pathophysiological mechanism resulting in the cocontinuous presentation of agenesis of the dorsal pancreas and unicornuate uterus.

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EXTRA-LUMINAL GASTRIC LEIOMYOSARCOMA MASQUERADING AS A PancreATIC MASS ON CT- UNMASKED BY ENDOSCOPIC ULTRASOUND (EUS)
S. Mathur, MD, N. Sonpal, BS, W. Thelmo, MD, Y. Arya, MD, M. Arya, MD, Wyckoff Heights Medical Center, Brooklyn, NY.
Purpose: Half of all GI tract stromal tumors are gastric while approximately 80% of these are leiomyomas or leiomyosarcomas. The benign lesions are the most common; however the malignant type account for 1% of all gastric malignancies and can be difficult to distinguish via radiological methods. Since the growth of leiomyosarcoma can grow outward from the submucosa into adjacent structures CT scanning can yield results which are not in line with the true anatomy.
Methods: Such is this case of a 55 year old female with no relevant PMH who presented to the ER with lower abdominal pain, loss of appetite, 32 pound weight loss over 4 months and sporadic vomiting. The patient also complained of lower back pain radiating her mid abdomen and retching for the past three months which had worsened in the last one month. The patient denied any history of fever, diarrhea, weight loss and loss of appetite. His PMH is significant for diverticular, COPD, DMII, BPH and CAD. Physical examination on admission was non contributory except for a tender palpable mass which was hard in consistency on rectal examination and yielded guiac positive stool. Other laboratory findings were non contributory and a colonoscopy was undertaken to evaluate for the blood loss. A suspicious malignant tumor in rectum was seen 8 cm in length, circumferential, fusing but not obstructing the lumen. Biopsy and subsequent immunohistochemical stain for CD 45 were strongly positive for leiomyosarcoma.
Results: Radial EUS performed for staging demonstrated a large hypoechic mass arising just above the anal verge extending to the serosal surface without penetration into the peri-rectal fat consistent with a T3 process. A second lesion measuring 3.5 x 1.5 cm was seen intramurally just proximal to the mucosal mass. This second lesion was sonographically distinct from the lymphomatous process and appeared to be arising from the muscularis propria with extension into peri-rectal fat. This finding was corroborated by the initial CT of the abdomen showing a reticular mass with extensive extra luminal component. Echo features of the tumor were characterized by marked heterogeneity and small cystic spaces.
Conclusion: Modern diagnostic procedures with multiple biopsies and endoscopic ultrasound (EUS) for staging increase the percentage of early detection and more precise diagnoses without the need for invasive surgeries. Further fine need aspiration can be implemented to increase the yield in biopsies of local or lymph node metastasis. EUS has the ability to image colonic wall layers and peri-rectal lymph nodes and is therefore most accurate staging method for rectal cancer. However due to the rarity of a primary rectal lymphoma very little has been described in the current literature on the EUS findings in this disease process.

P192
ENDOSCOPIC ULTRASOUND CHARACTERISTICS OF A MALIGNANT RECTAL LYMPHOMA
S. Mathur, MD, N. Sonpal, BS, W. Thelmo, MD, Y. Arya, MD, M. Arya, MD, Wyckoff Heights Medical Center, Brooklyn, NY.
Purpose: Primary rectal lymphomas are a very uncommon disease and have not been extensively described in the literature. They compromise about 0.1 – 2% of primary lymphomas of the gastrointestinal tract, and 4 - 4% of the malignant neoplasms of the rectum. We present a case of a malignant primary large B cell rectal lymphoma and highlight the notable EUS characteristics.
Methods: A 95 year old male presented to the ED with complaints of bleeding per rectum for last five days. He had a history of abdominal pain for the past three months which had worsened in the last one month. The patient denied any history of fever, diarrhea, weight loss and loss of appetite. His PMH is significant for diverticulous, COPD, DMII, BPH and CAD. Physical examination on admission was non contributory except for a tender palpable mass which was hard in consistency on rectal examination and yielded guiac positive stool. Other laboratory findings were non contributory and a colonoscopy was undertaken to evaluate for the blood loss. A suspicious malignant tumor in rectum was seen 8 cm in length, circumferential, fusing but not obstructing the lumen. Biopsy and subsequent immunohistochemical stain for CD 45 were strongly positive for leiomyosarcoma.
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P193
COLONIC PSEUDO-ULCERS: UNUSUAL COLONOSCOPIC FINDING IN LAXATIVE ABUSERS
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Purpose: It is well known that chronic use of laxatives containing natural herbal products such as Aloe vera, Sena, Cascara and other anthraquinone laxatives results in pigmentation of the colonic mucosa called pseudomelanosis coli. The common herbal laxatives in this category are Chomper, Swiss Krisis and Supercleanse. Sometimes colonic emaciations containing such herbal products are used. The resulting pigmentation is usually patchy with areas of normal non-pigmented mucosa being present. Sometimes the pigmentation is so dark that a satisfactory correlation could not be found.
Methods: We report a case of a 55 year old female with no relevant PMH who presented to the ED with lower abdominal pain, loss of appetite, 32 pound weight loss over 4 months and sporadic vomiting. The patient also complained of lower back pain radiating her mid abdomen and retching for the past three months which had worsened in the last one month. The patient denied any history of fever, diarrhea, weight loss and loss of appetite. His PMH is significant for diverticulous, COPD, DMII, BPH and CAD. Physical examination on admission was non contributory except for a tender palpable mass which was hard in consistency on rectal examination and yielded guiac positive stool. Other laboratory findings were non contributory and a colonoscopy was undertaken to evaluate for the blood loss. A suspicious malignant tumor in rectum was seen 8 cm in length, circumferential, fusing but not obstructing the lumen. Biopsy and subsequent immunohistochemical stain for CD 45 were strongly positive for leiomyosarcoma. CD 45 were strongly positive for leiomyosarcoma. CD 45 were strongly positive for leiomyosarcoma.
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SUCTION POLYPECTOMY: A NOVEL AND SAFE METHOD FOR REMOVING COLONIC LIPOMA

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Purpose: After adenomatous polypl, lipomas are the second most common benign polyps of the colon. Most of the rectosigmoid polyps are asymptomatic, but lipomas, due to their submucosal location, may cause polypoid obstruction (Am J Gastroenterol, 99:1253). Small lipomas of the colon are usually left alone. However, carcinoma of the colon, because of their high lipid content, may have yellowish appearance and mimic lipoma. The presence of the polypoid signs indicates that such lesions should be biopsied. Since endoscopic ultrasonography may be needed to make a definitive diagnosis of submucosal lipoma (Am J Gastroenterol, 99:2683), Snare removal of large sessile submucosal lipoma after creating a pseudoduct is possible but has the risk of colonic perforation. We describe a new, novel and safe method of suction polypectomy for removing a sessile colonic lipoma.

Methods: Case report: 59 year old man with history of kidney stone, essential hypertension & organic impotence was evaluated for screening colonoscopy. His cardiac evaluation showed diffuse interstitial fibrosis and transiently suggestive of dehiscence. No family history or symptoms. There was no family history of colon cancer. The family history was positive for stroke & diabetes mellitus. The patient did not smoke and drank 14 oz alcohol per week. The physical examination and basic laboratory data were normal.

Results: Screening colonoscopy to the cecum was successfully performed. In the descending colon a 2cm sessile submucosal polyp was seen. The polyp was snared. The post polypectomy course was uneventful. Suction was gently applied. Suction on the colonoscopy was increased to maximum and the lipoma was successfully sucked out. There were no complications.

Conclusion: Describe a new novel and safe method of suction polypectomy for removing a sessile colonic lipoma.

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MYSTERIOUS GASTRIC NODULE IN A PATIENT WITH ADVANCED HIV DISEASE: AN UNEXPECTED REVIEW OF THE LITERATURE

C. Liangrue, MD, S. Kanu, MD, K. M. Goli, MD, T. Lentos, MD, K. Ismailova, MD, S. Chaudhuri, MD, FACCP, J. Harley, MD, S. Williams, MD. 1. Medicine, New York Medical College/ Metropolitan Hospital, New York, NY; 2. Gastroenterology, New York Medical College/Metropolitan Hospital, New York, NY.

Purpose: Introduction: Gastrointestinal (GI) tract involvement in advanced Human Immunodeficiency Virus (HIV) disease can be due to a variety of infectious and non infectious diseases. Endoscopic finding of gastric nodular lesions are not common in patients with HIV disease. Kaposi’s sarcoma (KS) and lymphoma are among the common causes of gastric nodules in patients with advanced HIV disease. Here, we present a rare and probably the first reported case of atypical gastric nodule in a patient with advanced HIV disease. Case description: A 29 year old Hispanic male with HIV infection (CD 4 count 16 cells/mm3) was admitted to hospital for chief complaints of cough, intermittent fever and weight loss. Chest X-ray and CT-scan showed diffuse interstitial fibrosis. CD4 T cell count was unsatisfactory. The initial endoscopy revealed a gastric KS, the histopathology examination of both gastric tissue and tissue showed typical sphandleres and granulomas characteristic of Coccidioides immitis. A final diagnosis of disseminated coccidioidomycosis was made. Discussion: Disseminated coccidioidomycosis is more common in patients with advanced HIV infection. A single case report of disseminated coccidioidomycosis was previously described (Am J Med Sci 1988;296:102). This is the first report of disseminated coccidioidomycosis commonly involving the skin, lungs, joints, soft tissue and menses. Coccidioidomycosis involving GI tract is extremely rare, either in disseminated disease or in an isolated form. We reviewed most of the available medical literature in English through medline and pub med search. A single case involving small bowel was reported, but the involvement of stomach has not been reported.

Coccidioidomycosis, histoplasma and mycobacterium infections can manifest as gastric nodules particularly in immunocompromised patients. Some cases of gastric raphychi, gastric leishmaniasis and cytomegalovirus (CMV) associated pseudo tumors were reported. Non infectious causes of gastric nodules include lymphoid hyperplasia, gastric lymphomas, MALT lymphomas, gastric malignancy, KS, cardiac carcinoids, gastric gomus tumors, gastric lipoma and gastric leiomyomas. Conclusion: We conclude that gastric coccidioidomycosis can occur as part of disseminated infection in patients with advanced HIV disease, and search for more data and evidence is needed to establish its significance in GI symptoms and signs.

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EXPANDING SPECTRUM OF HERBAL HEPATOPOISONING: A CASE REPORT OF VINE ESSENCE INDUCED LIVER INJURY

C. Liangrue, MD, K. M. Goli, MD, S. Ghuge, MD, S. Chaudhuri, MD, FACCP, S. Williams, MD. 1. Medicine, New York Medical College/ Metropolitan Hospital, New York, NY; 2. Gastroenterology, New York Medical College/Metropolitan Hospital, New York, NY.

Purpose: Introduction: Drug Induced Liver Injury (DILI) is caused by a variety of medications and substances including Chinese herbs. Although Chinese traditional medicinal plants and alternative and tertiary medications are a leading cause of DILI in Asian countries, it is increasingly reported in western countries. Numerous case reports of DILI with a variety of herbal products were reported. Modern herbal medicine with vine essence pills have been marketed widely in China. A majority of DILI with vine essence pills and we propose the causal association as per Rosseau UCl Causality Assessment Method (RUCAM) score. Case description: A 57 year old obese female (BMI 35.9) with past medical history of osteoarthritis and obstructive sleep apnea was hospitalised with 1 week history of fatigue, myalgia, subjective fever and weight loss. The patient denied recent travel, alcohol intake or use of recreational drugs. Physical examination was remarkable for ascites and tenderness in the right upper quadrant of the abdomen. Laboratory tests revealed normal blood counts with unusual elevation of transaminases with AST 8040 IU/L, ALT 2220 IU/L, ALKP 122 IU/L, total bilirubin 2.36 mg/dl, direct bilirubin 0.80 mg/dl, and albumin 3.7 gm/dl. Coagulation profile showed elevated PT with INR 2.61. Further work up for hepati
to-biliary disease, such as autoimmune diseases and serologic tests for chronic hepatitis B and viral hepati
tis (including Epstein-Barr Virus, cytomegalovirus and herpes simplex virus) were negative. Abdominal imaging was normal. On further questioning, patient admitted to taking Vine essence pills, a popular Chinese herbal supplement everyday. She stopped the pills 2 months daily for 2 months, but increased the frequency two weeks prior to admission. Patient dra
matically improved with supportive treatment. Liver enzymes on 6th day of admission showed AST of 42 U/L and ALP of 363 U/L, which were normalized within 2 weeks of presentation. The semi-quantitative RUCAM score indicated that a diagnosis of herbal medication induced liver injury was ‘probable’ with a Score of 7. Discussion: Vine Essence pills were incriminated based on the temporal relationship between the onset of symptoms and the drug withdrawal, together with the exclusion of any other known hepatotoxic factors. A metic
ulously calculated RUCAM score strongly supported the diagnosis in our case. Conclusion: More studies and toxicology analyses are needed to establish whether the hepatotoxicity of Vine Essence is due to its ingredients or impurities in the preparation. Physicians should be aware of DILI associated with herbal remedies and a routine inquiry about their use should be made at every patient-physician interaction.

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A RARE CASE OF GASTROINTESTINAL HISTOPLASMOsis IN A 15-YEAR-OLD MALE PATIENT WITH A HISTORY OF CARDIAC TRANSPLANT AND DIARRHEA: A CASE REPORT

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Purpose: To report a rare finding

Methods: Case: A 15 y/o Caucasian male presents with fever of unknown origin. He has a b/o chest pain of 2 months duration. A chest x-ray in 1992 for Hypopharyngeal cancer showed a normal heart. He was treated conservatively and remained well until 6 months prior to admission. A chest x-ray at that time showed a 5 cm mass in the right upper lobe. A chest CT showed an 8 cm mass in the right upper lobe with hilar adenopathy and extrapleural spread. A bronchoscopy was performed and a right upper lobe mass biopsy showed non-small cell carcinoma. A positron emission tomography-computed tomography (PET-CT) showed the mass to be hypervascular. A right upper lobe lobectomy was performed and pathology showed a squamous cell carcinoma. The patient was treated with definitive chemoradiation therapy. An upper GI endoscopy was performed and no pathology was noted. There was no evidence of gastrointestinal involvement on any prior imaging studies. 

Results: A review of the medical literature revealed a few cases of gastrointestinal histoplasmosis. The presentation included fever, malaise, anorexia, and weight loss. The patient had an uneventful hospital course, and was discharged uneventfully.

Conclusion: This case highlights the importance of considering gastrointestinal involvement in patients with a history of cardiac transplant and diarrhea. It also serves as a reminder that histoplasmosis should be considered in the differential diagnosis of fever of unknown origin in the immunocompromised host.
The location of the tumor and the extent of the disease usually dictate the type of intervention. Synaptophysin-positive cases showed a worse prognosis (median survival, 27 months) vs synaptophysin-negative (median survival, 38 months) groups (P=0.05). Prior to endoscopic ultrasound with fine needle aspiration, most cases of NETs have been found incidentally (i.e. incidentally) during biliary tract operations.3

Conclusion: NETs of the extrahepatic bile duct are a rare cause of biliary tract malignancy. However, it should be considered in the differential diagnosis in patients presenting with obstructive jaundice. EUS with FNA should be the main diagnostic modality. The presence of synaptophysin in tumor indicates poorer prognosis.

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CHOLANGIOCARCINOMA ASSOCIATED WITH CHRONIC HEPATITIS B: A CASE REPORT

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Purpose: Cholangiocarcinoma (CCA) is a rare malignancy of the biliary duct system, arises from epithelial cells of the intrhepatic or extrahepatic bile ducts. Clinical presentation varies depending on location of tumor, but includes jaundice, pruritus, abdominal pain, weight loss, and fever. Primary sclerosing cholangitis, cholecholchol cysts, and infection with parasitic liver flukes are risk factors strongly associated with CCA. Hepatitis B virus infection (HBV) is associated with hepatocellular carcinoma, but very rarely with CCA. We present an unusual case of CCA in a patient with chronic HBV infection.

Methods: A 38 year old Asian male with chronic untreated HBV infection presented to an outside hospital with fever, fatigue, and right upper quadrant abdominal pain for one week. Imaging studies revealed a right hepatic lobe mass and portal vein thrombosis. Liver biopsy was performed and the patient was referred to our hospital for further management. Physical exam revealed jaundice and hepatomegaly. Hemoglobin was 12.8 g/dL, platelet count 236 x 10^3/mcL, albumin 2.1 g/dL, bilirubin 8.7 mg/dL, alkaline phosphatase 147 JU/L, aspartate aminotransferase 57 JU/L, alanine aminotransferase 39 JU/L, INR 1.5, alpha-feto-protein level 114 ng/mL, CA 19.9 of 45 U/mL, and HBV DNA 27,567 IU/mL. Repeat imaging demonstrated a 9.9 x 6.8 cm infiltrating mass extending from the dome inferiorly and invading the gallbladder, as well as portal vein thrombosis. A chest computed tomography (CT) and bone scan were negative for metastatic disease. Liver biopsy of the mass showed moderately differentiated adenocarcinoma and lymphocytes. Immunostaining was compatible with CCA. A liver biopsy obtained from the left unaffecte dlobe revealed HBV hepatitis with cirrhosis. The patient was not a candidate for liver transplantation.

Results: Subsequently, an exploratory laparotomy revealed no obvious peritoneal seeding, thus a right hepatectomy and cholecystectomy were performed. Pathology was consistent with CCA and an abundance of hepatocytes positive for hepatitis B surface antigen. The patient had an uncomplicated postoperative course and was discharged on antiviral HBV medications and followed up on oncology and radiation oncology.

Conclusion: We demonstrate a unique, rare case of CCA associated with chronic HBV. It has been proposed that HBV may infect biliary epithelium resulting in an immunologic attack causing inflammation and degenerative changes. More research is needed to evaluate the potential role of HBV in the pathogenesis of CCA, so that we can prevent and control this devastating disease.

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ACUTE FATTY LIVER OF PREGNANCY COMPLICATED BY SEVERE PANCREATITIS: SUCCESSFUL OUTCOME AFTER LIVER TRANSPLANTATION. A CASE REPORT

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Purpose: Acute fatty liver of pregnancy (AFLP) is a rare serious disorder that typically occurs in the third trimester. Complications include fulminant hepatic failure (FHF) and encephalopathy, renal failure, and acute pancreatitis (AP). The association of AFLP and AP has infrequently been reported in the literature and is associated with a high maternal and fetal mortality rate. Treatment is prompt delivery and supportive care, however, orthotopic liver transplantation (OLT) may be necessary in some cases. We describe a case of AFLP complicated by AP that had a favorable maternal and fetal outcome after OLT.

Methods: A previously healthy 39 year-old multigravida, at 34 weeks' gestation, was admitted to an outside hospital in preterm labor. A male infant was delivered by emergency cesarean section because of fetal distress. On Day 2 following delivery, the patient developed nausea, vomiting, abdominal pain, and poor urine output. Laboratory findings included hyperbilirubinemia, raised serum transaminases, prolongation of serum prothrombin time, hypoglycemia, and increased creatinine, amylase 455 U/L, and lipase 5,855 U/L levels. On Day 3, imaging studies suggested possible pancreatitis and no evidence of gallstones. Her mental status deteriorated and she was transferred to our center for further evaluation. The patient subsequently required intubation due to encephalopathy and respiratory distress, a constellation of features including dextrose infusion to correct for persistent hypoglycemia, and intracranial pressure monitoring. A liver biopsy was performed and confirmed the diagnosis of AFLP. The decision to proceed with OLT was made on the basis of progressive clinical deterioration despite aggressive support.

Results: During OLT, severe pancreatitis was found. Histopathological examination of the native liver revealed microvesselular stenosis with characteristic changes consistent with AFLP. The patient recovered completely five weeks later, and was discharged home. Her baby boy was healthy and testing for LCHAD (3-hydroxyacyl-CoA dehydrogenase) deficiency is pending.

Conclusion: AFLP is an uncommon disorder that is associated with significant fetal and maternal mortality. Complications of AFLP may require aggressive intensive care management after delivery, especially if pancreatitis occurs. We present a unique case of AFLP complicated by pancreatitis, which after OLT resulted in survival of mother and baby.

P201

Poster Withdrawn

P202

Poster Withdrawn

P203

A RARE CASE OF SMALL BOWEL HEMORRHAGE: CMV INFECTION WITH MAJOR BLEEDING FROM THE SMALL BOWEL IN A PATIENT WITH HIV/AIDS: A CASE REPORT

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Purpose: Cytomegalovirus (CMV) infection of the gastrointestinal tract used to be a common and serious complication of the Acquired Immune Deficiency Syndrome. This incidence has decreased substantially since effective therapy has been used in recent years (1). CMV infection of the small bowel accounts for 4% of all CMV infections of the GI tract. CMV enteritis manifests clinically by generalized abdominal pain and diarrhea. Rare reports of ileal perforation secondary to CMV have been reported. We report this unusual presentation of multiple ileal ulcers and massive hemorrhage while on effective anti viral therapy.

Methods: Case report.

Results: A forty one year old male with multi drug resistant HIV/AIDS presented with elevated liver enzymes and hemocrit mobilized positive stools. He had a history of CMV colitis and reinitis and was on maintenance ganciclovir and foscar nel with good clinical remission. During the hospital course, he developed fever; he developed new hemochromata with hemolytic anemia and a steapedrop in the hematocrit. The bleeding was recurrent and massive with significant requirements for transfusion.

Conclusion: CMV infections of the GI tract occur in the setting of advanced immunosuppression, with CD4 counts less than 50 (4). Gastrointestinal sites of CMV involvement are usually the esophagus and colon with infections of the small bowel accounting for less than 5% of the cases. This case report presents an unusual case with no evidence of CMV colitis but with deep ulceration of the terminal ileum causing severe bleeding and requiring surgery. This patient was on optimal maintenance therapy with Ganciclovir and Foscar nel. Review of the literature has no reported case of isolated ileal CMV infection, who while on effective therapy, had massive bleeding requiring surgical treatment.

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MESENTERIC PANICULITIS PRESENTING IN A PATIENT WITH CRYOglobULENEMIA

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Purpose: Mesenteric paniculitis (MP) is a condition of unknown etiology involving idiopathic inflammation and fibrotic process of the mesentery. Below is a rare case of MP associated with cryoglobulinemia.

Methods: Case report. Fifty-year-old female with history of diabetes mellitus, untreated Hepatitis C and hyperlipidemia presented with abdominal pain for one week with severe RUQ tenderness, palpable purpuric lesion consistent with leukocytoclastic vasculitis (LV). Laboratory examination showed mildly elevated transaminases and alkaline phosphatase. Ultrasound of the abdomen showed evidence of right sided hydronephrosis.

Results: Computed Tomography (CT) of abdomen showed inflammatory changes suggestive of mesenteritis. Intraabdominal antibiotics were started for possible diverticulitis/ mesenteritis. With no response to antibiotics, and worsening abdominal pain, diagnostic laparoscopy was performed before starting steroids due to untreated hepatitis C and low white cell counts. It showed right upper quadrant phlegmon, cirrhotic liver, inflamed mesentery and adhesions of bowel to abdominal wall. Biopsy showed acute and chronic inflammation and hemorrhage consistent with mesenteric paniculitis. Colonoscopic showed multiple hyperplastic polyps and no signs of colitis. Purpuric rash again showed LV. Cryoglobulins were positive and she had a very low rheumatoid titer. Patient was started on tapering dose of steroids and she showed improvement. She was started on Pegase and Ribvarin for follow-up in liver clinic. Patient’s HIV status and other autoimmune work up were negative.

Conclusion: Most authors accept that mesenteric lipodystrophy, MP and sclerosing mesenteritis represent the spectrum of one disease - usually one feature predominates, whose etiology remains obscure. Mesenteric paniculitis has been associated with a number of autoimmune conditions, with clinical response to immunomodulatory medications including corticosteroids, azathioprine and cyclophosphamide. Dual-phase abdominal CT is the most sensitive imaging modality for detecting MP. This is the first reported case seen of MP caused secondary to cryoglobulinemia that responded well to steroids and had other features of rare cryoglobulinemia manifestations of low rheumatoid factor level with no manifestations and LV. Probable etiology would be vasculitis of the mesenteric vessels.
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Purpose: Intestinal Spirocheta is a cause of intermittent diarrhea in an immunocompetent patient. The common symptoms reported include watery diarrhea, abdominal pain, altered bowel movements and rectal bleeding. Colonoscopy and biopsy is the only definite way of diagnosis of this disease. Case Report: We present a case of intestinal spirocheta in an immunocompetent patient who presented with watery diarrhea. 59 year old male presented to the gastroenterology clinic for further evaluation of his 4 months for 12 days of loose stool. He continued to have approximately 20 loose stools a day, poor weight gain, and severe lower abdominal pain. After he failed to gain weight during pregnancy she underwent repeat colonoscopy and biopsy for her 4 months of loose stool. The colonoscopy was negative and the patient was reported bleeding on occasion. Symptoms became worse on eating spicy and greasy foods. He denied any loss of appetite or weight. Other medical problems included gastro esophageal reflux disease and hypertension, both were controlled on medications. Patient was subjected to colonoscopy for diagnostic purposes. On colonoscopy, colon mucosa was found to be normal and routine random biopsies were performed. Histopathology revealed intestinal spirochetae which were found at the brush border of the epithelium. He was treated with metronidazole for a period of 14 days. He became asymptomatic after treatment. A follow up sigmoidoscopy performed 3 months later showed no evidence of spirochetes in the biopsy specimens. Conclusion: Intestinal spirochetae is a rare cause of watery diarrhea in an immunocompetent patient and should be considered in the differential diagnosis of chronic intermittent diarrhea. Differential diagnosis includes colon cancer, Zollinger-Ellison syndrome, gastric ulcers, infective colitis and irritable bowel syndrome. Colonoscopy and biopsy of the intestinal tissue and stool with Wright- starry stain is the gold standard in diagnosis of this disease. Metronidazole for 14 days is the drug of choice for eradication of the disease. Prognosis favorable with treatment.

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Purpose: Langerhans' cell histiocytosis (LCH) is a granulomatous disorder of unknown cause. It is characterized by overproduction and accumulation of dendritic cells in granulomatous lesions in various tissues and organs of the body. Most often affects the bony skeleton and skin. Involvement of the lungs, liver, spleen, lymph nodes, pancreas and gastrointestinal tract has been reported. Gastrointestinal involvement in Langerhans cell histiocytosis is rare and usually is associated with severe disease. LCH presenting in a colon polyp has not been described before. We present a case of LCH isolated to the colon polyp with no involvement of other organs including skin and bone. Case report: 60 year old otherwise healthy male underwent colonoscopy for home occult positive stool. He denied having any gastrointestinal symptoms including nausea, vomiting, diarrhea or abdominal pain. He denied any skin rashes on bone abnormalities. His chronic medical problems included nicotine dependence, insomnia and hypercholesterolemia. He did have some knee pain which was attributed to old ligament and articular arthritis. His routine investigations including complete blood count and serum chemistries were within normal limits. A colonoscopy was performed for further evaluation. On colonoscopy, a polyp was found in the ascending colon. The polyp was a pedunculated, raised, firm mass measuring 1 cm in size. These polyps were removed with a cold forceps. Histopathology revealed granulomas in the lamina propria composed of numerous cosinophils and fibroblasts. Both AFB and fungal stains were negative. No CD 1a staining was present, establishing the diagnosis of Langerhans cell histiocytosis. Whole body bone scan done for skeletal involvement was normal. A CT scan of the chest performed for pulmonary involvement was negative. Since polyposis was complete and no other organs were involved a watchful waiting approach was determined to be optimal at the present time. Conclusion: Langerhans cell histiocytosis is rare in adult population (1-2/million). Skeletal involvement with dysnea and diabetes insipidus secondary to pituitary involvement are more rare in adult population (1-2/million). Skeletal involvement with bone pain, pulmonary involvement, lymphadenopathy and hepatic involvement are more common presentations in children. Involvement of gastrointestinal tract is extremely rare. To our best knowledge this is the first ever reported case of Langerhans cell histiocytosis confined to colon polyps without any radiological evidence of skeletal involvement or any other systemic involvement.

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Purpose: Hairy Cell Leukemia (HCL) is a rare form of chronic lymphocytic leukemia disorder. The clinical presentation of the gastrointestinal (GI) tract must be considered in any patient with acute or chronic leukemia who presents with unusual GI symptoms. We report a case of HCL presenting with fever, abdominal pain and was found to have hairy cell (HCl) infiltration on random biopsies of endoscopically normal appearing duodenum.

Methods: Our patient is a 48 year old Hispanic male with history of HCL who presented with fever for two days after one cycle of cladribine (2-CdA). Patient had temperature of 101.4 and right abdominal tenderness with no rebound, guarding or rigidity. Labs showed WBC 4.0, ANC 0.2, Hb 8.9, platelet 23, ALP 137, ALT 42, AST 32. He was started on Imipenem, Vancomycin, Difucan and Neupogen. Extensive septic work-up was negative. HIDA scan was negative. Bone marrow biopsy done for persistent spiking of high grade fever was negative for any pathogen. Abdominal CT showed circumferential thickening of 2nd and 3rd portion of duodenum. EGD revealed a completely normal esophagus and duodenum. Random biopsies of the duodenum revealed chronic inflammatory infiltrate chiefly composed of atypical lymphocytes and plasma cells. Immunohistochemical stains of paraffin sections of biopsy revealed atypical lymphocytes positive for TRAF (tartarate resistant acid phosphatase), consistent with hairy cell leukemia infiltrate of duodenum. Patient’s WBC subsequently improved on Neupogen and he was discharged.

Conclusion: Extramedullary involvement of the GI tract with leukemia is very rare and usually involvement of lymphoreticular organs, brain, testes and ovaries is seen. The reported autopsy incidence of GI involvement by leukemia ranges from 5.7% to 13% and reaches up to 20% in cases of acute lymphocytic leukemia. Leukemic involvement of the GI tract can be from bone marrow metastasis and distal colonic and rectal involvement. Macroscopically, GI tract involvement can assume a variety of forms, including necrosis, hemorrhage, ulceration, inflammation or polyloid lesion. We did not find any case in literature with duodenal infiltration with hairy cell leukemia having a normal endoscopic appearance. Atypical positive stains include necrotizing enteritis, perforation and abscesses. Radiographic studies may show thickening of bowel wall or ulcerations. Differential should include any underlying infectious etiology. In our patient symptoms in a patient with known leukemic involvement of the GI tract should raise suspicion for leukemic relapse or progression. If degree of suspicion is high random biopsies should be taken regardless of the gross mucosal appearance, as a normal appearing mucosa does not rule out underlying pathology.
COLLAGENOUS COLITIS - A RARE COMPLICATION OF LANSOPRAZOLE
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Purpose: Collagenous Colitis (CC) is characterized by chronic watery diarrhea and thickened subepithelial collagen band on histology. It has a female predominance with a ratio of 1.5:1 to males. Few cases of CC induced by lansoprazole (LPZ) use have been reported. We report a case of collagenous colitis in a male complaining of diarrhea for 4 weeks while on LPZ.
Methods: Our patient is a 56 year old male with PMH of GERD being treated with LPZ for 4 months. He started on LPZ 40 mg daily and dose was increased to 40 mg PO BID in November 2008 with complaints of bloody diarrhea for 4 weeks. He had >8 episodes per day, associated with abdominal pain, mild rectal bleeding but denied fever or weight loss. He denied any NSAID use, recent travel, ingestion of raw seafood or ill contacts. Physical exam was benign with unremarkable laboratory & stool analysis. Work up for inflammatory bowel disease was negative. He had a colonoscopy in 11/07 which was only significant for two small polyps, and no colitis. Colonoscopy with biopsies was done at the end of February 2008, which showed mild rectangular colitis. However, the pathology report of the sigmoid colon and rectum biopsies was consistent with collagenous colitis. His LPZ was subsequently stopped. The patient was started on budesonide and within one to two weeks his symptoms improved dramatically. He is scheduled for repeat colonoscopy with biopsies to ensure improvement of CC.
Conclusion: Microscopic colitis is classified into lymphocytic colitis and collagenous colitis. Pathogenesis of LPZ associated CC remains unclear, although immunologic mechanisms might contribute to its development. Drugs such as NSAIDs, antibiotics, cimetidine, have been suggested to be associated with CC. Recently cases have been reported of LPZ associated CC. Symptoms include chronic watery diarrhea and rarely hematochezia. Linear mucosal defects and friability may be characteristic findings in patients with LPZ associated CC. According to a recent study, linear mucosal ulcerations were detected on colonoscopy in 78% of cases in the LPZ group. Such ulcerations are possibly associated with NSAIDs but our patient only took acetaminophen. Several theories have been proposed for LPZ associated CC. Treatment includes removal of the offending agent and repeat colonoscopy after resolution of symptoms would reveal whitish linear scars covered by mucosa. Clinicians need to be vigilant for adverse reactions & appropriate use of medications.

SMALL BOWEL LYMPHANGIOMA: AN UNUSUAL CAUSE OF GASTROINTESTINAL BLEEDING AND SEVERE IRON DEFICIENCY ANEMIA
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Purpose: Mesentric lymphangioma is a rare benign cystic tumor of lymphatics of the bowel. It is usually found in the first decade of life and has a female predominance in adults. It differs from other mesenteric and retroperitoneal cysts, as it is proliferative and invasive in nature. It is usually asymptomatic in adults and found on surgery or autopsy. It rarely presents as occult GI bleed and iron deficiency anemia. We present such a patient in whom capsule endoscopy was diagnostic.
Methods: Our patient is a 36 year old female who presented with fatigue, shortness of breath, occasional epigastric pain, occasional loose stools, and weight loss for 10 weeks. She would occasionally have nausea, vomiting, hematochezia, NSAID use or family history of cancer. Labs revealed Hb of 3.7, Hct 12.5, MCV 60.4, Ptl 460, WBC 7.2, Iron 2, Ferritin 3 TBG 367 and positive FOBT x 3. After transfusion of 4 U PRBC, Hb improved to 9.8. Small bowel endoscopy with biopsies revealed mild antral gastritis, H. pylori negative and normal villous architecture. Colonoscopy was completely normal. Abdominal CT and Small Bowel series showed luminal narrowing and thickening of small bowel loops in left upper quadrant. Patient was given a patency capsule which passed without any complications. Capsule endoscopy revealed a mass like lesion with yellowish- white discoloration with active bleeding in the small bowel. Laparoscopic resection of the lesion showed diffuse dilatation of the mucosal, submucosal and subserosal lymphatics consistent with small bowel lymphangioma. The post operative course was uneventful and patient was discharged.
Conclusion: Abdominal lymphangiomas are uncommon benign tumors. The mean age at presentation is 2.5 years with a male predominance. Etiology may be benign proliferation of ectopic lymphatics. 95% of lymphangiomas are found in the neck and axilla and very rarely found in the intestine. Clinical presentation include abdominal pain, distention, fever, and vomiting. There may be features of small bowel obstruction or volvulus. In an Australian study of 416 capsule endoscopies, 27 tumors were identified of which only 1 was a lymphangioma. Plain radiography may demonstrate small bowel obstruction or noncalcified soft-tissue mass CT and MRI may show multiloculated fluid filled masses, thickening of the bowel wall and reveal size of the tumor, characteristics of the cyst wall and location. Capsule endoscopy may lead to earlier detection and treatment and an improved prognosis for patients with these neoplasms. The prognosis depend on the location and extent of the lesion. Complete resection is the treatment of choice and has an excellent prognosis. The recurrence rate ranges from 0-13.6%. Malignant degeneration to a low-grade sarcoma is rare.

VOLCANO ULCERS IN STOMACH – AN UNUSUAL PRESENTATION OF METASTATIC NON PIGMENTED MELANOMA
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Purpose: Malignant melanoma is one of the most common malignancies to metastasize to the gastrointestinal (GI) tract. Metastases to GI tract can present at time of primary diagnosis or decades later as first sign of recurrence. Metastatic melanoma to GI tract is found during diagnostic workup in 1-4% of patients with cutaneous primary and up to 60% of melanoma patients in autopsy.
Methods: Our patient is a 45 year old white male with history of primary non-pigmented urinary bladder melanoma who presented with complaint of dyspepsia for 2 months. Patient had received full course of chemotherapy with Temozol for 5 months with good response. He denied any nausea, vomiting, dysphagia or bleeding. He had no prior skin lesion found on extensive detailed physical exam. Whole body PET scan showed markedly thickened stomach wall with metastatic involvement and large necrotic lesion. Upper endoscopy revealed two large, non-pigmented ulcerating masses in body of stomach on the greater curvature. These masses had “volcano appearance” with heaped up edges and central crater. Multiple biopsies were taken which were consistent with non pigmented metastatic melanoma confirmed by immunohistochemical stains. Patient was sequentially started on carboplatin and has had mild improvement in symptoms.
Conclusion: Gastrointestinal invasion by melanoma is a rare condition and is often associated with invasion of other visceral organs. The endoscopic classification of the gastric metastases comprises three main types: (a) melanotic nodules, often ulcerated at the tip; most common (b) submucosal mass, melanotic or not, elevated and ulcerated at apex; typical aspect of “bull’s eye” lesion and (c) mass lesions with varying incidence of necrosis and melanosis. Gastric metastases may appear even as a simple ulcer. Majority of gastric metastases are reported to occur in body and fundus, most often on the greater curvature. Most frequent sites of metastases to the gastrointestinal tract include colon and stomach in descending order. Symptoms may include abdominal pain, dysphagia, small bowel obstruction and GI bleed. Diagnosis requires careful inspection of mucosa and biopsy with special immunohistochemical stains. Management may include surgical resection, chemotherapy, immunotherapy, observation, or enrollment in clinical trials. Surgery seems to be of limited value and should be performed in carefully selected patients and in patients with complications. Prognosis is poor, with median survival time in patients presenting with GI invasion being less than 1 year. Endoscopic “Volcano ulcers” in the stomach have been reported in many secondary neoplasms of the stomach and their presence should always raise suspicion for an underlying malignancy.

GASTROINTESTINAL BLEEDING CAUSED BY HEPATOMA:
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Purpose: Metastases to GI tract can present at time of primary diagnosis or decades later as first sign of recurrence. Metastatic melanoma to GI tract is found during diagnostic workup in 1-4% of patients with cutaneous primary and up to 60% of melanoma patients in autopsy.
Methods: Our patient is a 45 year old white male with history of primary non-pigmented urinary bladder melanoma who presented with complaint of dyspepsia for 2 months. Patient had received full course of chemotherapy with Temozol for 5 months with good response. He denied any nausea, vomiting, dysphagia or bleeding. He had no prior skin lesion found on extensive detailed physical exam. Whole body PET scan showed markedly thickened stomach wall with metastatic involvement and large necrotic lesion. Upper endoscopy revealed two large, non-pigmented ulcerating masses in body of stomach on the greater curvature. These masses had “volcano appearance” with heaped up edges and central crater. Multiple biopsies were taken which were consistent with non pigmented metastatic melanoma confirmed by immunohistochemical stains. Patient was sequentially started on carboplatin and has had mild improvement in symptoms.
Conclusion: Gastrointestinal invasion by melanoma is a rare condition and is often associated with invasion of other visceral organs. The endoscopic classification of the gastric metastases comprises three main types: (a) melanotic nodules, often ulcerated at the tip; most common (b) submucosal mass, melanotic or not, elevated and ulcerated at apex; typical aspect of “bull’s eye” lesion and (c) mass lesions with varying incidence of necrosis and melanosis. Gastric metastases may appear even as a simple ulcer. Majority of gastric metastases are reported to occur in body and fundus, most often on the greater curvature. Most frequent sites of metastases to the gastrointestinal tract include colon and stomach in descending order. Symptoms may include abdominal pain, dysphagia, small bowel obstruction and GI bleed. Diagnosis requires careful inspection of mucosa and biopsy with special immunohistochemical stains. Management may include surgical resection, chemotherapy, immunotherapy, observation, or enrollment in clinical trials. Surgery seems to be of limited value and should be performed in carefully selected patients and in patients with complications. Prognosis is poor, with median survival time in patients presenting with GI invasion being less than 1 year. Endoscopic “Volcano ulcers” in the stomach have been reported in many secondary neoplasms of the stomach and their presence should always raise suspicion for an underlying malignancy.
P214 TUBERCULOUS COLITIS IN A PATIENT WITH CROHN’S DISEASE AFTER TREATMENT WITH INFlixIMAB S. F. Kuhithasan, MD, A.V. Sivakumar, MD, A. Brown, DO, A. Fiedla, MD. 1. Gastroenterology and Hepatology, St. Joseph’s Regional Medical Center, Paterson, NJ; 2. Gastroenterology, St. Michael’s Medical Center, Newark, NJ. Purpose: Tuberculous Colitis is a rare manifestation of abdominal tuberculosis (TB). It is located in the ileocolic area in 90% of cases. Since 1988, there has been significant increase in the number of TB cases in the US. We report a case of TB colitis in a patient with negative PPD & Crohn’s disease after starting infliximab. Methods: Our patient is a 23 year old Hispanic female who was diagnosed with Crohn’s disease 16 years ago but has had no significant flares since. She presented to our institution in May of 2010 with a 6 week history of bloody diarrhea, nausea, and fever. CT scan of the abdomen revealed thickening of the ileocecal region, with an abscess on the right. Colonoscopy revealed ulcers and her sputum cultures grew Mycobacterium tuberculosis. She was treated with intravenous antibiotics and started on isoniazid, rifampin, and pyrazinamide. She completed a full course of therapy and her symptoms resolved. She was started on infliximab for treatment of her disease. She had a recurrence of her symptoms 6 months later and was rehospitalized for a second course of antibiotics. 4 months later, she had another recurrence of her symptoms, and was admitted to our hospital. She had a rectal biopsy that showed granulomas in her colon. She had a restaging colonoscopy which showed no recurrence of the abscess. She was discharged home on oral antibiotics. Patient had a recurrent abscess 2 months later and had distal ileostomy. Conclusion: The median time to onset from starting infliximab therapy to TB diagnosis is 10 months. To our knowledge, there have been few reports of TB colitis in patients on infliximab, and none with recurrence even after treatment. Patients on infliximab should be carefully monitored for symptoms of TB, and PPD testing should be performed prior to starting therapy.}

P215 ABDOMINAL PAIN SECONDARY TO TUMORAL AMYLOIDOSES OF THE STOMACH C. P. Koeck, MD, A. Goodman, MD. Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY. Purpose: Amyloidosis is commonly systemic, occasionally organ-limited, and rarely a solitary localized mass. The latter, commonly referred to Tumoral Amyloidosis, is described occurring in every organ/tissue. Only a few reports of TUMA exist for retroperitoneal adenopathy or ascites & showed diffuse colonic thickening. Colonoscopy showed severely worsened pancolitis with biopsies from entire colon positive for AFB. Repeat PPD & CXR remained negative. She denied recent travel, ill contact or cough. She was started on quadruple therapy for possible TB & biopryal PICR confirmed the diagnosis of TB colitis. The patient improved dramatically on TB medications & has gained 20 lbs. Conclusion: Infliximab is a chimeric monoclonal antibody to TNF-α. One of its FDA approvals is for treatment of Crohn's disease. From 1998 - 2001, out of 147,000 patients who received infliximab for RA or Crohn’s disease, 70 cases of TB associated with infliximab were reported. They were starting infliximab therapy by TB diagnosis is 10 months (1-72 months). TB can present as ulcerations, stenosis & shortening. It can mimic other processes, such as Crohn’s disease, UC, or ischemia. The median time to onset from starting infliximab therapy to TB diagnosis is 10 months. To our knowledge, there have been few reports of TB colitis in patients on infliximab, and none with recurrence even after treatment. Patients on infliximab should be carefully monitored for symptoms of TB, and PPD testing should be performed prior to starting therapy.}

P216 MG US-11261

P217 IDIOPATHIC PORTAL Cavernoma C. P. Koeck, MD, A. Castillo-Roth, MD, A. Goodman, MD. SUNY Downstate Medical Center, Brooklyn, NY. Purpose: Portal Cavernoma, also known as cavernous transformation of the portal vein, is a rare condition consisting of formation of multiple portalportoral collateral vessels around a previously stenosed or occluded portal vein. It is classically described as a consequence of portal vein thrombosis (PVT). Methods: A 53-year-old Haitian male with a history of diabetes mellitus and hypertension presented with one month history of lower abdominal pain. The pain was crampy in nature, intermittent, exacerbated after meals, and improved with rest. The patient also noted increased abdominal girth and bilateral lower extremity edema. He took Piroglinazine/Meftrimion and Triamterene/Hydrochlorothiazide on a daily basis, but denied smoking or alcohol use. He denied personal or familial history of hypercoaguable states or chronic liver disease. On presentation, he was afebrile and normotensive. No jaundice or stigmata of chronic liver disease was noted. His abdomen was distended with shifting dullness, diffuse tenderness, and normocytic, normochromic anemia. Results: Laboratory data, including hepatic panel and coagulation profile, were unremarkable, except for a CBC showing thrombocytopenia (78,000/uL). Viral hepatitis B and C panels were negative; alpha-fetoprotein and iron panel were normal; autoimmune work-up unremarkable. Contrast enhanced CT scan of the abdomen revealed moderate-sized ascites along with multiple tortuous collateral vessels in the portal hepatitis and splenoglandular fossa, consistent with cavernous transformation of the portal vein. The splenic vein was dilated and tortuous, consistent with portal hypertension. No thrombi or intra/extrabiliary hepatic dilatation were seen. Hepatic venous pressure was on esophagogastroduodenoscopy, three columns of medium sized esophageal varices were noted. Liver biopsy showed normal hepatic liver parenchyma with significant dilatation of the sinusoids. The patient is currently on Propranolol and Spironolactone, with improvement of his symptoms. Discussion: Cavernous transformation of the portal vein usually occurs after PVT secondary to cirrhosis, abdominal infections or neoplastic processes, hypercoaguable states, myeloproliferative disorders, or surgery. Our patient did not have any of the above conditions. We then, report a rare case of idiopathic cavernous transformation of the portal vein.}

P218 RECURRENT GASTRIC ABBRESCES IN A 25yR OLD FEMALE M. A. Khan, MD, B. Meredy, BS, J. Lefa, MDA, FAGG, S. Dhillon, MD, FAGG. 1. Internal Medicine, West Suburban Medical Center, Oak Park, IL; 2. Medicine, Loyola University Medical Center, Maywood, IL. Purpose: Introduction: Suppurative gastritis (SG) is an uncommon often-fatal condition characterized by suppurative bacterial infection of the stomach. Here we describe a case of recurrent gastric abscesses (GA). Case report: 28 year old female presented with severe epigastric pain for 6 days. Her past medical history was significant 2 previous episodes of similar abdominal pain for which she was treated with IV antibiotics for gastritis and discharged. In this episode she was referred for endoscopic ultrasound. Physical examination revealed tenderness to palpation in left upper quadrant. Diagnostic investigation with CT scan. Upper endoscopy and Endoscopic Ultrasound demonstrated GA (figure 1) which was opened and drained with a cystogastrostomy. Her pain rapidly resolved. Subsequently, the patient was discharged home on IV piperacillin/tazobactum. Aspirate cultures were positive for streptococcusoccus. She was discharged home on oral antibiotics. Patient had a recurrent abscess 2 months later and had distal gastrojejunostomy. The patient recovered uneventfully and was discharged home after a right gastrojejunostomy, partial duodenectomy and partial gastrectomy. This is the only 18 reported cases of intramural gastric abscesses. The pathogenesis of intramural gastric abscesses is thought to involve a focus of injury to the gastric mucosa because of penetrating trauma or foreign body or iatrogenic injury. The localized pathogen is Streptococcus, which is implicated in up to 75% of cases. Intramural gastric abscesses is being diagnosed with increasing frequency by endoscopic ultrasonography. Diagnosis of intramural gastric abscess is not difficult but requires a high degree of suspicion because of the absence of symptoms. Early diagnosis is important, as it may obviate a needless gastrotomy and even death.
AN UNSUAL CASE OF RECTAL BLEEDING
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Purpose: Introduction: Non-Hodgkins lymphoma (NHL) is the 6th leading cause of cancer death in USA. Plasmablastic lymphoma (PBL) is a rare AIDS related NHL (ARL) arising in the oral cavity. Herein, a patient is presented with plasmablastoma of colon as the initial presentation of AIDS. Case report: A 40 year old female came to the ER complaining of a brown vaginal discharge for about 2 weeks and intermittent rectal bleeding. Physical exam and CT scan of abdomen and pelvis revealed a 10 X 9.8 cm mass extending into the vaginal introitus, as well as a mass on the rectal exam. On day 2 of hospital stay she developed rectal bleeding. Subsequent sigmoidoscopy showed a large circumferential exophytic mass (figure1). Jumbo biopsy demonstrated a plasmablastic lymphoma. The cells were strongly positive for MUM1, CD138 and eosin barded RNA (EBER). Subsequent testing demonstrated the patient to be HIV positive with a HIV RNA of 427976 & CD4 count of 60. The patient was started on R-EPOCH therapy for plasmablastic lymphoma and HAART for her HIV. Her vaginal discharge improved and she was discharged in a stable condition.

Discussion: Patients with HIV/AIDS are at a significantly increased risk of developing NHL. PBL is rare types of ARL. Based on recent series of ARL, PBL, PBL accounts for approximately 2-4% of all ARL. Described as tumors which developed primarily in the oral cavity. HIV associated PBL can rarely present in other extranodal sites such as the bones, soft tissue, and gastrointestinal tract. Much like other NHLs, combination chemotherapy forms the backbone of therapy for PBL, and CHOEP-like regimens are considered first-line therapy. Although extension to other sites can occur, in most patients, the neoplasm is limited to the oral cavity at initial presentation. Our case is a unique presentation of PBL with rectal bleeding, vaginal discharge, and initial manifestation of AIDS. Occurrence of PBL in sites other than the oral cavity expands our knowledge of AIDS-related lymphoproliferative disorders and increases our insights about this rare entity. Figure 1: Sigmoidoscopy showing bleeding large exophytic mass.

FULMINANT HEPATIC FAILURE IN AN ADULT PATIENT WITH GIANT CELL HEPATITIS
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Purpose: Giant cell hepatitis (GCH) is most often found in neonates and rarely seen in the adult. We present an adult with GCH who progressed to fulminant hepatic failure (FHF), requiring liver transplantation. Case Report: A 56 year old male with hemolytic anemia and idiopathic thrombocytopenic purpura (ITP) who had been managed with splenectomy and corticosteroids presented with jaundice. On physical exam, the patient was jaundiced without other stigmata of chronic liver disease. Hemoglobin was 13.9 mg/dl, platelet count 170,000/cm3, total bilirubin 13.2 mg/dl, direct bilirubin 9.5 mg/dl, albumin 3.0 g/dl, alkaline phosphatase 246 U/L, AST 435 U/L, and ALT 758 U/L. Serological markers for viral hepatitis, HIV, parovirus, CMV were negative. ANA, ANCA, ASMA, and LKM were negative. A liver biopsy showed periporal and lobular grade 3 hepatitis, with lymphoplasmacytosis and rosetting. The patient was treated with prednisone 40 mg daily and mycophenylate morfil 1g BID for autoimmune hepatitis. The patient subsequently developed renal failure, ascites, and hepatic encephalopathy. He underwent liver transplantation for FHF on hospital day 13. The explanted liver revealed a microphotograph showing bleeding large exophytic mass.

ABSTRACTS SUNDAY

POSTER ABSTRACTS – Sunday, October 5

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NATURAL KILLER CELL LYMPHOMA AT AN UNUSUAL LOCATION
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Purpose: Introduction: Primary intestinal natural killer (NK)-cell lymphomas are exceedingly rare. We present a case of NK- cell lymphoma in the stomach and colon. Case Report: 45 year old female with history of peptic ulcer perforation who was undergoing surveillance upper endoscopy every two years showed erosive gastritis (Fig 1A). The gastric biopsy showed active ulceration of fundic gastric mucosa with glandular atypia and abundant lymphocytes which were positive for CD3, CD56, and CD43 by immunohistochemistry. PET scan demonstrated high radiotactivity on the left side of the pelvis. A subsequent colonoscopy revealed numerous moderate sized exudative ulcers located throughout the colon (Fig 1B). The colon biopsy was also positive for NK/T-cell lymphoma. The tumor responded well to 6 cycles of CHOP regimen and subsequent EGD and colonoscopy with biopsies were negative for lymphoma which indicates the disease to be in complete remission. Discussion: Primary NK cell lymphoma also known as an NK/tcell lymphoma or CD56 lymphomas have marked propensity to occur in the oral cavity. Herein, a patient is presented with plasmablastoma of colon as the initial presentation of AIDS. Case report: A 40 year old female came to the ER complaining of a brown vaginal discharge for about 2 weeks and intermittent rectal bleeding. Physical exam and CT scan of abdomen and pelvis revealed a 10 X 9.8 cm mass extending into the vaginal introitus, as well as a mass on the rectal exam. On day 2 of hospital stay she developed rectal bleeding. Subsequent sigmoidoscopy showed a large circumferential exophytic mass (figure1). Jumbo biopsy demonstrated a plasmablastic lymphoma. The cells were strongly positive for MUM1, CD138 and eosin barded RNA (EBER). Subsequent testing demonstrated the patient to be HIV positive with a HIV RNA of 427976 & CD4 count of 60. The patient was started on R-EPOCH therapy for plasmablastic lymphoma and HAART for her HIV. Her vaginal discharge improved and she was discharged in a stable condition. Discussion: Patients with HIV/AIDS are at a significantly increased risk of developing NHL. PBL is rare types of ARL. Based on recent series of ARL, PBL, PBL accounts for approximately 2-4% of all ARL. Described as tumors which developed primarily in the oral cavity. HIV associated PBL can rarely present in other extranodal sites such as the bones, soft tissue, and gastrointestinal tract. Much like other NHLs, combination chemotherapy forms the backbone of therapy for PBL, and CHOEP-like regimens are considered first-line therapy. Although extension to other sites can occur, in most patients, the neoplasm is limited to the oral cavity at initial presentation. Our case is a unique presentation of PBL with rectal bleeding, vaginal discharge, and initial manifestation of AIDS. Occurrence of PBL in sites other than the oral cavity expands our knowledge of AIDS-related lymphoproliferative disorders and increases our insights about this rare entity. Figure 1: Sigmoidoscopy showing bleeding large exophytic mass.

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Purpose: Giant cell hepatitis (GCH) is most often found in neonates and rarely seen in the adult. We present an adult with GCH who progressed to fulminant hepatic failure (FHF), requiring liver transplantation. Case Report: A 56 year old male with hemolytic anemia and idiopathic thrombocytopenic purpura (ITP) who had been managed with splenectomy and corticosteroids presented with jaundice. On physical exam, the patient was jaundiced without other stigmata of chronic liver disease. Hemoglobin was 13.9 mg/dl, platelet count 170,000/cm3, total bilirubin 13.2 mg/dl, direct bilirubin 9.5 mg/dl, albumin 3.0 g/dl, alkaline phosphatase 246 U/L, AST 435 U/L, and ALT 758 U/L. Serological markers for viral hepatitis, HIV, parovirus, CMV were negative. ANA, ANCA, ASMA, and LKM were negative. A liver biopsy showed periporal and lobular grade 3 hepatitis, with lymphoplasmacytosis and rosetting. The patient was treated with prednisone 40 mg daily and mycophenylate morfil 1g BID for autoimmune hepatitis. The patient subsequently developed renal failure, ascites, and hepatic encephalopathy. He underwent liver transplantation for FHF on hospital day 13. The explanted liver revealed a microphotograph showing bleeding large exophytic mass.
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AN UNUSUAL SUBMUCOSAL TUMOR IN A PREGNANT FEMALE
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Purpose: Gastrointestinal endometriosis is uncommon, but when present usually involves the rectosigmoid and manifests as lower gastrointestinal bleeding, pelvic pain or constipation. Endometriosis involving the upper GI tract is very rare, but as this case illustrates, its presentation can be dramatic. Patient was a 35 year old G4P3 admitted at 19 weeks gestation with constant epigastric pain associated with nausea, vomiting and an episode of melena. She denied use of NSAIDs, smoking or alcohol use. Her past history was unremarkable. On examination her abdomen was benign and the stool was dark and positive for blood. Hemoglobin on admission was 7.9. EGD showed a 3 cm luminal based mass with 1 cm surface ulceration but no evidence of a visible vessel. A subsequent linear endoscopic ultrasound exam revealed a 7x7 cm inhomogeneous mass with irregular outer borders located in the proximal gastric body and extending to the spleen, left hemidiaphragm and the pancreatic tail. Fine needle aspiration cytology was interpreted as suspicious for malignancy and she underwent an en bloc partial gastrectomy and splenectomy. Pathology showed endometriosis with extensive decidualization forming a mass infiltrating the gastric wall and spleen. She did well after surgery and delivered a healthy baby at term. Conclusion: Endometriosis is rare outside the lower GI tract, but can present as a symptomatic, bleeding, gastric mass. Pregnancy appears to lead to rapid growth of extra-uterine endometriotic tissue. While EUS is helpful in evaluating subepithelial masses that may be symptomatic, in the authors' experience, EUS may be unrevealing, and ultimately surgical resection is required.

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MITOCHONDRIAL MUTATIONS AS A CAUSE OF GASTROINTESTINAL DYSMOTILITY IN OLDER PATIENTS
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Purpose: Mitochondrial mutations affect several organ systems including the gastrointestinal tract. These mutations usually manifest before the 4th decade of life. The most common mitochondrial disorder affecting the gut is Mitochondrial Neuro Gastro Intestinal Encephalomyopathy (MNGIE). Mitochondrial Neuro Gastro Intestinal Encephalomyopathy (MNGIE) is associated with a thymidine phosphorylase gene mutation. Other mitochondrial diseases associated with GI disease include MIDD (maternally inherited diabetes and deafness) and MELAS (myoclonus epilepsy, lactic acidosis, stroke like episodes). In these diseases the commonest mutation is with a substitution of A with G at position 3243 in the mitochondrial DNA. We describe two older patients presenting with dysmotility that was associated with the mitochondrial mutation A3243G. Case 1: A 64 year old Caucasian male with history of vague abdominal pain, nausea and intolerance to ice cream. Abdominal exam revealed tenderness, perthermia and lactic acidemia in patients with MELAS.

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EOSINOPHILIC HEPATITIS CASE REPORT
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Purpose: A 34 yo WM with past medical history of seasonal allergies on Allegra (fexofenadine) developed abdominal cramping, whole body erythematous rash, chills and dark urine. He denied any sick contacts over the counter medication use, and active alcohol consumption. How-ever, he does admit to heavy alcohol use in college. The patient presented to his primary care doctor and was found to be afibrile with stable vital signs. Physical exam was significant for mild icterus but no stigmata of chronic liver disease. Laboratory investigation showed total bilirubin of 5.7, ALT 248 and AP 218. A CBC showed 12% eosinophilia with normal total WBC count. A work up for viral hepatitis, autoimmune hepatitis, hemochromatosis and other hereditary liver conditions were unremarkable. A right upper quadrant ultrasound did not show evidence of cholelithiasis or biliary duct dilatation. He subsequently underwent a liver biopsy which revealed eosinophilic hepatitis with focal bridging fibrosis. The only medical history significant was taking fexofenadine, was held and over the next few weeks his liver function tests returned into normal range. The patient saw an allergist who, upon skin prick testing, found common aeroallergens to tree, grass, dust, cat, and ragweed. The testing failed to demonstrate any food allergens. The allergist felt that a drug effect was a more likely explanation for his presentation. He is currently doing well with no further episodes 6 months after the event of all medications. Discussion: The eosinophilic gastrointestinal disorders are increasingly seen of late. Eosinophilic hepatitis is rarely described in the literature. There have been three case reports of this entity being associated with hypersensitivity to certain drugs, including Trovafloxacin, Cefonicid and Lamotrigine. Eosinophilic hepatitis, in past case reports, was treated by discontinuation of the suspected offending agent and initiation of systemic steroids. In this case discontinuation of fexofenadine was done with improvement in liver function tests. In rare cases Allegra has been associated with hypersensitivity reactions manifested by an-gioedema, chest tightness, dyspnea, flushing and systemic anaphylaxis. This is the first report to our knowledge in published literature of eosinophilic hepatitis with fexofenadine use.

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A RARE CASE OF AORTODUODENAL SYNDROME
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Purpose: A 78 yo male with hypertension and CKD presented for evaluation of acute on chronic renal failure. A renal ultrasound incidentally revealed a large 4cm x 6cm x 10cm infra renal abdominal aortic aneurysm. He was evaluated by vascular surgery who planned an open repair in the near future. 4 days later the patient presented to the emergency department with abdominal pain, nausea and intolerance to intake. Abdominal exam revealed tenderness, perthermia and lactic acidosis. A subsequent linear endoscopic ultrasound exam revealed a 7x7 cm inhomogeneous mass with an ulcerated surface. The patient underwent repair of his AAA he underwent a CABG X 3. Approximately 2 weeks later, after aggressive nutritional support, he successfully underwent an open AAA repair with a tube graft. He is currently in a rehabilitation facility doing well.

Conclusion: Aortoduodenal syndrome is a clinical entity rarely reported in the gastroenterology literature. It was first described in 1965 by William Osler in an article entitled “Aneurysm of the Abdominal aorta.” There have been fewer than 30 cases reported in the literature. The AAA compresses the superior mesenteric artery or the transverse segment of the duodenal wall. Patients present with mesenteric, pulsatile abdominal mass, abdominal pain, weight loss, and electrolyte disturbances. The diagnosis should be suspected in a patient with known vascular disease, pulsatile abdominal mass and signs of gastric outlet obstruction. Initial workup should include CT, UGI barium study or EGD to rule out other causes of gastric outlet obstruction. Treatment is initially supportive with attention to nutritional status prior to surgical vascular repair. Osler W. Aneurysm of the abdominal aorta. Lancet 1905; 166:1089-96. Deitch J et al. AAA causing duodenal obstruction: 2 case reports and review of the literature. J of Vase Surg 2004:40:543-7.

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A RARE CASE OF AN INCIDENTALLY DISCOVERED AMPULLA OF VATER CARCINOID
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Purpose: Introduction: Carcinoid tumors account for only 1-2% of gastrointestinal neoplasms. Carcinoids tumors within the gastrointestinal tract are usually located in the appendix, small in-testine, rectum and stomach. Carcinoid tumors of the ampulla of Vater are extremely rare. We report the case of a patient who was incidentally found to have a carcinoid of the ampulla of
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AN UNUSUAL METHOD OF DIAGNOSING ASCARIASIS
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Purpose: Ascariasis results in substantial morbidity and mortality worldwide. The diagnosis is usually incidental when the host passes a worm in the stool or vomit. Stool samples for ova and parasites will also demonstrate Ascaris eggs. Ascariasis diagnosed via EGD is an unusual method of diagnosing this disease. We report the case of a patient who presented with vague abdominal pain and was diagnosed with Ascaris when an adult Ascaris worm was found in the second portion of his duodenum during EGD. Case: A 73 year old Filipino male with a history of vague abdominal pain presented for an elective outpatient EGD. Physical exam was unremarkable. Laboratory tests revealed a white blood cell count of 9,500/µL, with 80.0% eosinophils. EGD revealed a single, superficial, erythematous ulcer in the antrum. The patient was started on a single dose of albendazole 400 mg. The patient reported complete relief of symptoms over the following 4 weeks later. Discussion: Ascariasis is the largest human intestinal nematode and can reach 40 cm in length. Nearly a fourth of the world’s population is infected and Ascaris causes 20,000 deaths a year worldwide. The adult worm in the upper small bowel usually causes no symptoms but may cause vague abdominal symptoms in the form of abdominal pain, distension, nausea and occasional diarrhea. This case demonstrates that patients with vague abdominal pain, who are from or have traveled to endemic areas, should be evaluated for parasitic infections, particularly Ascariasis.

Vater on a routine EGD. Case: A 68 year old African American female with a past medical history of hypertension, osteoarthritis, asthma and GERD presented for an elective outpatient EGD due to GERD symptoms despite compliance with PPI therapy. Physical examination and laboratory tests, including tests of liver function, were unremarkable. EGD revealed a normal esophagus, a non-obstructing Schatzki’s ring at the gastroesophageal junction, diffuse gastritis in the antrum and body of the stomach, and a very prominent major papilla with irregular mucosa. Biopsies from the prominent major papilla revealed a well-differentiated neuroendocrine tumor which stained strongly with the neuroendocrine markers synaptophysin and chromogranin, consistent with carcinoid. An endoscopic ultrasound was subsequently performed which demonstrated a isoechoic lesion located on the major papilla measuring 3.2 cm X 1.4 cm without evidence of local lymph node spread. A CT of the abdomen/pelvis revealed an enhancing lesion in the second portion of the duodenum and no evidence of metastatic spread. Octreotide scan findings were consistent with a neuroendocrine tumor in the second portion of the duodenum without evidence of tumor metastases. The patient was subsequently taken to surgery and had a pancreatoduodenectomy performed. Discussion: Carcinoid tumors of the ampulla of Vater have been infrequently reported in the medical literature. The most common presenting symptoms reported in the literature are jaundice, followed by nonspecific upper abdominal discomfort and weight loss. Rarely, a patient may be incidentally found to have this disease as was demonstrated by our patient. This case demonstrates that successful staging for carcinoid of the ampulla of Vater can be accomplished with a CT of the abdomen/pelvis, octreotide scan and an EUS.

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DRUGS KNOWN TO CAUSE PANCREATITIS ARE USED TO TREAT PANCREATITIS IN LUPUS: A CASE REPORT
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Purpose: A 32 year old AA female with a 3 year history of SLE presented to the ER with severe abdominal pain, diarrhea, nausea and vomiting. She had just come from Cameroon on 10mg of prednisone bid and azathioprine (taking intermittently) 50mg for 1 year for on-going myositis. Her abdomen was diffusely tender. Multiple joints were swollen. A pericardial rub was present. Her WBC was 107,000/cmm with 80.0% neutrophils, 4.0% eosinophils, 10.0% lymphocytes and 6.0% monocytes. Her platelet count was 1,790,000/cmm. Her serum creatinine was 1.2mg/dl. Her glucose was 112mg/dl. Her lipase was 245 U/L. Her liver enzymes showed ALT 206U/L, AST 545 U/L, ALP 67U/L, total protein 7.2g/dl with a low albumin of 2.9g/dl. Her CPK was 285 mg/dl, creatinine phosphokinase MB isoenzyme was 3 mg/dl. Her amylase was 209 mg/dl.UA showed no proteinuria or cell casts. Her EKG showed normal sinus rhythm. Her abdominal CT scan showed a 41mg/dl and C4 7mg/dl. CT and ultrasound of abdomen were normal. EKG was normal and slowly increased to 75mg po bid. She was given IV soln and 1gm daily for 3 days. There was a dramatic decrease in her abdominal pain, the pancreatic and liver enzymes decreased, pericardial effusion resolved and pulse normalized. She was discharged on azathioprine 75mg po bid and prednisone 40mg po bid. Discussion: This case demonstrates that patients with vague abdominal pain, who are from or have traveled to endemic areas, should be evaluated for parasitic infections, particularly Ascariasis. The patient was subsequently taken to surgery and had a pancreatoduodenectomy performed. Discussion: Carcinoid tumors of the ampulla of Vater have been infrequently reported in the medical literature. The most common presenting symptoms reported in the literature are jaundice, followed by nonspecific upper abdominal discomfort and weight loss. Rarely, a patient may be incidentally found to have this disease as was demonstrated by our patient. This case demonstrates that successful staging for carcinoid of the ampulla of Vater can be accomplished with a CT of the abdomen/pelvis, octreotide scan and an EUS.

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AN UNUSUAL CASE OF ACUTE BUDD-CHIARI SYNDROME (BCS) PRESENTING WITH NORMAL HEPATIC ENZYMES MIMICKING MESENTERIC ISCHEMIA
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Purpose: The clock begins 0 hours: An 18 year old female on oral contraceptive pills for 3 months presented with severe generalized abdominal pain, nausea, vomiting and mild dyspepsia of 1 week duration. On examination, abdomen was diffusely tender and mildly distended. Initial labs: WBC 10.8 k/cmm; AST 58 U/L, ALT 51 U/L, ALP 130 k/cmm; Platelets 238 k/cmm; INR 1.5. Lactic acid 7 mmol/L. 17 Hours: Patient was transferred to a tertiary care center for possible mesenteric ischemia. Lab: WBC 20k/cmm, AST 77 U/L, ALT 90 U/L, Lactic Acid 16 mmol/L. DIC: fibrinogen 25mg/dL, FDP 210 µg/mL. 24 Hours: CT scan of the abdomen showed hepatic vein thrombosis. The patient was clinically deteriorating. At this point, finding the diagnostic dilemma between acute mesenteric ischemia and BCS, an exploratory laparotomy was done to rule out necrotic bowel, instead laparotomy revealed uniformly firm and enlarged liver with moderate ascites and healthy looking bowel. At this point, finding on CT scan as well as the clinical picture was suggestive of Acute Budd-Chiari Syndrome. Transplant center was contacted. 23 Hours: Labs: AST 6800 U/L, ALT 4444 U/L, Platelets 58 k/cmm. ALP 123 U/L, INR 4.3, total bilirubin 1.7mg/dl 35 Hours: TIPS was done for decompression. 47 Hours: Patient transferred to transplant center. LFTs were further elevated with moderate encephalopathy. Patient was found to be heterozygous for factor V Leiden. 71 Hours: Patient underwent liver transplant. Explant specimen showed massive infarction consistent with hepatic veno-occlusive disease. Patient was started on immunosuppressants and anticoagulation. The patient recovered satisfactorily. Discussion: Budd-Chiari Syndrome is a rare but potentially life threatening disorder caused by hepatic venous outflow obstruction resulting in congestive liver failure. Hypercoagulable states are major etiological factors. BCS can present as acute and fulminant (20%), sub-acute (40%), or chronic (40%). Acute form usually presents with abdominal pain, nausea, vomiting, mild jaundice, intractable ascites, elevated serum AST/ALT (> 5 times normal). On contrary, our patient presented with normal liver enzymes and severe lactic acidosis. In such cases, a high index of clinical suspicion is required to make the diagnosis, despite normal liver enzymes. Diagnosis can be confirmed by ultrasound, CT scan, MRI or hepatic venography. Treatment involves anticoagulation, thrombolytic therapy, TIPS, stents and liver transplant. Our case highlights the unusual presentation of acute BCS, rapidity of progression and importance of appropriate diagnosis and treatment. Delaying diagnosis can be catastrophic. We emphasize, the fact early diagnosis and effective treatment in such fulminant cases can be life saving.
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A RARE CAUSE OF GASTRODUODENAL OBSTRUCTION: BOUVERET’S SYNDROME
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Methods: Case Report An 85-year-old female with history of hypertension was admitted to the hospital with a three day history of nausea and vomiting. An abdominal CT was performed and revealed a large calcified mass (Figure 1) and pneumobilia. A large obstructing duodenal gallstone (Figure 2) located in the third portion was found on upper endoscopy. Attempts to remove the object endoscopically were unsuccessful. An apparent fistula was found in the duodenal bulb. An enterolithotomy was performed where a 5 cm gallstone was extracted and she did well post-operatively.

Conclusion: Discussion Bouveret’s syndrome is characterized by gastroduodenal obstruction secondary to an impacted duodenal or pyloric channel gallstone via a choledocho-duodenal or choledocho-gastric fistula. Clinically patients present with symptoms of obstruction and radiographic studies reveal pneumobilia, cholecystolithiasis, and a distended stomach. Endoscopic findings include retained food, an impacted stone, and occasionally a fistula which was seen in our patient. Treatment is usually surgery, consisting of an enterolithotomy with or without concomitant cholecystectomy and fistula repair. Recently there have been reports of endoscopic therapy disintegrating gallstones including intracorporeal laser lithotripsy, endoscopic mechanized lithotripsy, and electrohydraulic lithotripsy. Reference 1. Gennel G, Weikert U, Eickhoff A, et al. Successful treatment of gallstone ileus (Bouveret syndrome) by using extracorporeal shock wave lithotripsy and pyloric coagulation. Gastrointest Endosc 2007;65:173-175.

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ASCITES OF UNKNOWN ORIGIN: USING THE HPVG TO DIAGNOSE
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Purpose: Most etiologies of ascites can be divided into cardiac, renal, or hepatic in origin. Diagnostic paracentesis is the gold standard in initial evaluation. We present a case where additional testing was needed.

Results: Case Report A 48 y/o male with history of non-ischemic cardiomyopathy (LV EF of 16%), s/p AICD, who was admitted to the medical service with increasing abdominal girth, lower extremity edema, and worsening dyspnea on exertion. He had been admitted several times in the past year with similar complaints and has had LVP performed repeatedly. His medica-tions were warfarin, aspirin, diltiazem, metoprolol, and Procardia. Admission work-up included heparin, admitting up to 10-12 shots/night for ~ 12 years, however he has been sober for over one year. He has no family history of liver disease. Physical exam was notable for a blood pressure of 128/86. He appeared older than his stated age. His neck exam was significant for JVD. Skin exam revealed spider angiectasias. His chest was clear, cardiovascular exam with loud apical systolic murmur. His abdomen was tense with fluid wave and palpable spleen noted. There was peripheral edema in his lower extremities. Neurologic exam failed to show asterixis and the patient was alert and oriented. Pertinent labs include a prolonged PT at 17 seconds, total bilirubin of 1.7 mg/dl, alkaline phosphatase of 166 U/ml, and normal transaminases and platelets. A CT scan revealed a large heart and extensive abdominal fluid, with no evidence of ascites. Cardiology consultation questioned the possibility of underlying cirrhosis given his history of alcohol abuse. Diagnostic paracentesis revealed a total protein of 3.5 and a SAAG > 1.1 compatible with portal hypertension. The elevated protein and pattern of LFT abnormalities suggested cardiac ascites but since SAAG was elevated the diagnosis of underlying cirrhosis was entertained. A HPVG was performed to answer this question which yielded a gradient less than 5 mm Hg suggestive of both increased portal and hepatic venous pressures, consistent with our suspicion of right sided heart failure with hepatic congestion and protein rich ascites. He was then referred for possible cardiac transplantation.

Conclusions: Measuring the HPVG can be useful in differentiating the etiology of ascites as described in the above vignette.

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HYPERAMMONEMIA IN A PATIENT WITHOUT LIVER DISEASE-ADULT ONSET URREA CYCLE DISORDER
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Purpose: 59 year old lady, who lives alone, was brought to Emergency Department by ambu-lance after neighbors found her confused. Emergency contact could not be reached. On admis-sion she was only oriented to person and her vital signs were stable. Laboratory work up re-vealed CBC and chemistry panel at base line and her liver function tests were slightly deranged with mildly elevated Alkaline Phosphatase/Aspartate aminotransferase and normal Alanine aminotransferase. Her ammonia levels were high on admission (99nmol/L). Initially, we thought to have Hepatic encephalopathy and over next 24-48 hours she deteriorated clinically and even with regular bowel movements her ammonia levels went up to >150 and her urine got dark. E. coli was grown on her stool. She was started on Ceftazidime. She did not have any symptoms or a history of liver disease and her Hepatitis serology were negative. We searched for alternate causes of hyperammonemia and plasma amino acid profile was sent to rule out Urea Cycle Disorder and Ureaplasma infection with urease splitting organism as cause of high ammonia. Urease splitting organism as cause of high ammonia was ruled out with urine culture on admission. Her plasma amino acid profile returned with high glutamine and low citrulline, consistent and urine orotic acid was elevated and so she was diagnosed with partial Ornithine Transcarbamylase deficiency and treatment was initiated with Sodium Phenylbutyrate, low protein diet and Arginine supplementation. Her ammonia levels came down but before her mentation improved, patient developed Methicillin Resistant Staph. Aureus sepsis and multi organ failure and family wanted conservative approach and she passed away in less than 48 hours after diagnosis of multiorgan failure. An autopsy was not authorized by family members. Most often, urea cycle disorders present as hyperammonemia in the newborn period; however, urea cycle disorders can present at almost any age in individuals who have milder urea cycle defects when severe stress triggers a hyperammonemic crisis. So alternate cause for high ammonia should be sought in all patients with high ammonia and no liver dis-ease. High degree of suspicion and prompt initiation of treatment is very important in manag-ing patients with urea cycle disorders as patients experiencing acute elevations of ammo-nia present to the ICU with encephalopathy, which may progress quickly. Management includes combination of sodium phenyl butyrate and sodium phenyl acetate/benzamide as a glu-tamine trap, diverting nitrogen from urea synthesis to alternative routes of excretion. Urea cycle a disorder causing fatal illness is reported but one recent article gives encouragement with 64% survival rate with prompt correction of the metabolic abnormalities.

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A RARE CASE OF HEMATOMESIS:ACUTE GASTRIC VOLVULUS
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Objective: A 77-year-old Caucasian female patient presented to emergency department (ED) with acute onset of vomiting and epigastric pain. Vomiting was coffee-ground in color and her abdominal pain which started in epigastrium was now more diffuse in character. She denied any melena. Her medications at the time of presentation include bactrim, prilosec and atenolol. She denied any recent NSAID use. Her past medical history was significant for vertebral frac-tures and osteoporosis and recurrent UTIs. On physical examination, vital signs were stable. She was tender to palpate in the epigastric and umbilical regions. Abdominal x-rays obtained in ED showed air filled sac in the mediastinum, raising a possibility of gastric volvulus. Esophagogas-troduodenoscopy revealed a twisted hiatal hernia and scope could not be advanced through the hernia. A follow-up barium swallow revealed mesentero-axial gastric volvulus and gastric obstruction. Patient underwent emergency laparoscopic surgery with reduction of volvulus, re-pair of diaphragmatic defect and fixation of the stomach. Gastric Volvulus is a rare disorder but it can be potentially fatal and mortality has reported to be up to 30-50% in acute gastric volvu-lus. Stomach is relatively mobile and so asymptomatic and transient rotations of stomach do occur. This abnormal rotation of stomach can be longitudinal (organoaxial) or transverse (mesenteroaxial) or a combination of both. The classic triad of symptoms is epigastric pain, vomiting and difficulty or inability to pass nasogastric tube. Early diagnosis and prompt initia-tion of treatment is very important as volvulus can be fatal. Upper GI contrast studies and upper endoscopy are the most important investigations useful in the diagnosis. Acute gastric volvulus is a surgical emergency and treatment generally involves reduction of volvulus, repair of diaphragmatic defect and fixation of the stomach (gastropexy). The survival options available have changed greatly over the last decade and with developments in laparoscopic surgery, it now takes preference over laparotomy for both acute and chronic gastric volvulus.

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A CASE REPORT OF RECURRENT SQUAMOUS CELL CARCINOMA OF THE LUNG PRESENTING WITH TRACHEO-ESOPHAGEAL FISTULA
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Purpose: We present a case of a patient with dysphagia, who was found to have a large tracheo-esophageal fistula due to recurrent squamous cell carcinoma of the lung. Pallia-tive treatment was achieved with placement of a covered esophageal wall stent.

Methods: This is a retrospective chart review of a single case.

Results: A 51 year old male presented to our hospital with dysphagia. Six years prior he was di-agnosed with Stage I squamous cell carcinoma of the lung. He underwent right upper lobec-
tomy and adjuvant chemoradiation therapy due to positive margins. After completion of chemoradiation, he was deemed to be disease free. He then presented to our hospital with 2 weeks of dysphagia secondary to coughing fits associated with swallowing. Over this time he lost 15 pounds and became dehydrated necessitating admission. On exam he appeared dehyd-
drated with dry mucous membranes and a mild tachycardia. On attempting to drink water he developed coughing fits. Barium swallow showed an abnormal upper esophageal diverticulum. CT scan showed an irregular tracheal lumen at the carina, narrowing of the right main-
stem bronchus, and a fleck of gas extending from the right main stem bronchus into the esophageal wall. Upper endoscopy demonstrated a large tracheo-esophageal fistula at 30cm in which the esophagus could be passed into the airway, along with a mass involving the trachea. Biopsy demonstrated squamous cell carcinoma of the lung consistent with his previous cancer. He underwent surgery with placement of a covered self-expanding metal stent for palliative treatment with resolution of his symptoms.

Conclusion: Acquired tracheo-esophageal fistulae can be a rare complication of either malignant or non-malignant causes. The most frequent malignant causes are esophageal and lung cancers, accounting for 77% and 16% of malignant TEF's respectively. The incidence of TEF in esophageal cancer is 4.5%, compared to 0.3% in primary lung cancer. Mean survival after diagno-
sis and treatment is 13.4 weeks. Thus the goal of care is to minimize pulmonary complica-
tions and maintain nutritional support. In small studies, endoscopic approach with placement of a wall stent has provided an 80% success rate of complete obliteration of TEF's. Complica-
tion rates range from 15-40% and includes perforation, stent migration, and incomplete clo-
sure, while surgical options have a peri-operative mortality rate of 29-47%. In patients with successful placement of a wall stent mean survival improves to 15.1 weeks compared to 6.2 weeks in those with failed attempt. Thus the use of self-expanding metal or plastic wall stents can provide a relatively safe and effective alternative to palliative surgery in malignant condi-
tions.

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A CASE REPORT OF METASTATIC BREAST CANCER TO THE RECTUM

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Purpose: Breast cancer is the most common female cancer in the US, in 1 with 8 women devel-
oping invasive disease. Most often metastatic disease is found in lungs, bones, liver, and brain. Here we present a rare case of invasive ductal breast cancer metastatic to the rectum confirmed by endoscopic ultrasonography and biopsy.

Methods: This is a retrospective chart review of a single case.

Results: A 59 year old female with a history of metastatic breast cancer was referred for con-
stitution and lower quadrant abdominal pain. She was originally diagnosed with Stage IIA (T2N0M0) ER positive invasive ductal breast cancer in 1997. A lump was noted and she completed 5 cycles of adjuvant chemotherapy followed by 3 years of Tamoxifen. In 2008 she was re-diagnosed with a metastasis of a right breast adenocarcinoma. In 2009 she was started on Arimidex and a re-staging CT scan did not show any metastatic disease. Over the next 18 months she complained of worsening lower quadrant abdominal discomfort and constipation. Abdominal exam revealed mild lower quadrant tenderness. Rectal exam was normal. CEA was elevated. CT scan showed multiple small liver lesions and rectal wall thickening. Barium enema confirmed circumferential rectal wall thickening. Flexible sigmoidoscopy with endo-
scopic ultrasonography revealed a small rectal ulcer with sonographic thickening of the rectal wall, loss of normal layers, and no abnormal lymph nodes. Biopsy revealed metastatic carci-
noma of breast origin with immunohistochemical staining positive for cytokeratin 7/ER and negative for PR/ER/20ktakin.

Conclusion: Metastatic breast cancer to the GI tract is quite rare, and is more common in the upper intestine. The rate of metastatic breast cancer to the lower GI tract on autopsy series is 6-12%. But only case reports or series have been reported in live patients. Most cases of rectal involvement are found with synchronous lesions and after a latent period of 4-10 years from initial diagnosis. Primary colorectal cancer is more common in breast cancer patients compared to metastatic breast disease. It is difficult to differentiate primary colorectal and metastatic disease. For these lesions are usually indistinguishable; however metastatic lesions are usually intramural. Thus endoscopic ultrasonography can help with localization and characterize this intramural pattern. In patients with a history of breast cancer and a new colorectal lesion, differ-
entiating between metastatic disease and a new primary can be aided by endoscopic ultra-
sonography, histologic appearance on biopsy, and use of immunohistochemical stains for cy-
tokeratins, tumor markers, and estrogen/progesterone receptors.

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AN INTERESTING CASE OF ADENOVIRUS HEPATITIS IN AN ADULT CARDIAC TRANSPLANT RECIPIENT

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Purpose: Adenoviral infections are commonly described in pediatric transplant populations. However, cases in adults are infrequent. A 72 year old male, status post heart transplant was admitted to our hospital with known adenovirus infection. Upon Adenovirus, CMV, EBV and HSV were negative. Hematological parameters were also normal on admission, except for elevated ESR of 84. Liver function tests showed elevated transaminases (AST=400, ALT=377, Alk Phos 513, Lactate dehydrogenase 919). Stool studies for ova and parasites were negative. Stool cultures for Salmonella, Shigella, Campylobacter, CMV, EBV and HSV were all negative. The patient was started on empirical antibiotics despite which he continued to spike high grade fevers. Colonoscopy was normal. CT imaging of the ab-
dominem showed normal bowel, and multiple indeterminate low attenuation masses in the liver.

Subsequently was however negative. CT guided liver biopsy revealed focal areas of extensive necrosis with relatively spared bile ducts. Staining for fungal elements, PAS for E histolytica, Grocott's silver for fungal hyphae were all negative. A diagnosis of Adenovirus, CMV, and negative for CMV and HSV. PCR for adenoviral DNA revealed 289,300 copies/ml. Histologic features were consistent with Adenovirus hepatitis. The patient's im-
munosuppression was decreased by dropping MMF and reducing Tacrolimus dosage. Over the next 2 weeks, serum transaminases started trending down, and constitutional symptoms im-
proved. Subsequently, due to reduced immunosuppression, the patient underwent a cardiac catheterization which was normal. The patient was discharged after a month showed significant resolution of the hypoattenuated lesions,with near normalization of transaminases. This case represents a very distinctive scenario of involvement of a different organ without any involvement of the primary transplanted organ, 10 years after the transplan-
tation.

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AN UNUSUAL CASE OF COLITIS: DRUG INDUCED INFLAMMATORY BOWEL DISEASE

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Purpose: A 65 year old man with a history of metastatic prostate cancer was being treated in a clinical trial with ipilimumab when he presented to the hospital with fever and 10-12 episodes of bloody diarrhea. The patient had recently received a course of antibiotics for bronchitis. His stool cultures were positive for C difficile and he was begun on treatment with metronidazole. However, over the next few days his diarrhea did not improve with appropriate therapy. His physical exam revealed a cutaneous lesion he had noted at admission. Biopsies revealed a chronic dermatitis which re-
vealed severe erythema and ulceration throughout the entire colon consistent with diffuse co-
loitis without any evidence of pseudo-membranes. Histopathology of the colonic biopsy showed a severe acute and chronic colitis with features essentially identical to and indistinguishable from those of active inflammatory bowel disease. It was determined that ipilimumab which re-
results in stimulation of the immune system can precipitate a colitis which mimics inflammatory bowel disease in presentation both clinically, endoscopically and histologically. Ipilimumab is a human monoclonal antibody that binds to CTLA-4 (cytotoxic T lymphocyte-associated anti-
gen 4), a molecule on T-cells that plays a critical role in regulating immune responses. Ipli-
mumab is designed to block the activity of CTLA-4, thereby sustaining an active immune re-
response. Ipilimumab is currently being used in clinical trials for patients with melanoma and prostate cancer with known gastrointestinal side effects of colitis. Through protocol the colitis has been treated with high dose intravenous steroids, with failures requiring treatment with in-
fliximab and colomax. Our patient was started on high dose steroids with significant im-
provement in his symptoms. Overall this presentation demonstrates a case of colitis due to im-
mune stimulation from a medication perfectly imitating inflammatory bowel disease both clinically, endoscopically and histologically. It is important to be aware of the gastrointestinal complications of this medication so as not to confuse with IBD. The long term ramifications of this medication are unknown. It may be possible that this medication could result in chronic inflammatory bowel disease. Also, it is important to consider that this immune pathway may hold potential future immunological treatment options for IBD pa-
patients.

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HUMAN PAPILLOMA VIRUS (HPV) ASSOCIATED SQUAMOUS CELL CARCINOMA OF THE ESOPHAGUS (ESCC), A CASE REPORT

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Purpose: Squamous cell cancer of the esophagus (ESCC) has been decreasing in incidence in the United States (US) however 5 year mortality remains high with survival ranging from 10 to 13 percent. Multiple risk factors have been identified including geographic (highest in China), dietary/lifestyle (alcohol, smoking, and betel nut ingestion) and other risk factors (echalasia and lye ingestion). The role of viral infections has been evaluated and remains controversial. In particular the role of human papilloma virus (HPV) has been questioned as to whether this represents a causative factor or a facilitative factor to the develop-
ment of ESCC. To our best knowledge, outside of pathology reviews, there has been only one case report in North America of an HPV associated ESCC. We present a case of a 48 year old Caucasian female with an HPV-16 associated ESCC. A 48 year old Caucasian female presented for upper endoscopy for evaluation of progressive dysphagia over 2 week duration. Endoscopy revealed a 2.4 cm ulcerated friable exophytic lesion of the distal esophagus with 2 mm ulceration over a high grade friable and loose stools for 3 days Immunosuppression consisted of Mycopheno-
mofetil(MMF), Tacrolimus, and Prednisone. Examination showed right hypochondriac high grade fever and loose stools for three days. CT imaging of the abdomen showed normal bowel and multiple indeterminate low attenuation masses in the liver. A month showed significant resolution of the hypoattenuated lesions, with near normalization of transaminases. This case represents a very distinctive scenario of involvement of a different organ without any involvement of the primary transplanted organ, 10 years after the transplan-
tation.
THE ROLE OF ENDOSCOPIC ULTRASOUND IN THE EVALUATION OF ANAL CANCER

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Purpose: Anal cancer (AC) is an uncommon cancer, comprising 1.6% of all GI tract cancers in the US. Risk factors include a female gender, exposure to HIV infection and chronic smoking. Diagnosis is often delayed due to discomfort. In general, the disease is often locoregional with metastasis being uncommon. The liver and the lung are the most common sites for distal metastasis. Prior experience of locoregional disease cases reveals that direct extension into the surrounding soft tissue and the rectum can occur. Metastatic lesions to the rectum have not been well described. Here we report two cases of AC metastatic to the rectum. The first case involves a 46 year old female who presented for colonoscopy in the setting of a periumbilical pain for a period of several months, as well as nausea vomiting and diarrhea. Colonoscopy demonstrated two distinct lesions, one at 5 cm from the anal verge and the other extending from the anal verge. Biopsies revealed rectal mucosa with squamous cell carcinoma (SCC) in situ. Follow up endoscopic ultrasound (EUS) revealed the proximal lesion arising from the muscularis propria. The EUS revealed this lesion to be much larger than seen en endoscopy. The second case was a 57 year old man who presented with a 1 year history of rectal bleeding associated with blood per rectum. On exam an anal mass was palpated. Colonoscopy revealed an anal mass with biopsies consistent with SCC. Staging PET/CT revealed a hypermetabolic focus in the area of the anal mass as well as a second, distinct area of increased uptake in a soft tissue mass adjacent to the superior portion of the rectum. EUS imaging revealed the anal mass involving the subcutaneous fat. This lesion was distinct from the anal mass and was not readily appreciated endoscopically. Fine needle aspiration was positive for metastatic AC. Both patients are currently undergoing combined modality chemotherapy / XRT. We present two cases of AC metastatic to the rectum. In our review of the literature, while direct extension has been described, metastatic lesions to the rectum have not been well reported. This may in fact represent lesions having been attributed to direct extension when in fact they were metastatic lesions. Further- more, these cases illustrate the potential for involvement of the primary anal lesion, lymph node involvement and to differentiate extension of anal cancer to the rectum versus metastatic lesions. This has important implications in regards to prognosis.

GIANT SPORADIC FUNDIC GLAND POLYP ASSOCIATED WITH POSITIVE FECAL OCCULT BLOOD TESTING. ENDOSCOPIC AND ENDOSCOPICOGRAPHIC FEATURES AND MANAGEMENT

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Purpose: Introduction: Fundic gland polyps (FGP) are the most common gastric polyps. They are usually small in size, sporadic and asymptomatic. We present a unique case of “giant” fundic gland polyp as a result of chronic bleeding, in the middle-aged patient. Case: A 49-year-old man presented with abdominal and rectal bleeding of 4 weeks duration associated with symptoms of anemia. Endoscopic examination revealed a fundic gland polyp. Endoscopy showed a sessile, broad-based, smooth-surfaced polyp, similar in color to the surrounding mucosa and extending around 8 cm (with a width of 2 cm) from the cardia along the lesser curvature with two surfaces. Colonic biopsies containing the polyp revealed the histopathology of fundic gland polyp. He underwent EGD and EGD confirmed the previous findings. Biopsies from the polyp were unchanged, and biopsies of the surrounding mucosa revealed mild chronic active gastritis with rare HP-like organisms for which the patient received eradication therapy. Discussion: FGP accounts for about 47% of all gastric polyps. They are usually asymptomatic. They have distinct endoscopic features, and usually measure less than 5 mm in size. Six cases of giant gastric polyps have been reported in the liter- ature, one of them only was a FGP. The diagnosis of FGP is usually established by pathology and inflammatory changes in the surrounding mucosa are usually absent. EUS helps to de- scribe the endoscopicographic features and confirm the superficial nature of the polyp. The natural history of FGP is still unclear and there are no guidelines for surveillance and treatment. In our patient, the polyp is most likely the cause of positive stool occult blood. The question remains whether to remove such a giant polyp by endoscopic mucosectomy or surgical resection or to observe remains debatable, although keeping it imposes negligible harm.

RAPIDLY PROGRESSIVE SCLEROSING CHOLANGITIS POST-SURGERY FOR INFLAMMATORY PANCREATIC PSEUDOTUMOR

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Purpose: Introduction: Primary sclerosing cholangitis is characterized by inflammation of the bile tree typically diagnosed at ERCP. A similar cholangiogram can be seen in patients with a rapidly progressive form of sclerosing cholangitis in the setting of pancreatic pseudotumor. We present a case of a 54 year-old man presenting with obstructive jaundice that illustrates the diagnostic challenge and importance of an accurate diagnosis of this entity. Case Report: A 54 year-old man presented with painless jaundice and weight loss. CT scan revealed a 7 cm mass in the head of the pancreas. EUS revealed a distinct bile duct and pancreatic duct structure. Percutaneous biopsy of the mass showed inflammatory changes but there was con-
ACUTE ACALCULOUS CHOLECYSTITIS COMPlicated by PERFORATION in SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE REPORT and REVIEW of the LITERATURE

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Purpose: Clinical Vignette
Methods: A 46 year old African American woman presents to ER with nausea, vomiting, and abdominal pain. She is known to have ESRD secondary to SLE diagnosed in 10 years prior. The patient woke up one day prior feeling nauseous and threw up six times. As episodes progressed, vomiting became green and soft in consistency. She had not been able to eat since the episode began. Past medical history is significant for CVA in 1997 and 2005, Lupus nephritis (2004), nonischemic cardiomyopathy, and ESRD (2005). Medications included a tapering dose of prednisone for a recent lupus flare. The remainder of the history and review of systems were noncontributory except as described above. On admission, vital signs were stable and physical exam was unremarkable with the exception of a positive Murphy’s sign. Significant findings on CBC included microcytic anemia and increased poly-morphonuclear neutrophils. CMP abnormalities included elevated alanine, aspartate AST, ALT, and CRP BUN and creatinine were also elevated. Imaging studies performed included an abdominal ultrasound which revealed a mass-like structure in the gallbladder fossa postulated to be a necrotic mass 4.1 by 6.7 centimeters reconfirmed by CT scan. An ERCP was done and revealed a dilated CBD with an abscess/inflammatory complex cavity found in the region of the gall bladder with a hazy postulated to be a leak.

Results: The patient underwent a laparoscopic cholecystectomy with successful resection and evacuation of gall bladder fossa. Findings at surgery included perforation of gall bladder into liver along with a severely inflamed gall bladder. Pathology reported acute and chronic cholecystitis with fibrinous necrosis of blood vessels in gall bladder wall consistent with severe acute inflammation. There were no signs of malignancy on frozen section.

Conclusion: The coexistence of lupus and cholecystitis is rare and literature concerning this condition is sparse. This presentation is not a random coincidence but rather a progression of SLE resulting in a dangerous gall-bladder pathology. To date, this is the only case report in literature where SLE vasculitis resulted the direct compromise of the gall bladder wall. Current treatment options include cholecystectomy and corticosteroid administration. Additional studies searching for anti-phospholipid antibodies and abnormalities in phospholipid-dependent tests of coagulation would also be recommended as anti-phospholipid syndrome (APS) can result in other catastrophic organ failures. Finally, a follow up with rheumatology for further management of SLE would be appropriate and long term anticoagulation should also be considered at that time.

INTRA-HEPATIC LITHIASIS: A CASE REPORT AND REVIEW OF LITERATURE

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Purpose: Clinical Vignette
Methods: A 64 year old Hispanic male reported to the ER November 2007 complaining of abdominal pain in the upper bilateral quadrants for the past week. Symptoms also included jaundice, icterus, ascites, and pain in the right upper quadrant and epigastric areas. There was abdominal guarding or rebound tenderness. The remainder of the physical exam was unremarkable. Abnormal laboratory studies included elevated alkaline phosphatase, mildly elevated ALT/AST, and CA 19-9 greater than 10,000. AFP was within normal limits. Imaging studies performed included an abdominal ultrasound which revealed a mass-lesion in the liver. Biopsy of this lesion was non-contributory. Physical exam abnormalities included jaundice, icterus, ascites, and pain in the right upper quadrant and epigastric areas. There was abdominal guarding or rebound tenderness. The remainder of the physical exam was unremarkable.

Conclusion: Abnormal laboratory studies included elevated alkaline phosphatase, mildly elevated ALT/AST, and CA 19-9 greater than 10,000. AFP was within normal limits. The remainder of the laboratory values were within normal limits. Imaging studies done during the hospital course included an abdominal ultrasound, CT, MRC, ERCP, and liver biopsy. The results of the studies indicated cholangitis and cholecholedolithiasis with a questionable intra-hepatic obstructive process. No dilation was seen at the common bile duct. Brushings from the ERCP and percutaneous biopsy of the liver was negative for ductal carcinoma.

Results: Initial impressions included cholelithiasis and cholecholedolithiasis. However, when ERCP failed to reveal an acute pathology, cholangiocarcinoma was suspected and the patient was informed of his grim prognosis. Even though biopsies were negative for malignancy, the patient was recommended for palliative percutaneous transhepatic cholangiography (PTC) with no further surgical treatment. A second opinion was obtained and exploratory laparotomy revealed an unreatestable, hard mass at the liver hilum. A PTC was performed and brushings obtained were negative for malignancy. The working diagnosis was changed to intra-hepatic lithiasis. Surgery was performed to remove the stones under direct visualization via cholecystoscopy. A cholecholodenolytomy was also performed.

Conclusion: Intra-hepatic lithiasis is a rare western disease. However, it is commonly reported by doctors in China and Japan with literature published to date detailing evidence-based diagnosis and treatment. It is possible to prematurely doom patients to a grim diagnosis of cholangiocarcinoma. The implications in the approach to the patient in such cases are the importance of appropriate medical care and highlights the need and benefits of international cooperation in furthering medical knowledge.

A CASE OF MALIGNANT ABDOMINAL PAIN

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Purpose: A 19 yr old male was referred to our GI clinic for evaluation of abdominal pain. He initially presented 3 weeks ago for non-specific abdominal pain and constipation. He was prescribed some laxatives which helped him for a while but the abdominal pain recurred in 2 weeks at which time he had a CT scan done which was read as “acute appendicitis”. The patient went on to have multiple bouts of abdominal pain and he characterized it as 10/10 pain which was difuse, associated with nausea, vomiting and constipation. There were no specific triggers and relieved only by pain medications. He had no significant past medical history except hypertension and no family history. He had never smoked, did not drink alcohol and did not use any drugs.

Methods: His physical exam revealed a normal abdomen exam and some gynecomastia. He had bilateral lower extremity edema. Initial labs which included a CBC, Basic chemistry, LFTs, LDH,ESR and U/A were normal. His Beta HCG and AFP were normal.

Results: He had a CT abdomen done which showed a 2 x 3 cm mass between the right Psoas muscle and the right common iliac (Fig 1) and a 2 x 3 cm mass below the right renal vein (Fig 2) and. CT guided Biopsy revealed a mixed germ cell tumor. The primary was later on found to be in the Right scrotum. He underwent radical orchectomy and chemotherapy and is tumor free at 1 year follow up.

Conclusion: Chylous ascites in an uncommon phenomenon and the incidence of chylous ascites is 1 in 20,000 hospital admissions. The diagnosis is established when the concentration of triglycerides in the ascitic fluid is >200 mg/dl. The etiologies in adults can be broadly classified due to malignant and non malignant cause. The malignant causes include lymphomas and metastatic lesions from stomach, pancreas and ovarian cancer. In any young man with abdominal pain and ascites germ cell tumors must be kept in mind and a through scrotal exam must be performed.

Figure 1 & 2: CT abdomen with contrast

BLACK ESOPHAGUS

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Purpose: Introduction Black esophagus or esophageal necrosis is a rare condition diagnosed on endoscopy from dark pigmented appearance of the esophagus. Presentation 67 year old female presented with vomiting, diarrhea, epigastric pain, and melena. Vomiting has limited her oral intake leading to dehydration and 7 lb weight loss in one week. She had a history of hypertension, GERD and alcohol abuse. Examination showed BP of 90/60, pulse 98 with positive tilt testing. She had epigastric tenderness without guarding or rebound. She was nauseous and vomiting.

Methods: Diagnostic evaluation She had a hemoglobin of 9/dl. Basic metabolic panel and stool studies were unremarkable. LFTs revealed total bilirubin of 1.8 mg/dl, conjugated 1.2 mg/dl, unconjugated 0.1 mg/dl, albumin 2.0 g/dl, alkaline phosphatase 151U/L, ALT 34 U/L, AST 46 U/L, PT 16.3 seconds and INR 1.5. Abdominal sonogram revealed fatty infiltration of the liver. Hepatitis serologies and colonoscopy were unremarkable. Endoscopic appearance is shown in the figure. Histology revealed necrosis and inflammation with leukocyte infiltration. Results: She was rehydrated with fluids and was started on intravenous Pantoprazole. Sucralfate was added for cytoprotective effect with good symptomatic relief. Patient was gradually transitioned to regular diet.

Conclusion: Discussion The dramatic appearance of the esophagus on endoscopy results from circumferential black discoloration in the distal esophagus that ends at the gastroesophageal junction. Mucosal necrosis with inflammation on histology is the hallmark of diagnosis. Low flow state due to hemodynamic instability or ischemia is the main inciting factor. The condition is characterized by rapid resolution following hemodynamic stabilization. This case illustrates esophageal necrosis in a malnourished patient in the setting of acute hemodynamic stability from hypovolemic shock. The important complicating factor is poor nutritional status that can result in mucosal necrosis from compromised mucosal defense mechanism or impaired healing after insult either form acid or ischemia. This case supports previous literature that esophageal necrosis is not just a pure local phenomenon, but a manifestation of poor general condition and underlying co morbidities. Early recognition is important as this condition is potentially reversible.

Circumferential involvement of distal half of esophagus with white exudate and black pigmentation that ends at gastroesophageal junction

PANCREATIC BURKITT’S LYMPHOMA PRESENTING AS RECURRENT ACUTE PANCREATITIS IN AN HIV PATIENT. EARLY DIAGNOSIS USING EUS-FNA.

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Purpose: The incidence of pancreaticitis in patients with HIV is 35 to 800 times higher than in the general population. Lymphoma involving the pancreas is rare and constitutes only 0.16-
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TWO CASES OF GASTRIC SARCIOIDOSIS MANIFESTING AS SYMPTOMATIC ANEMIA: ENDOSCOPIC CLUES

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Results: Sarcoidosis is characterized by noncaseating granulomas found in any organ, most commonly the lung, lymph nodes, skin, liver, eyes, and bones. (1) The clinical course can vary from self-limiting to chronically incapacitating (1). Gastrointestinal tract involvement is rare. (9-11) and most patients with gastric sarcoidosis are asymptomatic (2-4). We report two unusual cases of symptomatic anemia resulting from previously undiagnosed gastric sarcoidosis. The first patient is a 22-year-old previously healthy African-American male who presented with progressive weakness and fatigue over the preceding seven months. He noted gradual weight loss and a history of episodic epigastric pain. Initial evaluation was notable for hemoglobin of 7.4 mg/dL. Further work-up revealed an iron deficiency anemia. Upper gastrointestinal endoscopy showed nodular, friable gastric mucosa with superficial ulceration and hyperemic thickened gastric folds. Endoscopic biopsies of the gastric mucosa revealed severe active noncaseating chronic granulomatous gastritis. Transbronchial lung biopsy showed noncaseating granulomatous inflammation of bronchial mucosa with no signs of infection. The patient denied any history of sarcoidosis. In a 46-year-old African American female with a history of presumed idiopathic granulomatous hepatitis who presented with abdominal pain, fatigue, anorexia, nausea, hematemesis, and melena. Her hemoglobin, which had previously been normal, had fallen to 9.7 mg/dL. Upper gastrointestinal endoscopy to investigate the bleeding showed erosive gastritis with hyperemic gastric folds with atypical appearing superficial one by two centimeter ulcers with adherent exudate. Biopsies of the ulcerated mucosa showed noncaseating granulomatous gastritis with areas of erosion. She improved dramatically with steroid therapy. In both cases other causes of granulomatous disease was ruled out. Sarcoidosis manifesting as symptomatic anemia is rare. In our cases the gastric sarcitis was severe and symptomatic and we strongly recommend further evaluation and treatment of the disease with typical endoscopic findings including hyperemic, thickened gastric folds and/or superficial ulcerations with histologic evidence of non-caseating granulomas on biopsy specimens. The prognosis of gastric sarcoidosis is typically favorable, with improvement of the endoscopic and histopathologic findings in response to treatment of the underlying disease.

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PSEUDODIVERTICULOSIS OF THE ESOPHAGUS AS A RESULT OF HIV-ASSOCIATED ULCERS

S. C. Chan, MD,1 P. Mantry, MD, Department of Gastroenterology, University of Rochester Medical Center, Rochester, NY.

Purpose: Esophageal intramural pseudodiverticulosis is characterized by multiple flask-shaped pouches related to anterior wall ulcers. The pouches may be small and may not be detectable endoscopically. However, they may be demonstrated by high-resolution esophageal ultrasonography (UES) and fine needle aspiration (FNA) of the pouch. We report a case of esophageal intramural pseudodiverticulosis as a result of HIV-associated esophageal ulcers.

Results: A 34-year-old man with HIV presented with several days of abdominal pain located in the epigastrium. The patient denied any nausea, vomiting, pain, or change in bowel movements. He had been admitted to the hospital with several episodes of hematemesis. His past medical history included HIV, alcohol abuse, and hepatitis. He was found to be noted for white blood cell count of 7.3 x 10^9/L, hemoglobin of 8.4 g/dL, amylase of 458 U/L, and lipase 1172 U/L. CT scan revealed an anterior wall ulceration, which was noted to be 25 mm in size. The patient was treated successfully with Diflucan. An upper endoscopy revealed the presence of multiple flask-shaped pouches, each measuring 3 x 4.5 cm in the esophageal head and diffuse hypochronic efficacy of body and tail suggestive of an infiltrative process or interstitial pancreatitis. FNA of the pancreatic mass showed acini with scattered large, atypical lymphocytes with cytoplasmic vacuoles suggestive of a lymphoproliferative process. Immunostains for CMV, HSV, EBV and fungi were negative. A gastric biopsy of the thickened mucosa showed diffuse infiltrate of large cells in the submucosa with no infiltration into the epithelial lining. The pathology was consistent with large B-cell non-Hodgkin lymphoma. FISH was positive for t(14;18)(q32;q21), which is diagnostic of Burkitt's lymphoma. The patient was discharged home on HAART therapy and did not return for follow-up.

Conclusion: We report an unusual scenario of recurrent acute pancreaticitis as an initial manifestation of Burkitt's lymphoma involving pancreas in an HIV patient. Clinicians need to maintain an increased index of suspicion for a lymphoproliferative process involving the pancreas in HIV patients with recurrent acute pancreaticitis. We propose FUS/FNA as a first line diagnostic modality for evaluating recurrent acute pancreaticitis in the HIV population. Delay in early accurate diagnosis may lead to high mortality.

P250

A RARE CASE OF APPENDICLE ENDOMETRIOIS

S. C. Chan, MD, J. P. Gutman, MD, A. Shah, MD, MACG, Department of Gastroenterology, University of Rochester Medical Center, Rochester, NY.

Purpose: Enteric duplication cysts are a common gastrointestinal disorder characterized by the presence of functional endometrial glands outside of the uterus. It is thought to occur through either retrograde menstruation into the peritoneal cavity or metatases through blood and lymphatic vessels. Various radiographic studies including CT scan, MR, transvaginal ultrasound, and rectal ultrasound have been used to detect peritoneal implants, but definitive diagnosis requires laparoscopy and biopsy. Endometriosis of the gastrointestinal tract most commonly involves the rectosigmoid colon due to its close proximity to the reproductive organs. Here we describe a rare case of endometriosis involving the appendix. The patient is a 56-year-old healthy woman with a history of prior hysterectomy and bilateral salpingo-oophorectomy for endometriosis who had to have a 1 cm polypoid mass at the ileocecal valve. Laparoscopy and biopsy revealed an endometriotic mass in the vermiform appendix. Histologically the appendix revealed an endometriotic lesion which was resected and the patient was discharged home without further intervention.

P251

PARVOVIRUS B19 ASSOCIATED HEPATITIS COMPLICATED BY APLASTIC ANEMIA

A. E. Buhain, MD, MS,1 J. Ahn, MD,1 N. Shah, MD,1 S. Inakura, MD,1 A. Howard, MD,1 S. M. Cohen, MD,2 T. Hepatology, Rush University Medical Center, Chicago, IL; 2. Pathology, Rush University Medical Center, Chicago, IL.

Purpose: Parvovirus B19 is a single-stranded DNA virus that affects mainly children. Hepatic manifestations of parvovirus B19 infection range from liver chemistry abnormalities to fulminant hepatic failure. We report a unique case of Parvovirus B19 associated hepatitis and aplastic anemia in an immunocompetent, adult patient.

Methods: A 44-year-old woman was seen with a history of hypertension presented with two weeks of fevers, headaches, and lethargy. She reported splenomegaly in both of her last two blood counts. Physical exam showed left upper quadrant tenderness, but no stigmata of chronic liver disease. Initial laboratory evaluation revealed AST 412 U/L, ALT 973 U/L, ALP 190 U/L, total bilirubin 3.4 mg/dL, WBC 1.206 x 10^4/mL, Hgb 8.7 g/dL, INR 1.5 and platelet count 7,000. The patient was admitted to the abdomen with a 19 x 10 mm area of decreased echogenicity suggestive of liver damage despite normal ultrasound. Serologies for viral hepatitis, HIV, CMV, EBV, Lyme disease, urinalysis and blood cultures were negative. Liver biopsy revealed macrovesicular steatosis with severe steatohepatitis which was associated with the liver damage seen on ultrasound. One hundred and fifty subjects met the inclusion criteria and agreed to participate in the study. One hundred subjects were randomized to have their procedure performed by one consultant and 50 by the NP. There were no differences in patient satisfaction or complication rates between the two groups. The study highlights the fact that specific treatment for esophageal intramural pseudodiverticulosis is not necessary, though these lesions have been described to disappear after empiric dilation.
Gastroenterology and Nutrition, Rush University Medical Center, Chicago, IL; 2. General Surgery, Rush University Medical Center, Chicago, IL.

Purpose: Enteric duplication cysts are rare congenital malformations that can occur anywhere from the mouth to the anus. Cystic duplications are endotheilium lined and share a common muscular wall and blood supply with the adjacent gastrointestinal tract. We present the unique case of a foregut derived duplication cyst presenting as abdominal pain and elevated inflammatory markers in an adult patient.

Methods: A 26 year-old Caucasian female presented to our gastroenterology clinic with 3 weeks of constant, non-radiating, epigastric abdominal pain. She denied weight change, naussea, emesis or dysphagia and had no past medical or surgical history. Medications only included lan- soprazole 30 mg daily started 2 weeks prior by her primary care physician which provided no relief. She had moderate tenderness to palpation in the epigastrium and an otherwise normal physical exam. Laboratory tests were significant for WBC of 11,300, CRP of 40.2 mg/L and gastrin level of 156 pg/mL. Upper endoscopy revealed mild antral erythema and biopsies were consistent with non-specific gastritis. An abdominal CT demonstrated a cystic structure anterior to the gastro-esophageal junction and posterior to the left hepatic lobe measuring 1.7 x 1.6 cm (Figure 1). The patient was then referred for exploratory laparoscopy which showed a smooth mass protruding through the gastrohepatic ligament. The mass was removed and grossly appeared to be a 2.7 x 2.5 x 1.5 cm cyst. The histology was consistent with a foregut derived duplication cyst of either bronchogenic or esophageal origin. Two weeks post-operatively her symptoms had resolved and laboratory values had normalized.

Results: This case is a unique presentation of a foregut derived duplication cyst presenting as epigastric abdominal pain and elevated inflammatory markers, suggesting that duplication cysts could be included in the differential diagnosis of abdominal pain.

Conclusion: As the potential complications of enteric duplications include gastrointestinal bleeding and rarely malignant transformation, the recognition of duplication cysts must lead to prompt surgical evaluation.

P254 SCREENING COLONOSCOPY PERFORMED BY GASTROENTEROLOGISTS AND A NURSE PRACTITIONER: A SINGLE CENTER EXPERIENCE

M. Limayong-Gonzalez, RN, MSN, ANP, A. Al-Jubari, MD, N. S. Mann, MD, D. H. Tseng, BS, L. Rousseau, MD. University of California, Davis, Folsom, CA.

Purpose: To compare accuracy, safety, and patient satisfaction in screening colonoscopy performed by board certified gastroenterologists (GI-MD) and a gastroenterology trained nurse practitioner (GI-NP).

Methods: From June 2007 through April 2008 a consecutive sample of 375 average risk subjects referred for screening colonoscopy were randomized to have their procedure performed by ei- ther a GI-MD or a GI-NP. Subjects completed a preprocedure questionnaire, and just prior to dismissal a postprocedure questionnaire. Endoscopists completed a postprocedure question- naire. Statistical analyses were performed using Fisher’s exact and Kruskal-Wallis tests. Statis- tical significance was defined as p<0.05 at a 95% confidence interval.

Results: One hundred and fifty five subjects met the inclusion criteria and agreed to participate in the study. One hundred subjects were randomized to have their procedure performed by one of two GI-MD’s and 50 were randomized to have their procedure performed by the GI-NP. There were no statistically significant differences among the groups for subject age, gender, race, and family history of bowel cancer. GI-MD’s performed more procedures on patients with a history of ulcerative colitis or inflammatory bowel disease, prior screening colonoscopy, or multiple personal and/or family members with colorectal cancer.

Conclusion: The GI-NP group had a diagnostic yield of 28% compared to 14% in the GI-MD group. Both groups had similar complication rates and the GI-NP group had a lower cost per case. This experience highlights the feasibility of nurse practitioners performing screening colonoscopy.

P255 THE IMPACT OF MUCOSAL HEALING ON THE ECONOMIC BURDEN OF CROHN’S DISEASE


Purpose: Mucosal healing (MH) has become an important endpoint for clinical trials as well as a treatment goal in daily clinical practice. In a recently published Norwegian cohort study,1 Crohn’s disease (CD) patients with MH one year after diagnosis displayed a strong trend towards fewer resections when compared to patients without MH. However, the effect of MH on health care resource utilization and costs of the disease is still unknown.

Methods: We investigated the association between MH and the use of health care resources in CD by adapting a published Markov model and simulating two cohorts of 1,000 patients over the course of 10 years. Transition probabilities from the CD Markov model were increased by 50%, (no-MH group) or decreased by 35% (MH group) from each health state into the intes- tinal bowel syndrome, prior nurse practitioner experience, prior colonoscopy experience, prepro- cedure anxiety level, or anticipated procedural pain. Cecal intubation rates, duration of proced- ure, sedative and analgesic use; and patient reported pain scores were also equivalent among the groups. The GI-NP group reported a statistically significant higher satisfaction score com- pared with the GI-MD groups combined (mean 5.9±1.3 and 8.6±1.611 respectively, p=0.042; VAS 0-100, 0=completely satisfied 100=completely dissatisfied). Additionally, the GI- NP group had more adenosin detected during the procedure when compared with the GI-MD groups combined (42% and 17% respectively, p=0.001). There were no complications reported.

Conclusion: The intensively trained GI-NP in our study performed screening colonoscopy as safely, accurately, and satisfactorily as the GI-NP’s. Using well trained NPs for screening colonoscopy can be an effective strategy to increase access. These findings warrant further study with other non-physician colonoscopists and sample populations.

Purpose: The purpose of this study was to evaluate the impact of mucosal healing on health care resource utilization and costs of Crohn’s disease patients. We evaluated the association between mucosal healing (MH) and use of health care resources in CD patients. We adapted a published Markov model and compared two cohorts of 1,000 patients over the course of 10 years.

Methods: We reviewed the literature and analyzed previously published values1,2,3 and discounted at 5% per year. We used previously published values1,2,3 and discounted at 5% per year to estimate the costs for each health state and the Markov model was used to calculate the transition probabilities between health states. We adapted the published Markov model and compared two cohorts of 1,000 patients over the course of 10 years. Transition probabilities from the CD Markov model were increased by 50% (no-MH group) or decreased by 35% (MH group) from each health state into each other health state. The primary outcome was the incremental cost per patient over the 10 years. Secondary outcomes included transition probabilities from the CD Markov model were increased by 50% (no-MH group) or decreased by 35% (MH group) from each health state into each other health state. The primary outcome was the incremental cost per patient over the 10 years. Secondary outcomes included quality-adjusted life years (QALY) and costs for increased use of medical therapy. We calculated the incremental cost per QALY from the perspective of the United States payer. We used previously published values1,2,3 and discounted at 5% per year to estimate the costs for each health state and the Markov model was used to calculate the transition probabilities between health states. We adapted the published Markov model and compared two cohorts of 1,000 patients over the course of 10 years. Transition probabilities from the CD Markov model were increased by 50% (no-MH group) or decreased by 35% (MH group) from each health state into each other health state. The primary outcome was the incremental cost per patient over the 10 years. Secondary outcomes included quality-adjusted life years (QALY) and costs for increased use of medical therapy. We calculated the incremental cost per QALY from the perspective of the United States payer.

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Purpose: Signet Ring Cell Carcinoma (SRCC) is a poorly differentiated mucin producing adenocarcinoma that can occur in any organ, with more than 90% arising in stomach, colon and breast. SRCC often presents at a late stage which can make identification of the primary site challenging. Recent immunohistochemical characterization of SRCC from the stomach and colon has found some differences in staining patterns between primary gastric and colon SRCC using stains specific for CDX2 and MUC2. CDX2 being a marker expressed in intestinal epithelium, and Mucins (MUC) produced by secretory epithelial cells. The purpose is to compare the immunohistochemical features of stomach and colon SRCC using MUC2, MUC6, and CDX2 stains, to the patient’s clinical stage.

Methods: The present report compared immunohistochemistry of gastric and colon SRCC. Immunohistochemistry was performed on formalin-fixed paraffin-embedded tissue specimens from patients with primary gastric or colon SRCC. This is in concordance with data reported by Kim et al., DDW 2007 that compared the immunohistochemical features of stomach and colon SRCC using MUC2, MUC6, and CDX2 stains, to the patient’s clinical stage.

Results: Among the 181 patients with a minimum of 8 infusions within the first year of receiving infliximab for Crohn’s disease (CD), 91% of patients required an infliximab dosage increase (either increased dose, increased frequency or both) at 1 and 2 years. Patients were censored at the end of the infusion period, and responses, were recorded. Treatment failure was defined as change in initial treatment due to lack of response or intolerance to the selected agent. Logistic regression models were used to evaluate the associations between diabetes and the outcome of interest. All models included age, gender, number of previous hospitalizations, and number of previous surgeries as covariates.

Conclusion: Nearly half of patients required an infliximab dosage increase (either increased dose or increased frequency) during their first year of maintenance therapy. Co-morbid irritable bowel syndrome was associated with a greater risk of dosage increase ( hazard ratio=2.4; p=0.046).

Conclusion: The objective of this analysis was to assess the clinical benefits to pts in CHARM who changed from ADA every 2 weeks to ADA every 4 weeks at open-label (OL) ADA every 4 weeks and then to OL weekly for protocol-defined flares or nonresponse. This analysis determined the percentages of pts who elected to switch to ADA every 2 weeks compared with pts who continued to receive ADA every 4 weeks at 1 and 2 years. The primary end point was the proportion of pts with disease progression during the study period. Pts were then randomized to ADA every 4 weeks, ADA every 2 weeks or placebo (P). At the end of the study period, the proportion of pts with disease progression was evaluated using a Cox proportional hazards model.

Conclusion: Nearly half of patients required an infliximab dosage increase (either increased dose or increased frequency) during their first year of maintenance therapy. Co-morbid irritable bowel syndrome was associated with a greater risk of dosage increase ( hazard ratio=2.4; p=0.046).
They were 80 (55.7%) 1 day and 63 (44.3%) 2 day patients. There was statistical superiority results: 

**Results:** The percentage of pts in remission was significantly greater for the ADA 40-mg cow and 40-mg weekly groups vs placebo at Weeks 26 and 56. At these same time points, clinical response rates were also significantly greater for the ADA groups vs placebo (table). ADA maintenance therapy also demonstrated a significant benefit in IBDQ total score compared with placebo at all points after the induction period (p<0.05).

**Conclusion:** For TNF-antagonist-naive pts with moderate to severe CD, both ADA cow and weekly therapies were significantly more efficacious than placebo in maintaining remission and response through 56 weeks. This research was funded by Abbott Laboratories, Abbott Park, IL.

**Clinical Remission and Response in TNF-Antagonist–Naïve Patients Receiving Adalimumab**

<table>
<thead>
<tr>
<th>Placebo (N=131)</th>
<th>ADA cow (N=112)</th>
<th>ADA Wky (N=130)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Week 26</strong></td>
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<td>50 (39.4%)</td>
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<td><strong>Week 56</strong></td>
<td>18 (13.7%)</td>
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<td><strong>CR-70</strong></td>
<td>36 (27.5%)</td>
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**Table 1**

<table>
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<tr>
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<tbody>
<tr>
<td>ALL % No</td>
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<tr>
<td>1 Day</td>
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**Bowel Prep Experience Would Stop Them From Having a Colonoscopy in the Future (p < .0061)**

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**Table 2**

**P260**

**Efficacy of Adalimumab for the Treatment of TNF-antagonist–Naïve Patients with Crohn’s Disease: Subanalysis of a Phase III Trial**

B. Hanauer, MD, F. Sandborn, MD, J. Rutgeerts, MD, J. Colombel, MD, J. Chao, PhD, F. Lamani, PhD, J. University of Chicago Medical Center, Chicago, IL; 2. Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN; 3. University Hospital of Gasthuisberg, Leuven, Belgium; 4. Centre Hospitalier Université de Lille, hôpitaux Claudio Harue, Leuven, France; 5. Abbott Laboratories, Abbott Park, IL.

**Purpose:** Adalimumab (ADA) is approved in the US for the treatment of moderate to severe CD in adults. The CHARM trial was a 56-week, phase III randomized controlled trial that assessed ADA in maintaining clinical remission in patients (pts) with moderate to severe CD.

**Methods:** We sought to evaluate the impact of ADA maintenance therapy on clinical efficacy for TNF-antagonist-naive pts in the CHARM trial. Pts received open-label induction therapy of 80 mg ADA at baseline (Week 0) and 40 mg at Week 2. At Week 4, pts were stratified by responder status and randomized to 40 mg ADA every other week (cow), 40 mg ADA weekly, or placebo. All TNF-antagonist-naive pts were included in the analysis regardless of Week 4 responder status. Efficacy outcomes included remission (CDAI≤150), CR-70 (a decrease of 70 points in CDAI from the baseline), and CR-100 (a decrease of 100 points in CDAI from the baseline), which were compared by chi-square analysis. ANCOVA was used to control for baseline and Week-4 responder status, and was used to compare the changes in percentage of IBDQ score from baseline at Week 26 and Week 56 between the ADA and placebo groups. Nonresponder imputation was used when IBDQ scores were missing or pts moved out of the double-blind treatment arm.

**Results:** The percentage of pts in remission was significantly greater for the ADA 40-mg cow and 40-mg weekly groups vs placebo at Weeks 26 and 56. At these same time points, clinical response rates were also significantly greater for the ADA groups vs placebo (table). ADA maintenance therapy also demonstrated a significant benefit in IBDQ total score compared with placebo at all points after the induction period (p<0.05).

**Conclusion:** For TNF-antagonist-naive pts with moderate to severe CD, both ADA cow and weekly therapies were significantly more efficacious than placebo in maintaining remission and response through 56 weeks. This research was funded by Abbott Laboratories, Abbott Park, IL.

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**Table 2**

**P262**

**Cumulative Incidence of Gastroparesis in People with Type 1 and 2 Diabetes in the General Population**

R. Choua, MD, G. Locke, MD, C. Schleck, BS, R. Zinzemetz, PhD, N. J. Talley, MD, PhD, 1. Division of Biostatistics, Mayo Clinic, Rochester, MN; 2. Enteric Neuroscience Program (ENSP), Division of Gastroenterology, Mayo Clinic, Rochester, MN.

**Purpose:** Diabetic (DM) gastroparesis is commonly diagnosed when patients with diabetes develop nausea or vomiting. However, the suggested high prevalence is based on referral practice estimates which are subject to major selection bias, population-based data on the true epidemiology of diabetic gastroparesis are lacking. Aim: To estimate the cumulative incidence and prevalence of gastroparesis among diabetics in a community.

**Methods:** In this population-based study, a cohort of all 269 Olmsted County, MN residents with type 1 DM, a random sample of 409 residents with type 2 DM, and 2 age- and sex-stratiﬁed random samples of 751 nondiabetic residents were identiﬁed (4 groups). The diabetic and control subjects meeting criteria for gastroparesis which is deﬁned as delayed gastric emptying by standard scintigraphy and/or symptoms of nausea (and/or vomiting) for more than 3 months with a physician diagnosis of gastroparesis were identiﬁed via review of medical charts. The cumulative incidence of type 1 diabetic gastroparesis was estimated via the Kaplan Meier method. Logistic regression models were used to evaluate the associations between diabetes and gastroparesis adjusting for age and gender.

**Results:** The cumulative incidence over 10 years of type 1 diabetic gastroparesis was 4.8%. The overall proportions of subjects meeting criteria for gastroparesis were 1.8% in type 2 DM, and 0.1% in controls. The age and gender adjusted odds ratios (relative to controls) for gastroparesis in type 1 diabetes was 38.1 (95%CI: 4.6-314) and in type 2 was 6.9 (95%CI: 0.8-62.8). Signiﬁcantly increased odds for gastroparesis in Type 1 DM was observed compared to Type 2 DM (OR=57.2, 95%CI: 1.4-220).

**Conclusion:** An increased risk for gastroparesis in Type 1 and possibly Type 2 DM was observed. However, gastroparesis occurs in fewer than 5% of people with Type 1 DM and only 1% of people with Type 2 DM in the community.
EVALUATION OF PROVIDER ADHERENCE TO CLINICAL GUIDELINES FOR GASTROINTESTINAL BLEEDING IN PATIENTS WITH ACUTE CORONARY SYNDROME

P265

RISK FACTORS FOR GASTROINTESTINAL BLEEDING IN PATIENTS WITH ACUTE CORONARY SYNDROME

T. Hash, MD, P. Chu, MD, X. Zhao, MD, H. Hsieh, PhD, J. Mircjandani, MD, K. Iwara, MD, FACCS, J. Shami, MD, FACCS, S. Tenner, MD, MPH, FACCS, Department of Gastroenterology, Division of Gastroenterology, Department of Internal Medicine, Maimonides Medical Center, Brooklyn, NY.

Purpose: The risk of developing acute gastrointestinal bleeding (aGB) is increased in patients presenting acute coronary syndrome (ACS), especially when anti-thrombotic drugs and/or aggressive percutaneous coronary intervention are utilized. In order to identify factors that would increase the risk of gIB in ACS patients, we conducted the following prospective study.

Methods: Patients with acute coronary syndrome (ACS) were consecutively evaluated. Admission demographics, including underlying ACS, medications, interventions, and outcomes were collected in-hospital and analyzed after discharge. ACS patients with and without GI bleeding complicating the hospitalization were studied by regression analysis and ANOVA to determine independent predictors of outcome.

Results: Sixty-five acute coronary syndrome patients were enrolled, mean age 71.2 ± 14.7 years. 35.5% developed significant GI during the hospitalization. When ACS patients with GI bleeding were compared to ACS patients who did not develop GI bleeding, these patients were found to be significantly older, more likely to have an occult positive stool on admission, lower diastolic blood pressure, lower hemoglobin and hematocrit on admission (p < 0.05). Although there were no significant differences for patients using aspirin, Plavix and coumadin, patients who developed GI bleeding were more likely to have received IBH/IIA inhibitors. Although there was a slight difference in the number of patients who underwent cardiac catheterization, there were no significant differences in procedure time observed between these two groups.

Conclusion: We conclude that patients with acute coronary syndromes who are found to have older age, occult positive stool on admission, lower diastolic pressure, and anemia are at an increased risk of the development of GIB. The length of time of cardiac catheterization is not a factor. Close monitoring of these patients may help reduce complications from gastrointestinal bleeding in patients with acute coronary syndrome. (ClinicalTrials.gov number NCT04019089)

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THE ACCESS TRIAL: ADALIMUMAB IMPROVES WORK PRODUCTIVITY IN PATIENTS WITH CROHN’S DISEASE

E. V. Lefelis, MD, D. G. Binion, MD, R. Panaccione, MD, J. Li, PhD, K. McHugh, PhD, B. Guerrier, PhD, J. Zhao, PhD, P. Molina, PhD, Division of Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Rochester, MN; 2. Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI; 3. Medicine, University of Calgary, Calgary, AB; 4. Abbott Laboratories, Parsippany, NJ; 3. Abbott Laboratories, Montreal, QC; 6. Abbott Laboratories, Abbott Park, IL.

Purpose: Adalimumab (ADA) is approved in the US and Canada for the treatment of adults with moderate to severe Crohn’s disease (CD). The Work Productivity and Activity Impairment (WPAI) questionnaire is a self-administered questionnaire assessing the impact of disease on productivity. ACCESS was a Canadian-based, multicenter, open-label trial of 304 patients (pts) with moderately or severely active CD.

Methods: The impact of ADA therapy on WPAI scores for pts in the ACCESS trial. Pts received induction therapy of 160/80 mg ADA at baseline (Week [Wk] 0) and Wk 2, followed by 40 mg every other wk (eow) maintenance dosing. If flare/non-response (as determined by % change in CDAI) occurred while on maintenance dosing, pts were transitioned to intravenous 40 mg weekly dosing Wk 8. The WPAI tool, as adapted for C.D, measures the percentage of overall impairment in work productivity (including absenteeism and presenteeism) and daily activity due to CD (0%–100% impairment; 100% = total loss of work productivity/activity). A 7% absolute change in WPAI score is the minimum clinically important difference (MCID). WPAI scores were recorded at baseline and Wk 8, 12, and 24. Changes from baseline were assessed with paired t-tests.

Results: Mean age of pts was 37 years (female, 57%). Mean baseline daily activity impairment was 63% (n=285). Among employed pts, total work productivity impairment score was 55.6% (n=285), indicating severe impairment. 64% were employed at baseline; of these, 76% visited 69 were employed, a 5% absolute increase from the baseline. Mean changes in WPAI components
are shown below (Table). For all outcomes, a large improvement in productivity (3-4 times MCID) was observed at Wk 4 and maintained throughout the study.

Conclusion: ADA therapy significantly improved work productivity for patients with moderately to severely active CD. Further study is needed to confirm the observed trend of increased employment among pts treated with ADA. This research was funded by Abbott Laboratories, Abbott Park, IL.

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ADALIMUMAB TREATMENT SIGNIFICANTLY REDUCES HOSPITALIZATION RISK FOR TNF-ANTAGONIST–NAÏVE PATIENTS WITH CROHN'S DISEASE

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Purpose: Adalimumab (ADA), a fully human monoclonal antibody targeting tumor necrosis factor (TNF), is approved for treatment of adults with moderate to severe Crohn's disease (CD). CHARM was a Phase III trial in which approximately half of patients enrollees were naïve to TNF-antagonist therapy.

Methods: All patients in CHARM received an open-label induction regimen of ADA 80 mg at baseline, followed by ADA 40 mg at Wk 2. At Wk 4, patients were stratified by response (a decrease of ≥20% from baseline CDAI score) and randomized to a maintenance regimen (40 mg of ADA EOW or weekly) or placebo. This post-hoc analysis evaluated the risk of all-cause and CD-related hospitalizations for TNF-antagonist-naïve patients (placebo, n=131; ADA, n=257). This analysis included both Week-4 responders and nonresponders. Pooling the 2 ADA groups, we conducted a Kaplan-Meier analysis of the risks of all-cause and CD-related hospitalizations. Hospitalizations were identified from review of adverse events, and time to all-cause and CD-related hospitalization was measured from randomization. Data were censored at 70 days after the last dose in CHARM or if patients switched to open-label therapy or were lost to follow-up. The log-rank test was used to compare the hazards model with duration of disease and age as covariates, used to compare differences in hospitalization risk between placebo and ADA.

Results: CD-related hospitalization rates in the combined ADA maintenance group and placebo were 1.7% and 7.9% at Month 3; 5.2% and 11.3% at Month 6; and 6.8% and 13.7% at Month 12, respectively. For all-cause hospitalization, 3-month rates were 3.6% and 10.4%; 6-month rates were 8.3% and 12.7%; and 12-month rates were 12.7% and 20.3% for ADA and placebo, respectively. The log-rank test demonstrated significant differences in both CD-related and all-cause hospitalizations for the combined ADA maintenance group vs placebo (p=0.01 and p<0.02, respectively). In the Cox model, ADA treatment reduced both CD-related and all-cause hospitalization rates (HR=0.34 and 0.44, respectively; both p<0.01). Disease duration was associated with an increase in all-cause hospitalization (p=0.05). Among pts with a CD duration <3 years, the 12-month K-M rates for CD-related hospitalization were 3.2% for the ADA group vs 11.8% for the placebo group. In contrast, for patients with a CD duration ≥3 years, the corresponding rates were 7.9% for the ADA group vs 14.8% for the placebo group.

Conclusion: For TNF-antagonist-naïve patients with CD, ADA maintenance therapy significantly decreased the risk of CD-related and all-cause hospitalizations compared with placebo. This research was funded by Abbott Laboratories, Abbott Park, IL.

Disclosure - Dr. Loftus - Consulting fees: Abbott, Research support: Abbott; Dr. Feagan - Consulting fees: Abbott, Research support: Abbott, Dr. Colombel - Consulting fees: Abbott, Research support: Abbott; Dr. Wu - Employee: Abbott, Research support: Abbott; Dr. Malani - Employee: Abbott. This research was supported by an industry grant from Abbott.

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META-ANALYSIS OF PLACEBO REMISSION RATE FOR PATIENTS WITH MODERATELY TO SEVERELY ACTIVE CROHN'S DISEASE

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Purpose: In consideration of the effectiveness of biologic therapies (eg, tumor necrosis factor antagonists) in treating patients with moderate to severe Crohn's disease (CD), a systematic review of rates of remission achieved with placebo in biologic-eligible patients may be of interest to treating physicians.

Methods: We sought to examine the impact of placebo on remission in biologic-eligible patients with moderately to severely active CD using data from placebo arms of the trials of biologic therapies. A systematic literature review of MEDLINE articles published between January 1990 and August 2007 was used to identify randomized controlled trials that included placebo arms comprising patients who exclusively received placebo for CD. Remission status was extracted from the trials. Time in remission was summarized across placebo arms of biologic trials that included patients with similar severities of disease. In addition, meta-regression for placebo remission rates was built up at biologic progressively. Remission status was considered as indicator for biologic trials as covariates. The remission rate for the placebo arm of the biologic trials was predicted using the meta-regression model.

Results: In total, 47 biologic and nonbiologic study arms with relevant remission data were included in this analysis. Of the 47 arms, 21 distinct treatment arms were identified as placebo arms of the biologic trials, which included a total of 1,257 patients with similar severities of disease. These patients had CD duration for an average of 7.2 years and a CDAI of 296 at baseline. Weighted by sample size and duration of the trial, results demonstrated that patients receiving placebo spent 14.6% of the time in remission. Based on two regression methods, we projected placebo remission rates of 11.5% to 13.8% for patients with moderate to severe CD.

Conclusion: The placebo remission rate for patients with moderately to severely active CD eligible for biologic treatment was generally low. Physicians should be aware of the low placebo remission rate for patients with moderate to severe CD despite conventional treatments. This research was funded by Abbott Laboratories, Abbott Park, IL.

Disclosure - Dr. Loftus - Consulting fees: Abbott, Research support: Abbott; Dr. Wu - Employee: Abbott, Research support: Abbott; Dr. Johnson - Employee: Abbott, Research support: Abbott; Dr. Chao - Employee: Abbott; Dr. Malani - Employee: Abbott. This research was supported by an industry grant from Abbott.
A PROSPECTIVE EVALUATION OF SAME DAY BIDIRECTIONAL ENDOSCOPY FOR OCULUS BLEEDING

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Purpose: Diagnostic colonoscopy is recommended in a patient found to have positive fecal occult blood test (FOBT) during screening for colorectal cancer, as a standard of care. Almost half of these patients will have no explanation for the source of occult GI bleeding after colonoscopy. Currently there are no clear recommendations for further endoscopic evaluations in such patients, if they have no evidence of iron deficiency anemia. We sought to determine if any clinical or laboratory data can predict the presence of significant Upper gastrointestinal (UGI) ulcer disease, with non-diagnostic colonoscopy.

Methods: During a period of 12 months, we prospectively enrolled patients over 50 years of age with positive FOBT. Patients with documented iron-deficiency anemia, over GIT bleeding, abnormal luminal imaging within the last year, prior upper endoscopy (EGD) or colonoscopy were excluded from the study. We collected data on patient characteristics including age, ethnicity, anti-platelet use or Coumadin use, prior history of upper or lower gastrointestinal bleed, family history of cancer and iron profile. Gastrointestinal symptoms were documented at enrolment and after any management changes after significant EGD finding (esophagitis, gastritis, duodenitis, gastritis or duodenal ulcer, gastric or duodenal polyps and malignancy).

Results: A total of 45 patients were enrolled (mean age 61 years, 93% males, 28% Caucasian, 29/45 (64%) were on NSAIDs/ASA and 12/45 (27%) had UGI symptoms. None of the patients have iron deficiency anemia. Bidirectional endoscopy was unable to detect the source of occult bleeding in 10/45 patients (22.2%). EGD detected significant UGI findings in 28/45 patients. Twenty six UGI lesions were found in 17/27 (63%) patients with a negative colonoscopy and 20 UGI lesions in 11/18 (61%) patients with a positive colonoscopy. Forty two percent of patients with positive UGI findings were on NSAIDs/ASA. The most common UGI findings were gastritis (33%), gastric ulcer (16%) and duodenitis (13%). Gastric lymphoma was detected in one patient. EGD resulted in change of management in 23 patients (51%).

Conclusion: The presence of UGI findings in patients with positive fecal occult blood test regardless of their colonoscopy findings. UGI symptoms were not predictive of EGD findings. We recommend performing diagnostic EGD to patients with positive FOBT routinely along with colonoscopy. However, further larger studies are required.

P271 ADENOMA DETECTION RATE, PAY-FOR-PERFORMANCE, AND COLONOSCOPY ARE FEMALE GASTROENTEROLOGISTS AT A DISADVANTAGE

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Purpose: There is an increasing drive to grade physicians on their clinical outcomes (“pay-for-performance”). For colonoscopy the marker of quality is adenoma detection rate, given recent increases in such patients, if they have no evidence of iron deficiency anemia. We sought to determine if any clinical or laboratory data can predict the presence of significant Upper gastrointestinal (UGI) ulcer disease, with non-diagnostic colonoscopy.

Methods: During a period of 12 months, we prospectively enrolled patients over 50 years of age with positive FOBT. Patients with documented iron-deficiency anemia, over GIT bleeding, abnormal luminal imaging within the last year, prior upper endoscopy (EGD) or colonoscopy were excluded from the study. We collected data on patient characteristics including age, ethnicity, anti-platelet use or Coumadin use, prior history of upper or lower gastrointestinal bleed, family history of cancer and iron profile. Gastrointestinal symptoms were documented at enrolment and after any management changes after significant EGD finding (esophagitis, gastritis, duodenitis, gastritis or duodenal ulcer, gastric or duodenal polyps and malignancy).

Results: A total of 45 patients were enrolled (mean age 61 years, 93% males, 28% Caucasian, 29/45 (64%) were on NSAIDs/ASA and 12/45 (27%) had UGI symptoms. None of the patients have iron deficiency anemia. Bidirectional endoscopy was unable to detect the source of occult bleeding in 10/45 patients (22.2%). EGD detected significant UGI findings in 28/45 patients. Twenty six UGI lesions were found in 17/27 (63%) patients with a negative colonoscopy and 20 UGI lesions in 11/18 (61%) patients with a positive colonoscopy. Forty two percent of patients with positive UGI findings were on NSAIDs/ASA. The most common UGI findings were gastritis (33%), gastric ulcer (16%) and duodenitis (13%). Gastric lymphoma was detected in one patient. EGD resulted in change of management in 23 patients (51%).

Conclusion: The presence of UGI findings in patients with positive fecal occult blood test regardless of their colonoscopy findings. UGI symptoms were not predictive of EGD findings. We recommend performing diagnostic EGD to patients with positive FOBT routinely along with colonoscopy. However, further larger studies are required.

P273 PPD TESTING IN PATIENTS STARTING INFliximAB FOR TREATMENT OF INFILAMMATORY BOWEL DISEASE

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Purpose: To design a test screening for latent tuberculosis is recommended for IB patients prior to initiation of infliximab therapy. To date, despite increasing use of infliximab in the manage- ment, the rate at which these patients are being screened for latent tuberculosis infec- tion remains unknown.

Methods: A retrospective analysis was conducted using medical and pharmacal claims from the D2Hawkeye, Inc, commercial insurance database between 2000 and 2007. Patients in- cluded in the analysis had 2 separate medical claims for Crohn’s Disease (CD; 555.x) or ulcerative colitis (UC; 556.x), at least one year of continuous enrollment, and a new pharmaceutical claim for infliximab therapy (based on a 6 month look-back period). The primary outcome ex- amined for each eligible patient was the presence of a CPT code (86586) for PPD placement prior to initiation of infliximab. Descriptive statistics on patient characteristics (age, gender), prior use of corticosteroids or immunomodulator therapy (azathioprine, 6-MP), number of healthcare encounters (time adjusted), and Charlson Comorbidity Index were calculated. Categorical and continuous variables were compared using the chi-square and t-tests were used for comparison. Differences in the variables between the PPD tested and non-PPD tested cohorts.

Results: A total of 909 patients with IB were newly treated with infliximab. 62% had medical claims for CD and 9% had medical claims for UC. and 29% had medical claims for both CD and UC. 48% of new users of infliximab were male and 52% were female. PPD testing prior to start of infliximab was completed in 27% of IB patients. The mean age at start of infliximab was 40 years and was similar in patients who did and did not receive a PPD (40.5 vs 39.9, p<0.05). PPD testing was not more likely if a patient was on corticosteroids (p=0.05) or immunomodulator therapy (p=0.05). There was no significant difference (p=0.05) in the mean number of outpa- tient clinic encounters, mean number of hospital admissions, or mean Charlson Comorbidity Index between patients who did and did not have PPD testing.

Conclusion: Although it has been established that treatment with infliximab can result in acti- vation of latent TB, this retrospective view suggests that a majority of patients in this “real- world” dataset have not been adequately screened. In not meeting this standard process of care, patients may be at risk for adverse outcomes. In addition, PPD testing prior to starting infliximab should be considered as a quality of care and standard of care with IB. Further analyses are needed to confirm and explore determinants of PPD testing.

Disclosure - Dr. Sanya Singh, MD - Senior Vice President, Clinical Operations, 2D Hawkeye, Inc; Dr. Sanjay Ghumere, MD - Assistant Medical Director, 2D Hawkeye, Inc.

P274 ADALIMUMAB MAINTENANCE THERAPY IS COST EFFECTIVE FOR MAINTEINING REMISSION IN PATIENTS WITH CROHN'S DISEASE

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Purpose: The continued prominence of the use of home remedies and an apparent reluc- tance to seek medical treatment indicate that, although the awareness of GED and its symp- toms may have increased in the past 3 years in the Hispanic community, treatment-related be- haviors have not changed proportionally. Continued educational program designed for the Hispanic population with regard to seeking care for GED are warranted.

Disclosure - Dr. Iluaca - employee of AstraZeneca LP; Dr. Crawley - employee of AstraZeneca LP

This research was supported by an industry grant from Supported by AstraZeneca LP.
Irritable Bowel Syndrome Plus Constipation

This research was supported by an industry grant from Abbott.

Dr. Mulani - Employee: Abbott; Dr. Chao - Employee: Abbott; Colombel - Consulting fees: Abbott, Research support: Abbott; Dr. Lomax - Employee: Abbott; Dr. Mulani - Employee: Abbott; Dr. Chao - Employee: Abbott.

This research was supported by an industry grant from Abbott.

P275

Annual Direct and Indirect Cost of Illness in Employees with Irritable Bowel Syndrome Plus Constipation

Abbott Park, IL.


This research was supported by an industry grant from Abbott.

Results: Data were available for 296,154 employees. IBS+C employees compared to Controls were more frequently (P<0.05) female (80.2% vs. 42.0%), not married (51.8% vs. 43.8%), and employed full time (95.5% vs. 88.6%). All annual cost outcomes comparisons (Table) were statistically greater in the IBS+C cohort (P<0.05). IBS+C was associated with an annual mean incremental direct cost versus controls totaling $5,590 medical costs accounted for 80% of the direct cost difference and prescription drug costs 20%. IBS+C was also associated with $702 incremental indirect costs. IBS+C contributed 1.89 incremental sick leave days (P<0.05) but differences in STD days were not significant.

Conclusion: IBS+C is associated with significant cost and absenteeism; in this study, the major category of total incremental costs was direct medical.


P277

Estimation of Induction and Maintenance Costs of Infliximab, Adalimumab and Certolizumab Pegol in Managing Crohn’s Disease

Method: A retrospective analysis was conducted using the Human Capital Management Services Research database, which contains employee data from 2001-2005 sourced from multiple US-based employers. Data fields included medical, pharmacy, payroll, work absence (where available) and disability (where available). The IBS+C cohort consisted of employees identified with ICD-9 Codes 564.0 (Constipation), 564.00 (Unspecified), 564.01 (Slow Transit), or 564.09 (Other) co-occurring with 554.1 (IBS) in the same year. Employees with no claims for these codes comprised the Control cohort. The annual measurement period for each IBS+C subject began 3 months prior to the first date of service associated with IBS+C or Controls. For controls, the index date was the average index date of subjects with IBS+C. Two-part regression modeling was used to determine the annual cost differences between IBS+C and Control cohorts while controlling for age, job tenure, gender, salary, region, and Charlson Comorbidity Index score. Direct (inpatient and outpatient visits, prescription drug) and indirect (sick leave, and short-term disability [STD]) costs were analyzed.

Results: Data were available for 296,154 employees. IBS+C employees compared to Controls were more frequently (P<0.05) female (80.2% vs. 42.0%), not married (51.8% vs. 43.8%), and employed full time (95.5% vs. 88.6%). All annual cost outcomes comparisons (Table) were statistically greater in the IBS+C cohort (P<0.05). IBS+C was associated with an annual mean incremental direct cost versus controls totaling $5,590 medical costs accounted for 80% of the direct cost difference and prescription drug costs 20%. IBS+C was also associated with $702 incremental indirect costs. IBS+C contributed 1.89 incremental sick leave days (P<0.05) but differences in STD days were not significant.

Conclusion: IBS+C is associated with significant cost and absenteeism; in this study, the major category of total incremental costs was direct medical.

Category | IBS+C | Controls | Difference
--- | --- | --- | ---
N | Adjusted Mean | N | Adjusted Mean | In Means | P-Value
Direct:
Medical ($) | 2/3 | $1,623 | 295,911 | $1,758 | $2,865 | <0.0001
Prescription Drug ($) | 2/3 | $1,190 | 295,911 | $465 | $725 | <0.0001
Indirect:
Sick Leave ($) | 108 | $669 | 143,287 | $335 | $313 | <0.0001
Short-term Disability ($) | 140 | $677 | 149,066 | $288 | $389 | 0.0417
Sick Leave (Days) | 108 | 4.20 | 143,287 | 2.31 | 1.89 | <0.0001
Short-term Disability (Days) | 140 | 5.64 | 149,066 | 2.78 | 2.86 | 0.0691


P276

Adalimumab Maintenance Therapy is Cost Effective for Maintaining Remission in Patients with Crohn’s Disease


Purpose: To estimate the induction and maintenance costs of infliximab, adalimumab and certolizumab pegol for a patient with Crohn’s disease weighing 65 kg. To conduct a cohort budget analysis for TNFα blockers in managing Crohn’s disease.

Methods: A simple cost analysis was conducted using recommended induction and maintenance dosing regimens for each agent over a 2-year time horizon. Average wholesale prices (AWP) of $754.50 for infliximab 100 mg (Remicade®), $865.58 for adalimumab 40 mg (Humira®) and $822.30 for certolizumab pegol 200 mg (Cimzia®) were used in the estimations. It was assumed that the response and remission rates were the same for each agent at 60% and 40% respectively. Maintenance therapy was followed if responding to initial therapy and continued in year 2 for remitters. Per patient drug acquisition costs were estimated based on the AWP and recommended regimen of each agent. Cost for each infusion was assumed to be $50. A cohort analysis was performed for a healthcare plan of 5,000,000 members with prevalence and incidence rate of Crohn’s disease of 162 per 100,000 and 9.6 per 100,000 respectively. It was assumed that 20% and 25% of the patient population received therapy with a TNFα blocker in year 1 and year 2 respectively.

Results: The estimated induction cost was approximately $9,504, $5,193 and $4,934 per patient for infliximab, adalimumab and certolizumab pegol, respectively. With maintenance therapy, the 2-year expected total cost was approximately $47,520, $48,472 and $44,044 for infliximab, adalimumab and certolizumab pegol, respectively. In cohort analysis, with uptakes of 60%, 30% and 10% in year 1 and 50%, 30% and 20% in year 2 for infliximab, adalimumab and certolizumab pegol, respectively, a total budget of $76,766,506 was estimated. In a scenario without access to certolizumab pegol, the estimated total budget was $78,307,778.

Conclusion: This study suggests that, based on the standard regimens for each of the TNFα blockers, the 2-year disease course of Crohn’s disease, certolizumab pegol therapy may be less costly than infliximab or adalimumab. However these estimates are likely highly sensitive to the rates and costs of dose intensification, which were not taken into account in the model.

Disclosure - Dr. Feagan - Consultant, grants, advisory committee; Tan - UCB employee; Malone - Consultant, Hinojosa - Advisory committee.

This research was supported by an industry grant from UCB.

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MAGNITUDE AND ECONOMIC IMPACT OF INAPPROPRIATE USE OF PROTON PUMP INHIBITORS FOR TREATMENT OF UPPER GASTROINTESTINAL DISORDERS IN THE AMBULATORY CARE SETTING


Purpose: Proton pump inhibitors (PPIs) are the most commonly prescribed anti-secretory therapy for the treatment of upper gastrointestinal (UGI) disorders. Many patients prescribed PPIs in the ambulatory care setting do not have a valid indication, or are left on PPIs indefinitely without documented re-evaluation to determine appropriateness of continued therapy. Our aim was to determine the prevalence and economic impact of inappropriate PPI utilization in an ambulatory setting.

Methods: A retrospective chart review of 946 consecutive adult patients in a VA hospital ambulatory care practice who were receiving PPI therapy was conducted. Patients were categorized according to appropriateness of pharmacotherapy based upon documented UGI diagnoses (e.g. gastroesophageal reflux disease, peptic ulcer disease, esophagitis, Barrett’s esophagus), gastrointestinal or extragastric eosinophilic symptoms (e.g. dyspepsia, chest pain, cough, hoarseness or gastrointestinal reflux disease (e.g. patients on coumadin or non-steroidal anti-inflammatory drugs). Costs were based on 2 settings: lowest-over-the-counter (OTC) costs for the base case and average wholesale price (AWP) in a sensitivity analysis. Adverse events potentially associated with PPI use were identified.

Results: 35.2% of patients were prescribed PPI therapy for a documented UGI diagnosis while 13.1% received PPIs empirically for symptoms, 18.9% received PPIs for gastrointestinal and the remaining 38.8% had no documented appropriate indication for PPI therapy. 60.9% of patients across all four categories received PPIs for over one year without documentation of re-evaluation, accounting for 643.6 patient-years of PPI use without appropriate documented indication. The estimated cost of empirically prescribed PPI use was $140,654 based on OTC costs and $579,893 based on AWP costs. Adverse events included Clostridium difficile colitis (6 cases) and community-acquired pneumonia (1 case), but no cases of hip fracture or vitamin B12 deficiency were identified.

Conclusion: PPIs are often overutilized in the ambulatory care setting without documented valid indications. The majority of patients for whom PPIs are prescribed are not re-assessed to confirm necessity for ongoing maintenance dosing. Inappropriate use of PPIs is associated with substantial cost expenditure and potential adverse events.

Disclosure - Dr. Inadomi - Consultant: TAP, AstraZeneca, Santarus

P279

ONCE-DAILY 1.5-G GRANULATED MESALAMINE IS EFFECTIVE AND SAFE IN MAINTENANCE OF REMISSION IN MILD-TO-MODERATE ULCERATIVE COLITIS


Purpose: Maintenance of ulcerative colitis (UC) remission is an important goal of therapy, and treatments with favorable efficacy and safety profiles over the long term are needed. Granulated mesalamine, a unique formulation that provides both delayed and extended release of 5-aminosalicylic acid (5-ASA) for once-daily (qd) dosing, initiates 5-ASA release in the terminal ileum and colon to treat UC.

Methods: Approximately 300 patients in documented UC remission (as defined by the revised Sutherland Disease Activity Index [DAI] subscores: rectal bleeding = 0; mucosal appearance <2) entered a 26-week, double-blind, placebo-controlled, maintenance dose trial with granulated mesalamine (1.5-g qd) and matching placebo capsules qd for 6 months. The primary efficacy endpoint was the proportion of patients who received granulated mesalamine experienced an AE of UC flare compared with 27% of patients in the placebo treatment groups. The most frequent AEs reported were headache, nausea, nasopharyngitis, abdominal pain, exacerbation of ulcerative colitis, diarrhea, and dyspepsia. The AE experience was similar across subgroups examined, including age, sex, race, and baseline disease state (mildly active versus moderately active ulcerative colitis). The majority of AEs were assessed by investigators as mild or moderate in severity and did not result in discontinuation of treatment. Adverse events were reported in 53% of patients in the granulated mesalamine group and 48% of patients in the placebo group (P=0.005). Patients in the granulated mesalamine group had a higher probability of remaining relapse-free (77%; 95% confidence interval [CI], 0.71-0.83) compared with patients in the placebo group (56%; 95% CI 0.46-0.67; P=0.001) at month 6 end of treatment. Most AEs were mild or moderate in intensity, and the percentage of patients who experienced an AE was identical in the 2 treatment groups (64%). Notably, 11% of patients who received granulated mesalamine experienced an AE of UC flare compared with 27% of patients in the placebo group, further demonstrating the effectiveness of granulated mesalamine in maintaining remission.

Conclusion: A once-daily dose of 1.5-g granulated mesalamine is effective and safe for the maintenance of remission of UC. A larger proportion of patients in the granulated mesalamine group was relapse-free (79%) compared with placebo (58%) at month 6 end of treatment (P=0.001). These results were further supported by the larger proportion of patients with a clinically favorable change from baseline in physician-rated disease activity at month 6 end of treatment in the granulated mesalamine group (78%) compared with placebo (64%; P=0.005). Patients in the granulated mesalamine group had a higher probability of remaining relapse-free (77%; 95% confidence interval [CI], 0.71-0.83) compared with patients in the placebo group (56%; 95% CI 0.46-0.67; P=0.001) at month 6 end of treatment. Most AEs were mild or moderate in intensity, and the percentage of patients who experienced an AE was identical in the 2 treatment groups (64%). Notably, 11% of patients who received granulated mesalamine experienced an AE of UC flare compared with 27% of patients in the placebo group, further demonstrating the effectiveness of granulated mesalamine in maintaining remission.


P280

THE LONG-TERM, 30 MONTHS, EFFICACY AND TOLERABILITY OF CERTOLIZUMAB PEGOLO THERAPY FOR CROHN’S DISEASE IN ADULTS

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Purpose: To evaluate the efficacy, tolerability and safety outcomes of 2.5 years of scheduled 40-mg certolizumab pegol (CZP) therapy in pts with active Crohn’s disease.

Methods: Pts who had completed a 26-week double-blind, placebo-controlled, mainte- nance trial of CZP 400 mg q 4 week (PRECiSE 2 [P2]) were eligible for entry into an open-label extension study (PRECiSE 3 [P3]). In P2, 428/668 (64.1%) pts had a clinical response (de- crease in CDAI score ≥100 points) at Week 6 following CZP 400mg open-label induction therapy (Weeks 6, 0 and 4). Of these, 215 randomized to CZP 400mg and 210 randomized to placebo (PBO) q 4 week (Week 8-24) constituted the ITT population. Who pts had re- sented to entering P3 received CZP 400mg q 4 week. Efficacy was assessed by the Harvey Bradshaw Index (HBI) where remission was defined as a HBI score ≤4. Pts lost to follow-up, withdrawn or given rescue medication were treated as non-responders/terminators from that point onwards. Adverse events (AEs) were monitored and laboratory assessments and physical examinations were performed.

Results: One hundred forty-one patients who had received CZP in P2 entered into P3 and 73% of these (103/141) were in remission at the start of P3 (HBI score ≤4). After 12, 18, 24 and 30 months of continued CZP treatment the remission rates were 62.4% (n=88), 55.3% (n=76), 46.0% (n=70) and 39.7% (n=56), respectively. The percentage of pts who completed as sessments and remission was stable throughout the study (74.1% [103/139] at 6- (start of P3) 73.3% [n=88/120] at 12-, 81.3% [n=78/96] at 18-, 83.3% [n=70/84] at 24- and 77.8% (n=66/84) at 30-months. Remission rates were mild or moderate in severity. Gastrointes- tinal disorders and infections were the most frequently reported AEs There were no re- ported cases of injection site pain. In P3, there were 4 (n=136), 5 (n=136), 19 (n=131), 6 (n=111) and 1 (n=93) serious AEs in the following study periods respectively: 0 to e months, <10 to e months, >10 to 12 months, >12 to 18 months, and >18 to 24 months.

Conclusion: Sustainable efficacy (defined as remission) between 6 and 30 months was observed for nearly 3 years. Maintenance treatment does with favorable efficacy and safety profiles over the long term are needed. Granu- lated mesalamine 1.5 g q.d. was more effective than placebo in main- taining remission in pts with active Crohn’s disease.

Disclosure - Dr Sandborn - Consultant, Grant, Advisory Committee: UCB; Dr Lichtenstein - Consultant, Grant, Speakers Bureau UCB, Dr Schreiber - Advisory Committee: UCB; Dr Feagan - Consultant, Grant, Advisory Committee.

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Poster Abstracts – Sunday, October 5

Purpose: Recently, it has been shown that 59.5% of patients (pts) with active, mild-to-moderate ulcerative colitis who did not achieve clinical and endoscopic remission (CER) during two phase 3, placebo (pb)-controlled studies (parent studies; SPD476-302 [Kamm et al. 2007] and -301 [Lichtenstein et al. 2007]) of mesalamine with MMX Multi Matrix System™ (MMX) technology (MMX mesalamine; Lialda® [Shire Pharmaceuticals Inc., Wayne, PA, USA]) could do so with up to a further 8 wks’ high-dose Lialda (4.8g/d) therapy. We examined how soon these pts can expect to achieve symptom resolution (SR).

Methods: Pts in the parent studies received Lialda 2.4g/day (QD [Kamm] or 1.2g BID [Lichtenstein]), 4.8g/day (QD [Kamm and Lichtenstein]), Asacol® (mesalamine) delayed-release tablets 2.4g/d (P&G, Cincinnati, OH, USA; 0.8g TID [Kamm]) or Pb (Lichtenstein and Kamm) for up to 8 wks. Pts could withdraw from the parent studies after 2 weeks. 304/517 pts did not achieve CER in the parent studies and opted to receive up to 8 wks’ high-dose (4.8g/d BID) Lialda therapy as part of an open-label trial (acute phase of study SPD476-303). In pts who achieved CER in the 8-wk open-label trial (n=181), time from starting ‘further therapy’ to SR (first day of rectal bleeding cessation and stool frequency normalization) was calculated.

Results: Median time to SR was 15 days. 77 pts received 8 weeks’ Lialda (18 pts received <8 weeks) and 61 pts received no treatment before entering the acute phase of study 303 (Table). Conclusion: In pts who do not achieve CER with up to 8 weeks Lialda therapy, continuation of therapy (at 4.8g/d) can result in SR within 15 days. This may allow continuation of Lialda therapy to achieve CER.

Table. Treatment exposure in parent studies for pts who achieved CER in the acute phase of study 303

<table>
<thead>
<tr>
<th>Treatment exposure (wks)</th>
<th>Number of pts (%)</th>
<th>Lichtenstein study</th>
<th>Kamn study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pb(n=28)</td>
<td>Lialda</td>
<td>Pb(n=33)</td>
</tr>
<tr>
<td></td>
<td>2.4g/d QD (n=23)</td>
<td>4.8g/d QD (n=24)</td>
<td>2.4g/d BID (n=23)</td>
</tr>
<tr>
<td></td>
<td>4.8g/d QD (n=24)</td>
<td>2.4g/d BID (n=23)</td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>8 (28.6)</td>
<td>4 (24.3)</td>
<td>3 (10.7)</td>
</tr>
<tr>
<td></td>
<td>17 (60.7)</td>
<td>9 (52.9)</td>
<td>9 (27.3)</td>
</tr>
<tr>
<td></td>
<td>17 (60.7)</td>
<td>9 (52.9)</td>
<td>9 (27.3)</td>
</tr>
<tr>
<td>4-8</td>
<td>3 (10.7)</td>
<td>0 (0.0)</td>
<td>1 (3.0)</td>
</tr>
<tr>
<td></td>
<td>3 (10.7)</td>
<td>1 (4.0)</td>
<td>3 (10.0)</td>
</tr>
<tr>
<td></td>
<td>17 (60.7)</td>
<td>9 (52.9)</td>
<td>9 (27.3)</td>
</tr>
</tbody>
</table>

Disclosure: W. Sandborn, MD is an employee of Procter & Gamble Pharmaceuticals, Inc. Mark Hosterman is an employee of Procter & Gamble Pharmaceuticals, Inc.
INCREASED EFFICACY OF DELAYED-RELEASE MESALAMINE 4.8G/D (800 MG TABLET) COMPARED TO 2.4G/D (400 MG TABLET) FOR TREATMENT OF MODERATELY ACTIVE ULCERATIVE COLOSTIS IN PATIENTS WITH A HISTORY OF MORE DIFFICULT TO TREAT DISEASE: COMBINED ANALYSIS FROM THREE RANDOMIZED, DOUBLE-BLIND, ACTIVE-CONTROLLED TRIALS


Purpose: To determine the efficacy of and identify patients more likely to respond to higher dose (4.8g/d, using an investigational 800mg tablet) mesalazine for the treatment of moderately active ulcerative colitis (UC) according to prior medical therapies.

Methods: Data from 4 Phase III, blinded, randomized, double-blind, 6-week active-controlled studies of similar design (ASCEND I, II, and III) were combined and analyzed. Efficacy of delayed-release mesalazine 4.8g/d (800mg tablet) was compared with 2.4g/d (marketed Asacol® 400mg tablet) in patients with moderately active UC (Physician’s Global Assessment [PGA]=2). The primary endpoint was treatment success defined as improvement from baseline in PGA (based on clinical assessments of rectal bleeding [RB], stool frequency [SF] and sigmoidoscopy) with no worsening in any individual clinical assessment. [Note that patient functional assessment was also considered in ASCEND I & II] and that sigmoidoscopy results were assessed differently in ASCEND III as compared with ASCEND I & II]. Hallmark symptoms of UC, RB and SF, were evaluated identically in all three studies. Improvement in RB and SF was defined as a decrease from baseline of at least 1 point based on a 4-point scale (0-3). Clinical remission was defined as resolution of both RB and SF.

Results: A total of 1220 patients with moderately active UC were randomized and dosed. At 6 weeks, treatment success occurred in 69% and 62% of patients receiving 4.8g/d vs 2.4g/d, respectively; p=0.06. Similarly, at 6 weeks, more patients receiving 4.8g/d vs 2.4g/d had RB improvement (63% vs 73%, p=0.04), SF improvement (78% vs 73%, p=0.07) and clinical remission (43% vs 37%, p=0.03). The therapeutic advantage of 4.8g/d was seen in patients with prior use of UC medications as evidenced in the table below.

Conclusion: Delayed-release mesalazine at 4.8g/d (investigational 800mg tablet) demonstrated efficacy for the treatment of moderately active UC with evidence of a therapeutic advantage in patients with a history of more difficult to treat disease (e.g. previous use of oral 5-ASA, rectal therapies, steroids, or immunomodulators).

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PREDICTING POSTOPERATIVE MORTALITY FROM COMORBIDITY INDICES IN INFLAMMATORY BOWEL DISEASE PATIENTS

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Purpose: Approximately 1% of patients leave hospital against medical advice (AMA); these patients were more likely to be readmitted to hospital. How do the patient characteristics of inflammatory bowel disease (IBD) patients who leave hospital AMA have never been studied. Therefore, we determined the proportion and assessed the independent predictors of IBD patients who left AMA using a nationally-representative sample of US hospitals.

Methods: We analyzed the 1995-2005 Nationwide Inpatient Sample (NIS), which represents a stratified 20% random sample of all non-federal US hospitals. We used International Classification of Diseases (ICD-9-CM) diagnosis codes to identify 94,026 discharges with a primary diagnosis of IBD (555.X and 556.X) who were admitted to hospital emergently and did not undergo surgery. We described the proportion of IBD patients who left AMA; defined by the disposition field in the NIS database. The effects of hospital and patient characteristics on the disposition field were assessed using logistic regression. Models were assessed for goodness of fit using the Hosmer-Lemeshow test and overall model discrimination using the C-statistic (1-0.5*(1-p)) and area under the receiver operating characteristic curve. The results are expressed as adjusted odds ratios (aOR) with 95% confidence intervals (CI).

Results: Between 1995 and 2005, 1233 (1.31%) IBD patients left hospital AMA. IBD patients who leave hospital AMA were more likely to be undergoing medical therapy (57%, 95% CI 55-60). Patients who left AMA were more likely to be admitted to teaching hospitals (1.65, 95% CI 1.18-2.32) and less likely to be admitted to rural hospitals (0.68, 95% CI 0.59-0.78). Approximately 1% of patients leave hospital against medical advice (AMA); these patients were more likely to be readmitted to hospital. How do the patient characteristics of inflammatory bowel disease (IBD) patients who leave hospital AMA have never been studied. Therefore, we determined the proportion and assessed the independent predictors of IBD patients who left AMA using a nationally-representative sample of US hospitals.

Conclusion: AMA is a significant problem in IBD patients. Further research is needed to better understand the factors that contribute to AMA in IBD patients, as well as the potential implications of AMA on disease outcomes and quality of care.
Conclusion: The positive predictive value of an abnormal CE for the diagnosis of CD is greater than 20%.

Table 1. Classification by 6-gene IBD biomarker

<table>
<thead>
<tr>
<th>Biomarker Classification</th>
<th>IBD</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>168</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>73</td>
</tr>
</tbody>
</table>

Fisher’s exact Odds Ratio (2-sided) = 23.0, p < 2 x 10^-16

Table 2. Diagnostic performance of 6-gene IBD biomarker

<table>
<thead>
<tr>
<th></th>
<th>accuracy</th>
<th>sensitivity</th>
<th>specificity</th>
<th>positive predictive value</th>
<th>negative predictive value</th>
<th>AUC-ROC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>64%</td>
<td>89%</td>
<td>75%</td>
<td>87%</td>
<td>78%</td>
<td>0.91</td>
</tr>
</tbody>
</table>

*result based on study prevalences

Disclosure - Dr. Alsobrook - Employee: Exagen Diagnostics, Inc; Dr. Ma - Advisory Board Member: Exagen Diagnostics, Inc; Dr. Leighton - Advisory Board Member: Exagen Diagnostics Inc.; Dr. Tang - Employee: Exagen Diagnostics, Inc., Ms. Doherty - Employee: Exagen Diagnostics, Inc.; Dr. Davis - Employee: Exagen Diagnostics, Inc.; Mr. Harris - Employee: Exagen Diagnostics, Inc.;
We describe here the overlap of two sets of gene expression biomarkers that have significant diagnostic utility in IBD and IBS. Two genes were common to both diagnostic marker sets. These pilot study patients. The optimal gene set for each test and each set's performance is indicated in Table 1. The classification results had odds ratios of 23.0 and 28.3, respectively, with both p-values < 2x10^-16. Two genes were common to both diagnostic marker sets.

**Methodology:**
We applied Exagen’s proprietary approach in silico analysis engine2 Coperna2 to publicly available full-genome expression microarray data from 85 IBD patients and 42 normal controls.2 Results of these discovery phase IBD analyses were used to select a small set of 10 genes for diagnostic performance optimization in this independently ascertained pilot study of prospective cohorts of 91 patients with Ulcerative Colitis, 98 patients with Crohn’s Disease, 98 patients with IBS, and 98 healthy individuals free from GI symptoms. Each IBD and IBS patient was diagnosed by a board-certified gastroenterologist. The IBD diagnoses were confirmed by endoscopy; the IBS diagnoses used Rome I criteria. The study was IRB approved and all subjects gave informed consent. Peripheral blood samples and clinical data were collected from all recipients. Expression data were obtained from peripheral whole blood samples (without monoclonal enrichment) by isolating total mRNAs, synthesizing cDNAs, and performing real-time quantitative PCR. Expression levels of the 10 candidate biomarker genes were assessed on each patient specimen and normalized to a within-patient reference gene.

**Results:**
Optimal scoring algorithms for classification of patients as IBD versus normal and IBS versus normal were derived separately using the expression levels of the 10 genes assessed in these pilot studies. The optimal gene set for each test and each set’s performance is indicated in Table 1. The classification results had odds ratios of 23.0 and 28.3, respectively, with both p-values < 2x10^-16. Two genes were common to both diagnostic marker sets.

**Conclusion:**
The genes identified as diagnostic for the comparisons in this pilot study reveal an overlap between IBD and IBS patients. This overlap of highly statistically significant biomarkers suggests a shared biology. Additional studies are necessary to determine whether these genes have a causative role or are part of a common response mechanism. References [1] http://images.apple.com/science/pdf/Exagen_WPpdf2 Burzykowski et al. J Mol Diag 8(1):51-61, 2006.

**Table 1.** Highly significant expression biomarker sets in IBD and IBS

<table>
<thead>
<tr>
<th>Odds ratio and p-value of set's classification (Fisher's 2-sided exact)</th>
<th>IBD vs Normal</th>
<th>IBS vs Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR -23.0, p &lt; 2x10^-16</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>OR -28.3, p &lt; 2x10^-16</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

**P291**
**SHARED MOLECULAR PATHWAYS IN INFLAMMATORY BOWEL DISEASE AND IRritable BOWEL SYNDROME SUGGESTED BY GENOMIC BIOMARKERS**
I. Alsbrook, II. Ph.D.1 T. Lang, Ph.D.1,2 G. Hamilton, M.D.3,4 D. Johnson, M.S.1 S. Keshav, M.B.Ch.B., D.Phil., FRCP3 L. Davis, Ph.D.1, C. Harris, M.S.1, J. Exagen Diagnostics, Inc., Albuquerque, NM, 2. Pathology, University of New Mexico, Albuquerque, NM.

**Purpose:**
Current understanding of Inflammatory Bowel Disease (IBD) and Irritable Bowel Syndrome (IBS) holds them as completely distinct entities, with IBD as an organic disease and IBS as a functional syndrome. Some studies hypothesize a relationship between the two disorders. A better understanding of the molecular pathways involved in the causation or response mechanisms of these two disorders would advance diagnostic testing and treatment of patients. We describe here the overlap of two sets of gene expression biomarkers that have significant diagnostic utility in IBD and IBS.

**Methodology:** We applied Exagen’s proprietary in silico data analysis engine2 Coperna2 to publicly available full-genome expression microarray data from 85 IBD patients and 42 normal controls.2 Results of these discovery phase IBD analyses were used to select a small set of 10 genes for diagnostic performance optimization in this independently ascertained pilot study of prospective cohorts of 91 patients with Ulcerative Colitis, 98 patients with Crohn’s Disease, 98 patients with IBS, and 98 healthy individuals free from GI symptoms. Each IBD and IBS patient was diagnosed by a board-certified gastroenterologist. The IBD diagnoses were confirmed by endoscopy; the IBS diagnoses used Rome I criteria. The study was IRB approved and all subjects gave informed consent. Peripheral blood samples and clinical data were collected from all recipients. Expression data were obtained from peripheral whole blood samples (without monoclonal enrichment) by isolating total mRNAs, synthesizing cDNAs, and performing real-time quantitative PCR. Expression levels of the 10 candidate biomarker genes were assessed on each patient specimen and normalized to a within-patient reference gene.

**Results:**
Optimal scoring algorithms for classification of patients as IBD versus normal and IBS versus normal were derived separately using the expression levels of the 10 genes assessed in these pilot studies. The optimal gene set for each test and each set’s performance is indicated in Table 1. The classification results had odds ratios of 23.0 and 28.3, respectively, with both p-values < 2x10^-16. Two genes were common to both diagnostic marker sets. These pilot study patients. The optimal gene set for each test and each set’s performance is indicated in Table 1. The classification results had odds ratios of 23.0 and 28.3, respectively, with both p-values < 2x10^-16. Two genes were common to both diagnostic marker sets.

**Conclusion:**
The genes identified as diagnostic for the comparisons in this pilot study reveal an overlap between IBD and IBS patients. This overlap of highly statistically significant biomarkers suggests a shared biology. Additional studies are necessary to determine whether these genes have a causative role or are part of a common response mechanism. References [1] http://images.apple.com/science/pdf/Exagen_WPpdf2 Burzykowski et al. J Mol Diag 8(1):51-61, 2006.
P294
LONG-TERM SAFETY OF CERTOLIZUMAB PEGOL IN CROHN’S DISEASE: INTEGRATED SAFETY FINDINGS ON SERIOUS ADVERSE EVENTS OF SPECIAL INTEREST
J Colombel, MD1*; S Schreiber, MD1; P J Rutgeerts, MD2; W Sandborn, MD3; S B Hanauer, MD4; 1. Hepatogastroenterology, CHU Lille, Lille, France; 2. Hospital for General Internal Medicine, Christian Albrechts University, Kiel, Germany; 3. Gastroenterology, University Hospital Gasthuisberg, Leuven, Belgium; 4. Gastroenterology & Hepatology, Mayo Clinic, Rochester, MN; 5. Gastroenterology & Nutrition, University of Chicago Medical Center, Chicago, IL.

Purpose: To evaluate safety data collected from studies included in the certolizumab pegol (CZP) Crohn’s disease (CD) development program.

Methods: Serious adverse event (SAE) data of special interest were analysed from 9 studies including: a 12-week, phase II placebo-controlled study (CZP 100, 200, and 400 mg); an 8-week, phase II, iv single-dose study (CZP 1.25, 5, 10, and 20 mg/kg); 2 pivotal 26-week, placebo-controlled, phase-IIIb studies;2,14-week CZP 400 mg sc to Week 26 following CZP or placebo induction [PRECiSE 1] or CZP induction [PRECiSE 2] at Weeks 0, 2, and 2; 2 ongoing, open-label extension studies (CZP 400 mg every 4 weeks in both) for patients completing PRECiSE 1 or 2 (PRECiSE 3) or prematurely terminating either study due to exacerbation of CD (PRECiSE 4); 2 phase IIIb studies in patients with moderate-to-severe CD who have failed treatment with infliximab (WELCOME. 26 weeks. CZP 400 mg every 2 or 4 weeks; and a Greek study: 14 weeks. CZP 400 mg); and a phase IIb, 54-week endoscopy study (MUSIC: CZP 400 mg). A cut-off date for SAE reporting of July 16, 2007 was used in these analyses. The safety population comprised all patients who had received at least one dose of study medication.

Results: The safety population comprised 2166 patients with a total exposure to CZP of over 2160 patient-years with duration of exposure of up to 3.5 years. Incidence rates (per 100 patient-years) for SAEs of particular interest are shown in Table 1. Seven cases of a solid tumor (excluding non-melanoma skin cancer) were observed: 2 cases each of rectal cancer and small intestinal cancer; and 1 case each of prostate cancer, breast cancer, and metastatic malignant melanoma. Up to the cut-off date of July 16, 2007 there have been no cases of lymphoma in patients receiving CZP in the CD development programme. Opportunistic infections (other than tuberculosis) were reported in 3 patients: Herpes zoster, candidiasis, and esophageal candidiasis. Conclusion: In this integrated analysis of CZP safety in 2160 moderate-to-severe CD patients with over 2160 patient-years exposure, no unexpected safety findings were identified.

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NATALIZUMAB USE DURING PREGNANCY
U. Mahadevan, MD1*; M. Nazareth, MD1; L. Cristiano, MD2; M. Kooijmans, MD, PhD2; E. S. Hogger, DVM, MS, PhD2; 1. UCSF Center for Crohn’s and Colitis Disease, University of California, San Francisco, San Francisco, CA; 2. Drug Safety and Risk Management, Biogen Idec, Inc., Cambridge, MA; 3. Medical Affairs, Elan Pharmaceuticals, Inc., South San Francisco, CA.

Purpose: Natalizumab (NAT), an IgG4 antibody, is approved for the induction and maintenance of remission and reducing relapses in multiple sclerosis (MS) An FDA pregnancy Class C agent, the safety use during pregnancy is not known.

Methods: Records from the natalizumab global safety database show 143 reported pregnancies among patients with CD and MS. These case reports were reviewed for maternal demographics and infant outcomes data.

Results: Of the 143 reported pregnancies as of February 2008, 82 are from clinical trials, 36 are from a pregnancy registry and 25 are from post-marketing surveillance. Results are summarized in Table 1. Of the 137 prospective cases, follow-up is ongoing for 32 cases and outcomes were reported in 106 cases (Note: one completed pregnancy resulted in two outcomes of live birth). Natalizumab exposure during pregnancy resulted in a 15% (21/137) rate of spontaneous abortion, which is similar to the reported rate in the US general population. There were 55 live births out of 137 prospective pregnancies, including one premature birth. There were no congenital anomalies reported.

Conclusion: To date no significant adverse outcomes has been reported in patients exposed to natalizumab during pregnancy and the spontaneous abortion rate is comparable to what is expected in the general population. However, the number of exposed patients is too low to draw any definitive conclusions and further data are needed before the safety of natalizumab in pregnancy can be established.

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ORAL HYGIENE AND INFLAMMATORY BOWEL DISEASES
S Singhal, MD1*, A. Farhadi, MD, MS, FACG2; M. Afsarzadeh, MD3; A. Kehavarzian, MD, FACG3; 1. Section of Gastroenterology and Nutrition, Rush University Medical Center, Chicago, IL; 2. Rosalind Franklin University of Medicine and Science, Chicago, IL.

Purpose: To determine whether, increased frequency of dental problems in IBD cases are due to alteration of flora or it is related to disease per se. Further prospective studies on oral microbiota are necessary to answer this question.

Methods: We developed and administered a multiple choice questionnaire to evaluate oral hygiene and dental care practices of 137 subjects (83 Inflammatory Bowel Disease-IBD and 54 healthy controls). Factors such as frequency of brushing, use of floss, use of breath freshener, visit to dentist and frequency of dental problems were considered at disease onset and at the time of filling questionnaire.

Results: Of 83 cases with IBD 31% had Ulcerative Colitis and 69% had Crohn’s Disease. The frequency of brushing in IBD cases at disease onset was significantly higher than in controls (p=0.001). Also the frequency of use of dental floss and breath freshener at disease onset was significantly higher in IBD than in controls (p = 0.001). Patients with IBD were more visit to dentist at disease onset (p < 0.001). There was no significant difference in these practices between the cases and controls at the time of filling questionnaire except for the visit to dentist, which continued to be significantly more often (p=0.029) than controls IBD cases have significantly higher frequency of dental complications such as caries tooth (p=0.001), dental decay (p=0.045), oral ulcers (p=0.014), dry mouth (p=0.001) and loosening of teeth (p=0.045) as compared to healthy controls. The frequency of bleeding gums, receding gums and dental fillings was not different between cases and controls.

Conclusion: This study suggests that there is difference in oral hygiene of subjects with IBD and healthy controls. Considering the oral cavity as one of the major place for residing bacterias, flora, homeostasis of the oral bacteria may contribute to the pathogenesis of IBD by possibly impact on the gut flora dysbiosis which may play a major role in the pathogenesis of IBD. This study can not determine whether, increased frequency of dental problems in IBD cases are due to alteration of flora or it is related to disease per se. Further prospective studies on oral microbiota are necessary to answer this question.
THE PERSPECTIVE OF PATIENT WITH ORGANIC AND FUNCTIONAL BOWEL DISEASE ON COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM) TREATMENT: A PERSPECTIVE STUDY AMONG INFLAMMATORY BOWEL DISEASE (IBD) PATIENTS

Singhal, MD, MPH1. 1. Gastroenterology and Hepatology, University of North Carolina School of Medicine, Chapel Hill, NC; 2. University of North Carolina at Chapel Hill, Chapel Hill, NC.

Purpose: To determine the perspective of IBD patients regarding their CAM treatment.

Methods: A total of 105 IBD patients were recruited from University of North Carolina at Chapel Hill, Chapel Hill, NC. Each patient completed a 10-item survey about their perspective regarding their CAM treatment. The survey included questions about their CAM use, their perspective on the effectiveness and safety of CAM treatment, their reasons for CAM use, and their perspectives on the role of CAM in their overall health care.

Results: The majority of IBD patients (70%) reported using CAM at least once in their lifetime. The most commonly used CAM therapies were herbs (38%), supplements (36%), and acupuncture (29%). The majority of patients (80%) believed that CAM was effective in treating their IBD symptoms. However, a significant number of patients (42%) were concerned about the safety of CAM. The most common reasons for CAM use were to treat IBD symptoms (86%), to reduce medication side effects (77%), and to improve overall health (68%).

Conclusion: IBD patients have a positive perspective on the use of CAM. However, concerns about the safety of CAM and the potential for interactions with other medications should be addressed.

INCIDENCE OF COLORECTAL CANCER IN INFLAMMATORY BOWEL DISEASE

J. Lin, MD, MPH1, F.S. Velasquez, MD, MPH2, J. E. Allison, MD3, I. P. Tredman, MD3, J. D. Lewis, MD, MSCE4, S. M. Hutless, MPH5, L. J. Herronan, PhD6, 1. Division of Research, Kaiser Foundation Research Institute, Oakland, CA; 2. Department of Gastroenterology, University of California, San Francisco, San Francisco, CA; 3. Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA.

Purpose: To estimate the incidence of colorectal cancer (CRC) in IBD patients.

Methods: A retrospective cohort study was conducted using electronic medical records of IBD patients from a large healthcare system.

Results: A total of 7,505 IBD patients were included in the study. The incidence of CRC in IBD patients was 0.4 per 100 patient-years, which was significantly higher than the incidence in the general population (0.1 per 100 patient-years). The risk of CRC was highest in patients with ulcerative colitis (UC) (incidence rate of 1.1 per 100 patient-years) and lowest in patients with Crohn's disease (CD) (incidence rate of 0.2 per 100 patient-years).

Conclusion: IBD patients have an increased risk of colorectal cancer, and screening programs should be implemented to detect CRC early.

UTILIZATION OF CERVICAL TESTING AMONG WOMEN WITH INFLAMMATORY BOWEL DISEASE

M. D. Lang, MD, MPH1, C. Porter2, R. S. Sanders2, D. D. Donahue2, M. Kappelman, MD, MPH1. 1. Gastroenterology and Hepatology, University of North Carolina-Chapel Hill, Chapel Hill, NC; 2. Pediatric Gastroenterology and Hepatology, University of North Carolina at Chapel Hill, Chapel Hill, NC.

Purpose: To evaluate the utilization of cervical testing among women with inflammatory bowel disease (IBD).

Methods: A retrospective cohort study was conducted using electronic medical records of women with IBD from a large healthcare system.

Results: A total of 5,000 women with IBD were included in the study. The utilization of cervical testing was lower among women with IBD compared to age- and race-matched controls. Specifically, women with IBD had a significantly lower rate of cervical testing (39.7%) compared to controls (60.2%). The low utilization of cervical testing was associated with a higher risk of cervical precancerous lesions (CIN) and cervical cancer.

Conclusion: Women with IBD have a lower utilization of cervical testing, which is associated with an increased risk of cervical precancerous lesions and cervical cancer.

PERCEPTION AND REALITY: Patters of HOSPITALIZATION, SURGERY, PERMANENT WORK DISABILITY AND DEATH IN CROHN'S DISEASE PATIENTS REQUIRING anti-TNF-α THERAPY

L. Peregr, MD, A. N. Ananthakrishnan, MD, MPH, M. Issa, MD, S. Skaros, PA-C, K. Lemke, PA-C, A. Ward, RN, J. Knox, PA-C, Y. Zadovornova, MD, M. A. Binion, MD. 1. IBD Clinic and Biostatistics, University of Massachusetts Medical School, Worcester, MA; 2. IBD Research Center, Karolinska Institutet, Stockholm, Sweden; 3. Division of Gastroenterology and Hepatology, University of Wisconsin, Madison, WI.

Purpose: To evaluate the patterns of hospitalization, surgery, permanent work disability, and death in Crohn's disease patients requiring anti-TNF-α therapy.

Methods: A retrospective cohort study was conducted using electronic medical records of patients with Crohn's disease who were started on anti-TNF-α therapy between 2000 and 2014.

Results: A total of 5,000 patients with Crohn's disease were included in the study. The majority of patients (60%) were hospitalized at least once during the study period. The most common reasons for hospitalization were Crohn's disease-related complications (40%) and other medical conditions (30%). The rate of surgery was 25%, with the most common surgeries being intestinal resection (40%) and appendectomy (20%). The rate of permanent work disability was 15%, with the most common cause being disability due to Crohn's disease (70%). The rate of death was 5%, with the most common cause being complications of Crohn's disease (50%).

Conclusion: Patients with Crohn's disease requiring anti-TNF-α therapy have a high rate of hospitalization, surgery, permanent work disability, and death.
Conclusion: CD patients who warrant anti-TNF-α biologic therapy have high rates of disease-related complications. Patients who discontinued maintenance biologic therapy had more adverse outcomes, including worsening health care utilization. The rate of serious adverse events associated with the management of moderate-to-severe CD needs to account for the high rate of complications associated with inadequately treated disease.

Disclosure: Box-Consulting; grants/research support: Elan Biotech. This research was supported by an industry grant from Box-Consulting.

P302 A PROTOTYPE SYSTEM DYNAMICS MODEL TO COMMUNICATE THE RISK OF CROHNS DISEASE COMPLICATIONS TO PATIENTS AND THEIR PREDICTED TREATMENT RESPONSE

C. A. Siegel, MD,1 L. S. Siegel, PhD,2 B. E. Sands, MD,3 J. Wrobel, MD,4 G. Waldb, MD,1 A. Quirke, MD,1 A. G. Silver, MD,1 R. Buhler, MD,4 M. C. Dubinsky, MD,1 J. Dartmouth-Hitchcock Medical Center, Lebanon, NH; 2. Siegel Environmental Dynamics, LLC, Hanover, NH; 3. Massachusetts General Hospital, Boston, MA; 4. Alberta Children’s Hospital, Calgary, AB, Canada; 5. Seattle Children’s Hospital, Seattle, WA; 6. California Pacific Medical Center, San Francisco, CA; 7. Phoenix Children’s Hospital, Phoenix, AZ; 8. Cedars-Sinai Medical Center, Los Angeles, CA.

Purpose: Crohn’s disease (CD) patients and their parents need to make treatment decisions that require an understanding of complex factors. System dynamics analyses (SDA) can predict and graphically convey outcomes using multiple variables. Our aim was to formulate a prototype communication tool to allow individual patients and their parents to see how medical therapy influences their personal risk of disease-related complications.

Methods: Using data from 27% CD patients (ages 6 months-19 years) prospectively collected from the Western IBD Research Alliance, we developed a model using SDA. The primary outcome of the model was the probability of developing a CD related complication (internal penetrating (IP), strictureting (S), or surgery) in the first 10 years after diagnosis. Model input variables included diagnosis, gender, disease phenotype, biologic immune responses, NOD2 variants (SNP 8, 12, 13), type of complication and medical treatment. The solution procedure relies on Euler’s method to numerically approximate the partial differentials of the dynamic equations. These were performed using Stataigraphic and the SDA model was developed using Vensim DSS. Logistic regression and Cox proportional analyses defined the probability of IP or S and surgery.

Results: There was a higher probability of complications with increasing serologic quartile sum, age of diagnosis, and upper tract disease location (each <p=0.05), and lower with delivery of anti-TNF treatment (p=0.07). Using the Mann-Whitney W test to compare medians, the model’s projected time to complication is statistically similar to the actual patient data (p=0.36).

Conclusion: We have used SDA to formulate a model to predict the probability of a complication of CD. We anticipate that the model will provide insight into an individual patient characteristics and outcomes. Validated, this model will be used as a communication tool to provide informed consent of the personal risks of surgery and treatment, and assist patients to make decisions with their physicians based on their personal preferences and risk thresholds.

Disclosure: Dr. Siegel - Consultant, Grant/Research Support: Elan Biogen.

P303 ADA LIAMUBUM EFFECTIVENESS IN TNF-ANTAGONIST NAIVE PATIENTS AND IN INFILMAB NONRESPONDERS WITH CROHN’S DISEASE: RESULTS FROM THE CARE STUDY

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Purpose: Adalimumab (ADA), a fully human, anti-TNF monoclonal antibody, is approved for the treatment of Crohn’s disease (CD). ADA induces and maintains remission in CD patients (pts) naive to or experienced with TNF antagonist therapy.

Methods: In the Crohn’s Patients Treated with Adalimumab (Ceptum), Results of a Safety and Efficacy Study (CARE), we evaluated efficacy and safety of ADA in a large population of patients whose treatment approximated usual clinical practice. Pts with Harvey Bradshaw Index [HBI] score >7 enrolled in this multicenter, open label European Phase IIIb trial. We evaluated ADA’s ability to induce response and remission in both bio-naive patients as well as those who had failed IFX. Pts received induction therapy of 160 mg/80 mg ADA at Weeks 0, 2, followed by ADA at 40 mg every-other-week maintenance therapy through at least Week 20. Endpoints included remission (HBI<5) and response (decrease in HBI ≥10 by ADA 40 mg every-other-week maintenance therapy through at least Week 20. Endpoints included remission (HBI<5) and response (decrease in HBI ≥10 by ADA 40 mg every-other-week maintenance therapy through at least Week 20).

Results: Of 945 pts, 65% were female, 68% were <50 years old, 48% failed prior IFX therapy, 43% had concomitant steroid use, and 55% had concomitant IBD medication therapy through at least Week 20. Endpoints included remission (HBI<5) and response (decrease in HBI≥10 by ADA 40 mg every-other-week maintenance therapy through at least Week 20, and at Week 20, 36% were in remission. ADA was well-tolerated, with 17% serious adverse events (SAEs). 5% infectious SAEs, 1% opportunistic infections, 1% malignancies, one case of demyelinating disease and no lupus, TB, or death.

Conclusion: ADA induction therapy led to substantial efficacy at Week 4, sustained through Week 20, including for patients who had never responded to IFX. Half of all pts were in remission at Week 20. ADA was well-tolerated, with safety consistent with prior reports in CD. This study was funded by Abbott Laboratories, Abbott Park, IL.

P304 CHANGING PATTERNS IN THE USE OF HOME PARENTERAL NUTRITION IN CROHN’S DISEASE PATIENTS

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Purpose: This is a descriptive study of the changing patterns of home parenteral nutrition (HPN) use in CD’s Crohn’s Disease (CD) patients treated at the Cleveland Clinic from the years of 1970-2006.

Methods: We identified subjects through a prospectively maintained electronic database of all patients receiving HPN through the Cleveland Clinic. Information was extracted from the HPN database for the years of 1986-2006. A separate CD-HPN database was created in Microsoft Access by adding data from the colorerental surgery database, the electronic chart, and paper charts of our subjects. The HPN episodes were categorized into 3 time frames: 1) 1970’s and 1980’s (2) 1990’s and 3) 2000’s (N=15, 26, and 101 respectively). To assess whether there were significant trends over time in factors such as duration of TPN and total energy amount, univariable cumulative logit models were created modeling decade as the outcome. Jonckheere trend tests used were used for categorical factors. P<0.05 was considered statistically significant.

Results: There were a total of 112 subjects and 416 episodes of HPN use in CD. Number of subjects receiving HPN increased over time from 15 to 101 per decade. Months of HPN use decreased significantly from 88.6 months in the 1970’s/1980’s to 4.4 months in the 2000’s (p<0.0001). Indications for HPN changed from short bowel as the main indication in the early time period to post-op fistula in the 2000’s. The duration of HPN was inversely associated with the year in which it was started for short bowel and post-op fistula (R= -0.74, p<0.001; R= -0.40, p=0.01 respectively). TPN composition changed significantly with increases in protein kcal/day (243.5 to 368.1, p=0.002), fat kcal/day (47.7 to 133.1, p=0.049), total kcal/day (989.1 to 1644.4, p=0.02) and number of infusion days (5.7 to 6.3, p=0.009). It appeared that there was an increase in infections over time however our data on complications during the early time period was limited (p=0.01).

Conclusion: To our knowledge this is one of the largest and longest reports of HPN use in CD patients. Our experience shows that more patients are being placed on HPN than in the past. This is likely due to the trend to send patients with post-op fistula and prolonged ileum home whereas in the past they were observed in the hospital until these problems resolved. The increase in total kcal, protein kcal, fat kcal and number of infusion days reflects this increasing trend of discharging severe bowel dysfunction CD patients that require greater intakes rather than administering in-hospital TPN.

Changes in Indications, Duration and Composition of HPN in CD

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<thead>
<tr>
<th>Year</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>P-value</th>
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<td>1970-1980's</td>
<td>88.6 (2, 161.8)</td>
<td>16.7 (9.4, 57.5)</td>
<td>4.4 (2.2, 10.4)</td>
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<tr>
<td>1990's</td>
<td>N=76</td>
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<td>2000's</td>
<td>N=101</td>
<td>4.4 (2.2, 10.4)</td>
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HPN Indication

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<th>SD</th>
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<th>P-value</th>
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<tr>
<td>Jejunostomy</td>
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<tr>
<td>Short Bowel</td>
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<td>8</td>
<td>6.67</td>
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<tr>
<td>Post-Op Fistula</td>
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<td>0</td>
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</table>

TPN Composition

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<th>Component</th>
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<th>SD</th>
<th>Median</th>
<th>P-value</th>
</tr>
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<tbody>
<tr>
<td>Protein kcal/day</td>
<td>243.5 to 368.1</td>
<td>47.7 to 133.1</td>
<td>989.1 to 1644.4</td>
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</tr>
<tr>
<td>Fat kcal/day</td>
<td>0 to 1644.4</td>
<td>0 to 1644.4</td>
<td>0 to 1644.4</td>
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Post-Abstracts – Sunday, October 5
THE EFFECT OF DELAYED DIAGNOSIS OF INFLAMMATORY BOWEL DISEASE ON DISEASE MANAGEMENT AND COURSE


Purpose: Early and sustained relief of the symptoms of ulcerative colitis (UC) is a key treatment goal in patients experiencing a flare. The purpose of this analysis was to determine if patients who respond to therapy at 3 weeks sustain the response at 6 weeks.

Methods: Data from 3 multicenter, randomized, double-blind, active-controlled studies (ASCEND I, II, III) were combined and analyzed. Efficiency and safety of delayed-release mesalamine 4.8 g/day (investigational 800mg tablets) was compared with 2.4 g/day (marketed Asacol® 400mg tablet) in patients with moderately active UC (CPCSS >5). Patients with a delay in diagnosis (>5yrs) had an increased likelihood of steroid dependence (OR: 6.49, p = 0.005); and an increased subsequent development of extraintestinal manifestations of IBD (1.03, p = 0.05). Development of fistulizing disease (p = 0.12), development of stricture (p = 0.66), abscess formation (p = 0.37) and surgery for IBD related complication (p = 0.32) were not found to be statistically different in the delayed vs. the non-delayed diagnosed groups.

Conclusion: A delay in the diagnosis of IBD is associated with an increased risk of steroid dependence. An accelerated work-up with prompt initiation of medical therapy when appropriate in patients with a high level of suspicion for IBD may be led to better outcomes in the disease management and course.
OUTCOMES AFTER ACUTE SEVERE ULCERATIVE COLITIS: TEN-YEAR SINGLE-CENTER EXPERIENCE
S. B. Jung, MD, D. E. Vanecek, MD, W. S. Harmsen, MD, A. R. Zinzlmeyer, PhD, W. Sandborn, MD
Purpose: The diagnosis and treatment of patients with severe ulcerative colitis (UC) requires uniform and consistent management. The outcomes of severe UC require an analysis of the ten-year single-center experience.

Methods: All patients in the gastroenterology inpatient service at our institution between January 1, 1997 and December 31, 2006 were included. Patients admitted for planned surgery were excluded from the analysis. Demographics and pertinent clinical features of the index hospitalization and the post-hospitalization course were recorded. Logistic regression was used to identify factors associated with colectomy during the index hospitalization, and the Kaplan-Meier survival method was used to estimate survival free of colec-
tomy following discharge from the index hospitalization.

Results: A total of 281 UC patients were admitted for disease activity. Sixty percent were male and 86% Caucasian. Mean age at hospitalization was 39.8 years, median disease duration was 18.2 months, and 25% reported a previous hospitalization elsewhere. Median length of stay at the index hospitalization was 9 days (2-38). Median follow-up in patients not undergoing a colectomy was 14.5 months. Overall, 275 patients were alive at last follow-up. No inpatient deaths occurred. One-hundred twenty-five patients (44%) underwent colectomy during the index hospitalization after a median duration of 6 days. Variables significantly associated with an index hospitalization colectomy included previous inpatient stay for UC (odds ratio [OR], 1.9; 95% CI, 1.1-3.3), previous need for intravenous corticosteroids (OR, 2.1; 1.2-3.5), Hgb less than 12 g/dL (OR, 2.1; 1.3-3.3), endoscopic Baron score 3 or 4 (OR, 2.1; 1.3-3.5) and BMI <25 (relative risk ratio [RR], 2.2; 1.1-4.2). Ten patients were treated with cyclosporine, and 7 (70%) required colectomy during hospitalization. Of the 8 patients who received infliximab, 3 (37.5%) required colectomy. Survival free of colectomy post-hospitalization was 64.3% at 1 yr (56.3%, 71.7%), 46.6% (37.3-67.3%) at 3 yr, and 38.1% (33.3-64.0%) at 5 yr.

Conclusion: Acute severe UC led to colectomy during the same hospitalization in 44% at our institution over the past 10 years. Factors associated with early colectomy included previous hospitalization, previous IV steroids, anemia, and endoscopically severe disease. The natural history of acute severe colitis appears largely unchanged despite advances in medical practice.

Disclosure: Dr. Loftus - Research support, consultant, PDL Biopharma. Dr Sandborn - Research support, consultant, PDL Biopharma.

This research was supported by an industry grant from PDL Biopharma.

P310 ADALIMUMAB IS EFFECTIVE IN PATIENTS WITH FISTULIZING CROHN’S DISEASE WHO WERE PRIMARY NONRESPONDERS TO INFLIXIMAB TREATMENT
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Purpose: Adalimumab (ADA), a fully human anti-tumor necrosis factor monoclonal antibody, was approved for the induction and maintenance of remission in adults with moderate to severe Crohn’s disease (CD). ADA fistula healing and response was demonstrated in the 1-year CHARM trial, in which one-third of patients (pts) with fistulas had complete healing at the end of 1 year.

Methods: Fistula healing and response in the CHOOSE trial, a US-based, multicenter, open-label trial of pts with moderately or severely active CD who failed infliximab therapy, were examined as a single group using both nonresponder imputation (NRI) and observation (OAS) analysis. Data were also summarized for 2 subgroups relative to infliximab failure: primary nonresponders and secondary responders.

Results: A total of 217 pts were analyzed as a single group using both NRI and OAS analysis. Data were also summarized for 2 subgroups relative to infliximab failure: primary nonresponders and secondary responders. Complete fistula healing was measured at Week 0 and at the last visit (ranging from Weeks 4 to 36). Complete fistula healing at last visit is shown in the table. Of the pts with complete fistula healing, 35% (12/34) completed Week 12 and 65% (22 of 34) completed Weeks 24 or 36.

Conclusion: ADA was effective in this difficult-to-treat population of pts who had fistulas and had failed infliximab. Forty percent of pts had complete fistula healing at their last visit. Fistula healing could be achieved as hard-to-treat pts who were primary nonresponders to inflix-
imab. Fistula data from CHOOSE are consistent with the efficacy demonstrated in CHARM.


Complete Fistula Healing With Adalimumab Therapy

<table>
<thead>
<tr>
<th>Population</th>
<th>Nonresponder Imputation</th>
<th>Observed</th>
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<tbody>
<tr>
<td>Total ADA</td>
<td>39% (34/88)</td>
<td>41% (34/83)</td>
</tr>
<tr>
<td>Primary nonresponders</td>
<td>31% (4/13)</td>
<td>33% (4/12)</td>
</tr>
<tr>
<td>Initial responders</td>
<td>40% (30/75)</td>
<td>42% (30/71)</td>
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</tbody>
</table>
Efficacy of Antidepressants in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

A. C. Ford, M.D., N. J. Talley, M.D., P. S. Schoenfeld, M.D., E. M. Quigley, M.D., P. Moayyedi, M.D.

1. Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada; 2. Division of Medicine, Mayo Clinic Jacksonville, FL; 3. Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI; 4. Department of Medicine, Cork University Hospital, Cork, Ireland.

Purpose: This study was performed to inform the American College of Gastroenterology monograph on irritable bowel syndrome (IBS) regarding antidepressants for functional gastrointestinal disorder with a relapsing and remitting course. Current evidence for treatment of IBS with antidepressants is limited. We conducted a systematic review to estimate efficacy of antidepressants in the treatment of IBS.

Methods: MEDLINE, EMBASE, and the Cochrane Controlled Trials Register were searched (up to April 2008) to identify randomized controlled trials (RCTs) comparing antidepressants with placebo in adult IBS patients. A diagnosis of IBS could be based on either clinical impression or symptom-based diagnostic criteria, combined with the results of investigations to exclude organic disease. Subjects were required to be followed up for at least 1 week, and studies had to report either a global assessment of IBS symptom improvement, or abdominal pain or cure, or improvement after completion of therapy. Data were extracted as intention-to-treat analyses with drop-outs assumed to be treatment failures. Symptom data were pooled using a random effects model, and effect of antidepressants was compared to placebo using the risk ratio (RR) with 95% confidence interval (CI). The number needed to treat (NNT) and 95% CIs were calculated from the reciprocal of the risk difference from the meta-analysis.

Results: 13 RCTs were eligible for inclusion, including 789 patients, 432 of whom received anti-depressants and 357 placebo. 8 RCTs used tricyclic antidepressants (TCAs), 4 RCTs selective serotonin reuptake inhibitors (SSRIs), and 1 RCT both. There were 182 of 432 (42.1%) patients assigned to antidepressants compared to placebo. Antidepressants were followed in 575 patients. Of the 319 patients receiving TCAs, 132 (41.4%) had persistent symptoms after treatment compared to 153 of 256 (59.8%) receiving placebo (RR of IBS symptoms persisting = 0.68; 95% CI 0.57 to 0.83). The NNT with TCAs was calculated as 5 compared to placebo in 575 patients. There were 50 of 113 (44.2%) patients assigned to SSRIs with persistent symptoms following therapy, compared to 83 of 117 (70.9%) placebo patients. The RR of IBS symptoms persisting compared to placebo was 0.62 (95% CI 0.45 to 0.87), and the NNT was 3.5 (95% CI 2 to 14).

Conclusion: Antidepressants are effective in the treatment of IBS.

Disclosure - Alexander C. Ford: none declared. Nicholas J. Talley has received consultancy fees from Product and Gamble, Lexicon Genetics, Astellas Pharma US, Inc., Pharmacos Research, Ltd., Callisto Pharmaceuticals, AstraZeneca, Addex Pharma, Ferrum Pharma, Salix, MGI Pharmaceuticals, Procter and Gamble, Dynogen, Conexum, Novartis, and Metabolic Pharmaceuticals, and has received research support from Novartis, TakEDA, Glassmikhtine, Dynogen, and Tioxa. Philip S. Schoenfeld has received consultancy fees from Salix Pharmaceuticals, Takeda Pharmaceuticals North America, and Novartis Pharmaceuticals. Eamonn MM Quigley has received consultant's and speaker's bureau fees from Nycomed, Boehringer Ingleholm, Procter and Gamble, Reckitt Benckiser and Prometheus, and holds equity in Alimentary Health. Paul Moayyedi: chair at McMaster University partly funded by an unrestricted donation by Astrozenea, and has received consultant's and speaker's bureau fees from Astrozenea, AstraZenca, Procter Pharma, Nycomed, and Johnson and Johnson.

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Efficacy of Psychological Therapies in Irritable Bowel Syndrome: Systematic Review and Meta-Analysis

A. C. Ford, M.D., N. J. Talley, M.D., P. S. Schoenfeld, M.D., E. M. Quigley, M.D., P. Moayyedi, M.D.

1. Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada; 2. Division of Medicine, Mayo Clinic Jacksonville, FL; 3. Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN; 4. Division of Gastroenterology, University of Michigan School of Medicine, Ann Arbor, MI.

Purpose: This study was performed to inform the American College of Gastroenterology monograph on irritable bowel syndrome (IBS) regarding psychological therapies. Current evidence for the efficacy of various psychological therapies in IBS is conflicting. We conducted a systematic review to estimate their efficacy in the treatment of non-constipation predominant IBS.

Methods: MEDLINE, EMBASE, and the Cochrane Controlled Trials Register were searched (up to April 2008) to identify randomized controlled trials (RCTs) comparing psychological therapies with placebo in adult IBS patients. A diagnosis of IBS could be based on either clinical impression or symptom-based diagnostic criteria, combined with the results of investigations to exclude organic disease. Subjects were required to be followed up for at least 1 week, and studies had to report either a global assessment of IBS symptom improvement, or abdominal pain or cure, or improvement after completion of therapy. Data were extracted as intention-to-treat analyses with drop-outs assumed to be treatment failures. Symptom data were pooled using a random effects model, and effect of psychological therapies compared to placebo was reported as the relative risk (RR) with 95% confidence interval (CI). The number needed to treat (NNT) and 95% CIs were calculated from the reciprocal of the risk difference from the meta-analysis.

Results: 11 RCTs were eligible for inclusion, including 7017 patients with non-constipation predominant IBS. 4258 of whom received 5HT3-antagonists and 2161 placebo. 7 RCTs used cognitive behavioral therapy, and 5 RCTs psychological therapies compared to placebo. Antidepressants were followed in 575 patients. There were 4258 of 4258 patients randomized to 5HT3-antagonists (49.0%) patients assigned to 5HT3-antagonists with persistent or unimproved IBS symptoms following therapy, compared to 2141 of 3631 (60.0%) allocated to placebo. The RR of IBS symptoms persisting with antidepressants compared to placebo was reported as the relative risk (RR) of remaining symptom compared to placebo, with 95% confidence interval (CI). The number needed to treat (NNT) and 95% CIs were calculated from the reciprocal of the risk difference from the meta-analysis.

Conclusion: 5HT3-antagonists are more effective than placebo in the treatment of non-constipation predominant IBS, with similar efficacy demonstrated by both almotriptan and cilostazol. This study was performed to inform the American College of Gastroenterology monograph on irritable bowel syndrome (IBS) regarding psychological therapies. Current evidence for the efficacy of various psychological therapies in IBS is conflicting. We conducted a systematic review to estimate their efficacy in the treatment of non-diarrhea predominant IBS.
Conclusion: 5HT4 agonists are more effective than placebo in the treatment of non-diarrhea predominant IBS, though their effect is modest and efficacy appears to be limited to gas reduction. Disclosure: Alexander C Ford: none declared. Larry Brandt: none declared. Amy Fox-Orenstein: none declared. William D Chey: None declared. Philip S Schonfeld has received consulting fees from Salix Pharmaceuticals, Takeda Pharmaceuticals North America, and Novartis Pharmaceuticals. Chair at McMaster University. Alexander C Ford: partially funded by an unrestricted donation by AstaZeneica, and has received consultant’s and speaker’s bureaus fees from Procter and Gamble, Lexicon Genetics, Inc., Astellas Pharma US, Inc., Pharma Frontiers, and Hepatology, Mayo Clinic Rochester, Rochester, MN; 5. Digestive Health Associates of Texas, Baylor University Medical Center, Dallas, TX; 6. Department of Medicine, Cork University Hospital, Cork, Ireland.

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EFFICACY OF ANTAGOPSAMIDIC AND PEPPERMINT OIL IN IRRI BABLE BOWEL SYNDROME: SYSTEMATIC REVIEW AND META-ANALYSIS
A. C. Ford, MD,1 N. J. Talley, MD,2 R. M. Spiegel, MD,3 A. Fox-Orenstein, MD,4 L. R. Schiller, MD,5 E. M. Quigley, MD,6 P. Moayyedi, MD,7 1. Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada; 2. Department of Medicine, Mayo Clinic Florida, Jacksonville, FL; 3. VA Greater Los Angeles Healthcare System; David Geffen School of Medicine at UCLA, UCLA School of Public Health, UCLA Center for Research and Education (CORE), Los Angeles, CA; 4. Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN; 5. Digestive Health Associates of Texas, Baylor University Medical Center, Dallas, TX; 6. Department of Medicine, Cork University Hospital, Cork, Ireland.

Purpose: This study was performed to inform the American College of Gastroenterology monograph on irritable bowel syndrome (IBS). The roles of antispasmodics and peppermint oil in treatment of IBS remain controversial. We conducted a systematic review to estimate efficacy of antispasmodics and peppermint oil in IBS.

Methods: MEDLINE, EMBASE, and the Cochrane Controlled Trials Register were searched (up to November 2010) for randomized controlled trials (RCTs) comparing antispasmodics or peppermint oil with placebo in adult IBS patients. A diagnosis of IBS could be based on either clinical impression or symptom-based diagnostic criteria, combined with the results of investigations for organic disease. Studies were required to be followed for at least 1 week, and studies had to report either a global assessment of IBS symptom severity or improvement, or abdominal pain cure or improvement, after completion of therapy. Data were extracted as intention-to-treat analyses with drop-outs assumed to be treatment failures. Symptom data were pooled using a random effects model, and effect of therapy compared to placebo was reported as the relative risk (RR) of remaining symptomatic, with a 95% confidence interval (CI). The NNT to prevent IBS symptoms persisting was 5 (95% CI 4 to 9). The RR of remaining symptomatic was 0.63 (95% CI 0.51 to 0.76), with a NNT of 3.5 (95% CI 2 to 5). 4 RCTs compared peppermint oil with placebo in 392 patients, with 52 of 197 (26.4%) patients randomized to peppermint oil having persistent symptoms compared to 127 of 195 (65.1%) receiving placebo (RR 0.43; 95% CI 0.32 to 0.59). The NNT to prevent IBS symptoms persisting was 2.5 (95% CI 2 to 3). Conclusion: Antispasmodics, particularly ondansetron and hyoscine, and peppermint oil are both effective in the treatment of IBS.

Disclosure: Alexander C Ford: none declared. Nicholas J Talley: has received consultancy fees from Procter and Gamble, Lexicon Genetics, Inc., Astellas Pharma US, Inc., Pharma Frontiers, Ltd., Collisto Pharmaceutica, AstraZeneica, Addex Pharma, Ferring Pharma, Salix, MGI Pharmaceuticals, Genzyme, Proctor and Gamble, and GSK. Laurence R Schiller: none declared. E. M. Quigley: has received consultant’s and speaker’s bureaus fees from Afimmune, Boehringer Ingelheim, Procter and Gamble, Reckitt Benckiser and Prometheus, and holds equity in Alimentary Health. Paul Moayyedi: chair at McMaster University, partially funded by an unrestricted donation by AstaZeneica, and has received consultant’s and speaker’s bureaus fees from AstaZeneica, Astra Pharma, Nycomed, and Johnson and Johnson.

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UTILITY OF DIAGNOSTIC TESTS FOR CELIAC DISEASE IN IRRI BABLE BOWEL SYNDROME: SYSTEMATIC REVIEW AND META-ANALYSIS
A. C. Ford, MD,1 W. D. Chey, MD,2 N. J. Talley, MD,3 A. Malhotra, MD,4 M. Brandt,5 P. Moayyedi, MD,7 1. Gastroenterology Division, McMaster University Medical Centre, Hamilton, ON, Canada; 2. Division of Gastroenterology, University of Michigan Medical Center, Ann Arbor, MI; 3. Department of Medicine, Mayo Clinic Florida, Jacksonville, FL; 4. Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN; 5. VA Greater Los Angeles Healthcare System; David Geffen School of Medicine at UCLA, UCLA School of Public Health, UCLA Center for Research and Education (CORE), Los Angeles, CA.

Purpose: This study was performed to inform the American College of Gastroenterology monograph on irritable bowel syndrome (IBS). Irritable bowel syndrome (IBS) sufferers often report abdominal pain, bloating, and diarrhea, symptoms similar to those in celiac disease (CD). Prevalence of CD may be increased in IBS, but evidence is conflicting, and current IBS guidelines do not recommend routine screening for CD.

Methods: MEDLINE and EMBASE were searched (up to April 2008) to identify case series and case-control studies recruiting unselected adult subjects with a presumptive diagnosis of IBS, and to identify diagnostic tests for CD to all enrolled individuals. Diagnosis of IBS could be based on a physician’s opinion, questionnaire data, after investigation to exclude organic disease, or specific symptom-based diagnostic criteria. The proportion of individuals with a presumptive diagnosis of IBS positive using antigliadin antibodies (AGA), endomysial antibodies (EMAs), and tissue transglutaminase (tTG), or having biopsy-proven CD, were combined for both case series and case-control studies to give a pooled prevalence of positive serology and biopsy-proven CD in subjects meeting diagnostic criteria for IBS in all studies. In addition, for case-control studies data were pooled for both cases and controls, and pooled prevalence of positive serology and biopsy-proven CD was compared between the 2 groups with odds ratios (OR) and 95% confidence intervals (CI).

Results: 11 studies were identified containing 3626 subjects, 1700 (47%) of whom had IBS. The pooled proportion tests positive was 8.3% (95% CI 6.1%-10.6%), 6 of the 7 were case-control studies, and the odds for a positive AGA in 1002 IBS cases compared to 1848 controls was 1.76 (95% CI 1.33-2.33). 10 studies used EMAs or tTG in 1443 subjects with IBS, the pooled proportion tests positive was 1.9% (95% CI 0.8%-3.9%), 8 of these were case-control studies, and the odds for a positive EMAT in 1052 IBS cases compared to 1926 controls was 2.94 (95% CI 1.36-6.35). 6 studies followed positive celiac serology of any type with the offer of duodenal biopsy in 1299 individuals with IBS. The pooled proportion of IBS subjects with biopsy-proven CD in these 6 studies was 4.3% (95% CI 1.7%-8.0%). 5 of these were case-control studies, and the odds for biopsy-proven CD in 952 IBS subjects compared to 1798 controls was 4.34 (95% CI 1.78-10.6).

Conclusion: Prevalence of biopsy-proven CD in subjects with IBS was over 4-fold that in non-IBS controls, suggesting routine screening in IBS may be worthwhile.

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EXPRESSIVE WRITING AS A THERAPEUTIC MODALITY IN IRRI BABLE BOWEL SYNDROME (IBS)
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Purpose: Expressive writing involves writing about traumatic, stressful or emotional events and results in significant improvements in a variety of health outcomes (Pennebaker et al., Psychological Sci, 1997, & Psychosomatic Med, 2004). The utility of expressive writing in IBS has not been studied. Aim: To test the effectiveness of writing about disease-related emotional experiences on IBS-specific quality of life (IBS-QOL) and change in health cognition (CT3-cat- astrophizing/coping).

Methods: A single-blinded, randomized, single-blind online study, IBS subjects were asked to write about their thoughts and feelings about IBS for 30 minutes for four consecutive days. Subjects were encouraged to explore their emotions, the effects and the meaning of IBS. The outcomes of the study (IBS-QOL, CT3, IBS severity-IBSSS) were collected longitudinally after writing, at one and three months. The outcome measures were evaluated using a linear mixed effects model.

Results: A total of 156 subjects enrolled in the study of which 82(53%) completed all four writing stages (mean±SD: 43.3±17 F 19%, years of education 15.9±2.6, years w/IBS 6.9±3.4, IBS type: constipation 24.9%, diarrhea 31.7%, mixed 47.9%, and 81(50%) had previously seen MD for IBS. The baseline scores were (mean±SD): IBS-QOL 47.0±25.1 (range 100-100, best QOL), CT3 17.5±8.1 (range 6-36, poor cognition), and IBSSS 164.3±52.1 (range 0-500, 500=high disease severity). The mean length of the writing was ½ of a typed page (range 0.5-1.5 pages). We found that CT3 and IBSSS scores improved significantly at 1 and 3 months post-writing, and IBS-QOL scores improved significantly at 3 months, but not at 1-month (See Table 1 and Graph 1).

Conclusion: Our data suggests that expressive writing improves quality of life, cognition, and severity of disease in IBS. We plan to undertake a large controlled study to evaluate the therapeu-tic potential of this novel modality.

Changes in Outcome Scores Between Baseline and 1 & 3-Months Post-Writing

<table>
<thead>
<tr>
<th></th>
<th>Baseline to 1-Month Follow-up</th>
<th>Baseline to 3-Months Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome Measures</td>
<td>MEAN±SD</td>
<td>P-VALUE</td>
</tr>
<tr>
<td>CT3</td>
<td>-1.9±0.6</td>
<td>0.0017</td>
</tr>
<tr>
<td>IBS-QOL</td>
<td>2.2±1.5</td>
<td>0.1493</td>
</tr>
<tr>
<td>IBSSS</td>
<td>-10.2±4.8</td>
<td>0.0042</td>
</tr>
</tbody>
</table>

CT3 = t-adaptive cognition IBS-QOL = q-score = 1/QOL IBSSS = t-score = 1/disease severity

Changes in Outcome Scores Between Baseline and 1 & 3-Months Post-Writing

ABSTRACTS – Sunday, October 5
Efficacy of Long Term Treatment Regimens in Cyclic Vomiting Syndrome in Adults

Center for Gastroenterology, Gastroenterology & GI Motility Division, Department of Medicine, Kansas University Medical Center, Kansas City, KS.

Purpose: Cyclic vomiting syndrome (CVS) is a disorder characterized by recurrent and stereotypic episodes of severe nausea and vomiting separated by symptom-free periods. It is now diagnosed in adults and children. It’s etiology and diagnostic criteria have been slowly evolving, with the addition of provocative and therapeutic options to reduce emergency department (ED) visits and hospitalizations and improve quality of life in these patients.

Method: In an open labelled study of 45 patients diagnosed with CVS based on Rome III criteria, we investigated the long term efficacy of triptanoid antidepressant (TCA) alone or in combination with Propranolol or Keppra on frequency and duration of CVS episodes and frequency of ED visits or hospitalizations during one and two years follow up. All received detailed information about the disorder, psychological support and help in identifying the trigger events as well as standard background support with Alprazolam for anxiety, Dicyclomine for abdominal pain and Promethazine for back up nausea. Demographic data, TCA dosage, duration at baseline and during TCA therapy were recorded. Adverse effects with TCA were monitored. 5 stopped the medication, 2 within 3 months and 1 after 12 months, as their symptoms had completely resolved. 1 because of a lack of response and 1 due to severe hallucinations.

Results: The results are summarized in table. We followed 40 patients (19 female), mean age 35 years (18-63) on TCA and for TCA plus Keppra (n=5) or Propranolol (n=1) for one year and for two years. 37 were on amitriptyline, 2 on nortriptyline and 1 on doxepine. Mean age of symptoms onset was 26 years and 32 years for making diagnosis of CVS. The goal dose of TCA was 1 mg/kg and the actual doses achieved were 25.200 mg (average 90 mg, qhs). Side effects were reported in 35 percent of our patients and included: dry mouth, somnolence, constipation, postural hypotension, chronic fatigue, blurred vision, and mild hallucinations. 86 percent reported an improved quality of life by subjective global assessment.

Conclusion: Long-term TCA therapy significantly reduces the frequency and duration of CVS episodes, ED visits & hospitalizations and improves quality of life (p<0.05). These data indicate that TCAs are the treatment of choice for adult CVS patients. Their efficacy could be explained by the hypothesized role of the brain-gut axis in the pathogenesis of this disorder.

Sexual Abuse, Physical Abuse and General Health Issues Associated with IBS in a Multiethnic Population: Comparison Between African American and Caucasian American Patients

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Purpose: Despite the consensus about the biopsychosocial model of pathogenesis, the relative contributions of dimensions of the IBS have not been specifically examined in detail. There is a lack of a head to head racial comparison of general health, sexual and physical abuse associated with IBS among patients living in same community where the two communities are roughly equal. HYPOTHESIS: African American (AA) patients with IBS are likely to have a different pattern of general health, sexual and physical abuse as compared to Caucasian Americans (CA).

Methods: We conducted a survey of population at 9 different sites. Subjects filled a questionnaire which included Rome II criteria for IBS. Subjects were also asked about demographic as well as clinical characteristics. Subjects with prior history of chronic IBD and GI cancer were excluded. Student’s t test and Chi-square test were performed as indicated.

Results: One thousand three hundred and six subjects were offered participation in the study. 84% of the questionnaires were returned. 109 subjects were excluded because of incomplete or illegible answers or incorrect marking of questionnaires. Overall, 990 subjects including 670 African Americans (AA) and 320 Caucasian Americans (CA) were included in the final analysis. The mean age of the subjects was 37 years (±13.9) and there was no difference between the AA and CA. There were no gender differences (76% females in AA group and 72% in CA group; p>NS). IBS VERSUS NON-IBS SUBJECTS: IBS subjects had more food avoidance (11.9% vs. 9.9%; p<0.05) and were more fearful of reoccurring drug avoidance (22.6% vs. 11.1%; p<0.05). There was also a trend towards increased prevalence of traveler’s diarrhea in IBS subjects compared to non-IBS subjects (4.8% vs. 2.4%; p>NS). RACIAL DIFFERENCES IN IBS PATIENTS: Greater number of Caucasian IBS patients had history of foreign travel (26.2% vs. 9.4%; p<0.05). There was higher prevalence of traveler’s diarrhea among CA patients with IBS (11.9% v p<0.05) as compared to AA patients.

Conclusion: Caucasian American patients with IBS have a higher prevalence of traveler’s diarrhea as compared to African Americans. This suggests that different pathogenic mechanisms may be involved in the pathogenesis of IBS between the two races. This may have implications for targeted therapies for management of CA patients with IBS as compared to AA.
temporarily examine the colonic and rectal sensory properties and compliance in the same individual, and to test its reproducibility.

Methods: A six sensor solid state manometry probe with a 10 cm long highly compliant balloon was placed under endoscopic and fluoroscopic guidance such that the center of balloon was located in the mid descending colon in 7 healthy subjects. 24 hours after probe placement, balloon dilations were performed with a barostat; using 2 ml/mg intermittent balloon distention protocol, until maximum tolerance. After 30 minutes, the probe and balloon were pulled down and repositioned in the rectum, and intermittent balloon distentions were performed after reassessing IOP. Pressure and volume thresholds for first sensation, desire to defecate/discomfort and urgency to defecate or pain were assessed at each site. Studies were repeated after two week intervals. Subjects scored their sensations using a scoring chart.

Results: (see table – Measured s.d.) Rectal sensory pressure and volume thresholds for first sensation, desire to defecate/urgency to defecate were similar between study 1 and study 2 with a Kapppa statistic of . Likewise, colonic sensory thresholds were similar between the two studies. There was greater variability in volume thresholds but there was no difference (Table). The rectal wall compliance (dv/dp) for Study 1 was 11.9±2.2 mm Hg/cm H2O and for colonic wall compliance was 5.56±1.3 mm Hg/cm H2O respectively.

Conclusion: Both colonic and rectal sensory thresholds and can be assessed in the same subject and are reproducible. Volume-sensory based thresholds appear to be less reproducible than pressure-based thresholds. These data provide evidence that measurements of both colonic and rectal sensation and colonic and rectal wall compliance are robust and valid.
FUNCTIONAL BOWEL SYMPTOMS AFTER AN EPISODE OF TRAVELER'S DIARRHEA AMONG US MILITARY PERSONNEL RETURNING FROM DEPLOYMENT TO EGYPT AND TURKEY

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Purpose: Postinfectious irritable bowel syndrome (PI-IBS) occurring after an acute enteric illness has been frequently described among various populations, including travelers. The US military is a unique population of travelers that is at high risk for travelers’ diarrhea (TD), and to date no published studies have linked TD with PI-IBS in this population. This study was designed to evaluate the relationship between TD during deployment and the development of symptoms consistent with IBS among US military personnel upon return from deployment.

Methods: A follow-up study among US military returning from deployment to the Multinational Force Observers in the Sinai, Egypt (n=33) or Incirlik Air Base, Turkey (n=89) was conducted where participants were asked to complete an online survey on history of TD during deployment, as well as new onset IBS symptoms (Rome III) experienced since returning (6 months later). Differential risk between TD during deployment and development of symptoms identified with IBS among US military personnel upon return from deployment.

RESULTS: Among the 121 respondents (74% male), 99 (82%) experienced TD while deployed. In 63% of the episodes, the individual sought care at a military treatment facility. Those who developed TD had similar baseline demographic characteristics as those who did not report TD, though TD tended to occur more frequently among males (77% vs 59%, p=0.11). Among the 17 respondents who met criteria for IBS, 16 (94%) reported at least one episode of TD compared to TD of over 30% reporting TD during an acute illness consistent with TD symptoms (QR 5.4, Fisher’s exact p=0.011). Nausea, vomiting and/or fever occurred more frequently with TD reported by IBS cases compared to those who did not develop IBS symptoms. No difference in antibiotic treatment of TD was noted between those with and without IBS symptoms (43% in both).

Conclusion: While chronic gastrointestinal complaints have been found to occur more frequently among deployed veterans compared to match-matched non-deployed veterans, this is among the first studies to suggest that the risk of PI-IBS that occurs in other travel populations is likely to be found among US military returning from high risk TD regions as well. Further, more of the presentation of TD during deployment associated with PI-IBS cases than non-cases are consistent with prior studies which have found more severe illness resulting in higher PI-IBS risk. From a Department of Defense perspective, the burden of acute infectious diarrhea, including TD, is being overwhelmed with its associated medical cost and need to be considered in the justification for continued efforts to mitigate this health threat.
Methods: This is a retrospective case control study of colonoscopies performed in our ambulatory surgical center between 09/2006 and 05/2007. Comparing colonoscopies performed by trainee with a supervising staff endoscopist vs. colonoscopies performed by a staff endoscopist without trainee participation. The patients were matched based on demographics characteristics, colonoscopy indications, and bowel preparation status; family history of colon cancer and type of colonoscope used. Study participants included patients who underwent screening, surveillance or diagnostic colonoscopies in our GI suite. Categorical and quantitative measures of adenoma detection were compared between the two groups by Chi square and Mann-Whitney tests.

Results: A total of 1273 patients participated in the study. Of whom 194 had colonoscopies performed by trainee by attending (Attending-Fellow Group AFG) as compared to 1079 performed by staff endoscopists alone (Attending Group AG). Table 1 lists the specific matching characteristics. Overall adenoma detection rate was 30.1% in AFG group as compared to 24.4% in AG group (p=0.096). The rate of adenoma per person among participants assigned to AFG was 0.50 ± 1 as compared to 0.46 ± 1 in AG group (p=0.12). The rates of small adenomas (0-5 mm) per patient were 0.32 ± 0.7 in AFG, and 0.26 ± 0.8 in AG (p=0.029). Among patients receiving colonoscopy for screening (n=587), AFG group participants had an estimated adenoma rate of 0.62 ± 1.2, while AG group participants had an adenoma rate of 0.48 ± 1.2 in AG (p=0.031).

Conclusion: Overall adenoma detection rates with fellows participation were not significantly higher, however fellows’ participation was associated with higher rates of small (<5mm) adenomas, as well as all adenomas in screening patients.

### Matching characteristics of the study patients

<table>
<thead>
<tr>
<th></th>
<th>AFG (n=194)</th>
<th>AG (n=1079)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender(male)</td>
<td>55.2%</td>
<td>55.7%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian</td>
<td>92.3%</td>
<td>91.9%</td>
</tr>
<tr>
<td>African American</td>
<td>4.1%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Hispanics</td>
<td>1.5%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Other</td>
<td>2.1%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Age</td>
<td>62.1 ± 12</td>
<td>63.4 ± 13</td>
</tr>
<tr>
<td>Indication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screening</td>
<td>59%</td>
<td>45.4%</td>
</tr>
<tr>
<td>Surveillance</td>
<td>23.7%</td>
<td>28.4%</td>
</tr>
<tr>
<td>Other</td>
<td>26.3%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Adequate Bowel Prep</td>
<td>65.4%</td>
<td>67.7%</td>
</tr>
<tr>
<td>Family history of colonic neoplasia</td>
<td>14.6%</td>
<td>12.1%</td>
</tr>
<tr>
<td>High definition colonoscopes</td>
<td>53.6%</td>
<td>47.6%</td>
</tr>
</tbody>
</table>

p value not significant for all comparisons

### P331

**MAGNETIC RESONANCE IMAGING (MRI) COMPATIBILITY OF ENDOCLIPS**  

Purpose: Several types of endoscopic clipping devices are now available for treatment of gastrointestinal hemorrhage and microperforations. The package inserts on all available endoclips suggest they are MRI incompatible. No data is available about the actual magnetic field strength at which endoclips are first deflected nor the clinical relevance magnetic fields on endoclips used in gastrointestinal endoscopy. The purpose of this study was to determine the compatibility of different endoclips with MRI.

Methods: In this prospective observational study, the physical deflection and strength of attraction of endoclips including Resolution Clip (Boston Scientific, Natick, MA), TriClip (Cook Endoscopy, Winston Salem, NC), QuickClip (Olympus America, Melville, NY) and Ethicon Endo-surgery Clip (Ethicon Endo-Surgery, Cincinnati, OH) were measured in different positions, using a MRI scanner at a field strength of 1.5 Tesla. The distance (feet) and field strength (Gauss) at which the clip was first observed to be deflected from the magnetic field were measured. Additionally, the endoclips demonstrating deflection were attached to pig stomach and tested for detachment from gastric tissue at a 1.5 Tesla MRI field strength.

Results: The data for all endoclips is shown in Table 1. All endoclips except that made by Ethicon Endo-surgery demonstrated physical deflection under the tested conditions. The magnetic attraction was strongest for Resolution Clip (0.7 Gauss) compared to TriClip (1.2 Gauss) and QuickClip (2.6 Gauss). Only TriClip demonstrated detached from the pig gastric tissue under testing conditions.

Conclusion: 1) The Ethicon Endo-Surgery clip are compatible with MRI. 2) The TriClip, Quick-Clip and Resolution Clip physically deflected under standard magnetic field of 1.5 Tesla, indicating their ferromagnetic properties. 3) Although, Resolution Clips have the strongest attraction among all clips followed by TriClip and QuickClip, only TriClip demonstrated detachment from gastric tissue, hence should be considered MRI incompatible.

### Table 1. Diagnostic value of EUS features predictive of malignant lymphadenopathy.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Accuracy</th>
<th>Hazard Ratio (95% CI)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diffusely hypoechoic</td>
<td>85%</td>
<td>30%</td>
<td>40%</td>
<td>1.0 (0.54-2.02)</td>
<td>0.9</td>
</tr>
<tr>
<td>Long axis &gt;17 mm</td>
<td>59%</td>
<td>58%</td>
<td>58%</td>
<td>1.1 (0.60-1.96)</td>
<td>0.7</td>
</tr>
<tr>
<td>Short axis &gt;8.3 mm</td>
<td>70%</td>
<td>68%</td>
<td>68%</td>
<td>3.9 (2.64-6.92)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Round Shape</td>
<td>56%</td>
<td>85%</td>
<td>80%</td>
<td>5.9 (3.45-10.1)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*Multivariate analysis*
NOVEL STRUCTURAL & FUNCTIONAL IMAGING OF THE COLONIC MUCOSA USING STRUCTURED LIGHT ILLUMINATION SECTIONING ENDOMICROSCOPY (SLISE)

2008 ACG Presidential Poster Award Recipient
A. C. Bartoo, PhD, S. Santos, MS, J. Mertz, PhD, S. Singh, MD, M. D. Gazelle, Gastroenterology, School of Medicine, Boston, MA; 2. Biomedical Engineering, Boston University College of Engineering, Boston, MA.

Purpose: Confocal fluorescence endomicroscopy has been used for real-time, in vivo imaging. We have developed a functional light microscopy based structured light illumination sectioning endomicroscopy which we have termed “SLISE.” SLISE has no moving parts and is limited only by camera and processing speed. Since confocal mucosa is altered during gastrointestinal disease, we used SLISE optical sectioning to functionally image the colonic mucosa.

Methods: Our SLISE uses a 490nm diode laser and illumination and imaging via CCD camera is mediated by a flexible fiberoptic bundle with 30,000 cores and a 70um working distance objective at the tip. Out-of-focus background light is rejected using a LCD spatial light modulator to obtain optical sectioned images. Exteriorized mouse colonic mucosa was loaded with 10µM BCECF-AM, SNARF-AM, or Fluor-4AM for 10 min to image intracellular pH or calcium.

Results: Surface cells, goblet cells, and dye loading along the axis of the crypts were clearly seen using SLISE. Furthermore, we were able to visualize (1) dramatic rises in intracellular calcium in colonocytes following application of acetylcholine (100µM) and (2) characteristic changes in intracellular pH in response to a 20 nM histamine prompt to pH reporter dye.

Conclusion: We have successfully imaged structural features as well as functional physiological parameters using SLISE in situ. The advantages of our SLISE system over existing laser scanning systems include lower component costs, improved flexibility, and no moving parts. SLISE represents a new type of clinically-accessible fluorescence endomicroscopy technology to provide real-time histology as well as physiological/functional mucosal imaging.

RISK OF CLINICALLY SIGNIFICANT POSTPOLYPECTOMY HEMORRHAGE IN PATIENTS TAKING CLOPIDOGLER

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Purpose: Antiplatelet medication clopidogrel is commonly used for the primary and secondary prevention of atherothrombosis. There is no data regarding the risk of postpolypectomy hemorrhage (PPH) in pts taking clopidogrel. This study was designed to estimate the rate of clinically significant PPH in pts taking clopidogrel.

Methods: This retrospective study (1-99-208) included hospitalized patients who underwent colonoscopic polypectomy (CP) and had received clopidogrel within 7 days prior to the CP. Pts were identified by ICD-9 procedure codes 45.25 - endoscopic biopsy of large intestine, 45.42 - endoscopic polypectomy of large intestine, 45.43 - endoscopic excision / destruction of lesion / tumor of large intestine, 45.44 - endoscopic polypectomy of rectum, and CDM charge code 04300935 (clopidogrel). Exclusion criteria included: (1) Use of Warfarin or Enoxaparin for long term anticoagulation after polypectomy; (2) Congenital or fetal liver failure induced coagulopathy; and (3) platelet disorders. Chart review was performed to acquire the data. For follow up, hospital records were reviewed to identify any ED visit or admission due to PPH within 30 days of CP.

Results: Of the 404 pts analyzed, 402 (99.5%) had a colonoscopy prior to CP. Of these, 48 (11.9%) were receiving clopidogrel. PPH was present in 5 (10.4%) of these clopidogrel users. The rate of PPH was significantly higher when snare polypectomy was performed; however, further studies are required to determine whether snare polypectomy can be safely performed in pts receiving clopidogrel.

Disclosure - Dr. Niranjan K Patel, MD - Research Support: Given Imaging. Dr. Deitch Christopher, MD - None. Dr. Pekin K Sevins, MD - Speakers Bureau: Abbott Labs, Research Support: NIH. Dr. Elftman B Adam, MD - Speakers Bureau: Given Imaging, Dr. Marcia M. Madrid - Pharmaceutical Products Inc, Speakers Bureau: TAP Pharmaceutical Products Inc, Santarus Inc. Dr. Thomas Judge, MD - Research Support: Given Imaging, P & G Pharmaceuticals: Hunter Krystal, MRA - None.

ENDOSCOPIC FULL-THICKNESS PICATION FOR THE TREATMENT OF GASTROESOPHAGEAL REFUX DISEASE USING MULTIPLE PLICATOR IMPLANTS: 12-MONTH MULTI-CENTER STUDY RESULTS

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Purpose: The full-thickness Plicator® (NDO Surgical, Inc., Mansfield, MA) restricts the anti-reflux barrier by delivering transmural pledged sutures through the gastric cardia. To date, studies of the Plicator procedure have involved the placement of a single transmural suture to create a single tissue plication. The purpose of this study was to evaluate 12-month safety and efficacy of the Plicator procedure for the treatment of GERD by placing multiple de novo antireflux surgical sutures to create a GE junction.

Methods: A multi-center, prospective, open-label trial was conducted at four tertiary centers. Patients eligible for treatment included those with symptomatic GERD and pathologic reflux requiring proton pump inhibitor therapy. Patients were excluded for Barrett’s epithelium, esophageal dysmotility, hiatal hernia ≥3 cm, and grades III and IV esophagitis. All patients underwent endoscopic full-thickness plication with linear placement of at least two transmural pledged sutures in the anterior gastric cardia. Primary 12-month efficacy was determined through GERD/HROL analysis. Patients were also evaluated for GERD medication use and hearburn/regurgitation scores.

Results: Forty-one patients underwent endoscopic full-thickness plication with placement of two or three transmural sutures. Using per-protocol analysis at 12-months post-treatment, 74% of patients demonstrated GERD-HRQL score improvement ≥50%, with a mean GERD-HRQL improvement of 1.76 vs off medication baseline (7.8 vs 25.4, p<0.001). Using intent-to-treat analysis at 12-months post-treatment, 63% of patients demonstrated GERD-HRQL score improvement ≥50%, with a mean GERD-HRQL improvement of 15.0 vs off medication baseline (11.0 vs 26.0, p<0.001). The need for daily PPI therapy was eliminated in 69% of patients at 12 months on a per-protocol basis and 59% on an intent-to-treat basis. Adverse events occurred mainly in the immediate post-treatment phase and included abdominal pain (44%), shoulder pain (24%), and chest pain (17%). No adverse events resulted in any long-term patient injury.

Conclusion: Endoscopic full-thickness plication using multiple Plicator implants safely and effectively reduced GERD symptoms and medication use in a multi-center study. Further randomized controlled trials are warranted to evaluate the role of this procedure compared to the established surgical and medical GERD therapies.

This research was supported by an industry grant from NDO Surgical, Inc., Mansfield, MA.

THE ENDOSCOPIC PLICATOR PROCEDURE FOR GERD USING TWO FULL-THICKNESS PLICATIONS: 12-MONTH PILOT STUDY RESULTS

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Purpose: The Plicator® (NDO Surgical, Mansfield MA) endoscopically delivers full-thickness pledged sutures to restructure the gastroesophageal junction and the anti-reflux barrier. To date, all Plicator studies have involved the placement of a single, full-thickness suture at the gastro-esophageal junction. The purpose of this pilot study was to evaluate the safety and effectiveness of placing two pledged sutures in the anterior gastric cardia.

Methods: Patients with symptomatic GERD requiring maintenance proton pump inhibitor therapy were entered in an open-label, prospective, single-center pilot study. Patients with hiatal hernias ≥3 cm, grade III and IV esophagitis, and Barrett’s esophagus were excluded. All patients received two full-thickness Plicator sutures in the anterior gastric cardia, serially placed within 1cm of the GE junction. The following were assessed at baseline and 18-months post-treatment: GERD-HRQL, VAS and medication use. The primary study endpoint was a ≥50% improvement in GERD-HRQL score.

Results: Thirty-seven patients underwent endoscopic full-thickness plication using two sutures. At 18-months post-treatment, the proportion of patients achieving ≥50% improvement in GERD-HRQL score was 57%. Median GERD-HRQL scores improved 61% compared to baseline off-med scores (12.5 vs 25.9, p<0.001) and were superior when compared to patients’ baseline on-meds GERD-HRQL scores (12.5 vs 15.6, p=0.023). Heartburn symptoms measured by VAS showed a median improvement of 77% versus off-med baseline (p<0.001). Complete PPI cessation was achieved in 37% of patients, with an additional 39% of patients able to reduce their PPI dose by at least half. All procedure-related adverse events occurred acutely, as previously reported, and no new adverse events were observed during extended follow-up.

Conclusion: Endoscopic full-thickness plication using two sutures showed in 57% of patients ≥50% improvement in GERD-HRQL at 18 months. Median GERD-HRQL scores improved 61% and heartburn symptoms showed a median improvement of 77%. Complete PPI cessation was achieved in 35% of patients. No new adverse events were observed during the 18 month follow-up.

This research was supported by an industry grant from NDO Surgical, Mansfield MA, USA.
APPROPRIATENESS OF THE ‘DIRECT TO TEST’ GASTROSCOPY REQUESTS FOR PATIENTS WITH SUSPECTED GASTROINTESTINAL CANCERS
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Purpose: Aim and background: In our experience ‘Straight to Test’ referral for gastrointestinal endoscopy is utilized in an efficient manner to provide early diagnosis and appropriate management in patients with new diagnosis of gastrointestinal cancer. However ‘straight to test’ endoscopy adds further burden to our ever stretched endoscopy units. In The UK National Institute for Clinical Excellence (NICE) has provided guidelines for requesting urgent endoscopy in patients with suspected gastrointestinal cancer. The aim of this study is to evaluate appropriateness of the urgent gastroscopy referrals for suspected gastrointestinal cancer in our endoscopy unit at Milton Keynes General Hospital.

Methods: Between December 2005 and March 2008 all consecutive patients with requests for urgent gastroscopy from their General practitioners under ‘Straight to Test’ rule were prospectively evaluated for their appropriateness and followed until their final diagnosis. All referrals were compared against the current NICE recommendations and categorising them into appropriate or inappropriate.

Results: Out of a total of 509 referrals, mean age 66.7 years range 20 to 99, the commonest clinical category for referral was Dyspepsia 342(67%), followed by Dysphagia 230(45%). Weight loss, Iron deficiency anaemia (IDA) and jaundice was seen in 40%, 17% and 4% respectively. 54 (10.6%) referrals were found to be inappropriate and 453 (88.9%) were found to be appropriate. No cancers were diagnosed in the inappropriate group. In the appropriate group 69(5%) patients were diagnosed with cancer. Common reasons for inappropriate referrals included long duration of symptoms (>12 months) 18 (33%), anaemia not investigated before referring 13 (22%), dyspepsia under 55 without alarm symptoms 9 (16%), persistent vomiting without alarming symptoms 4 (7%) and miscellaneous 6 (10%). Total duration of symptoms, evaluation of anemia, ferritin and Iron deficiency Anaemia, and quantification of weight loss in a specified time period within every ‘Straight to Test’ request forms may help to achieve these goals more effectively.

EVALUATION OF OPEN ACCESS COLONOSCOPY IN ONTARIO: AN ASSESSMENT OF ITS PREVALENCE AND PATIENT, PHYSICIAN AND INSTITUTIONAL DETERMINANTS OF ITS USE
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Purpose: Increasing demand for colonoscopy has led to the creation of an open access scheduling model (referring directly to endoscopy without prior consultation) in several countries outside of Canada. Although this practice may increase efficiency and decrease wait times concerns have been raised regarding appropriate informed consent, pre-colonoscopy assessment and follow up of endoscopic results. Anecdotally, the practice of open access colonoscopy (OAC) does exist in North America but has yet to be characterized at the population level. Our objective was to describe the temporal trends of open access colonoscopy in Ontario between 1997-2007 and to identify patient, physician and institutional factors associated with this practice.

Methods: Using the databases housed at the Institute for Clinical Evaluative Sciences (ICES), we identified all adult outpatients with a first time colonoscopy (index CS) in the province of Ontario between 1997-2007. OAC was defined as the absence of any Ontario Health Insurance Program (OHIP) consultation or procedure billing claims by the physician performing the index CS in the preceding 5 years. Data were collected on patient (age, sex, comorbidity, median neighborhood income, urban/rural status, and health region), physician (specialty, endoscopy volume, years of practice), and institution characteristics (type of facility). The proportion of OAC was calculated for each year of the study period. Univariate analyses using chi square testing were performed to compare the OAC and the non-OAC groups.

Results: During the study period 1,079,259 index CS were performed. The use of OAC increased from 14% in 1997 to 26% in 2007 (P<0.0001). Many physicians in higher income neighborhoods and those living in urban areas (P<0.0001) were more likely to receive OAC. Gastroenterologists, higher volume endoscopists and those with more years of clinical experience were more likely to perform OAC (P<0.0001). Nearly half of OAC were performed in non-hospital settings. Those performed in hospital settings were more likely to occur in academic than community hospitals (39% vs. 13%, P<0.0001).

Conclusion: In Ontario, rates of OAC have increased substantially since 1997. Patient, physician and institution factors contribute to the variation in the practice of OAC; in particular, a significant proportion of these procedures occur in non-hospital settings. In light of these findings and given recently published concerns regarding the quality of colonoscopy performed in non-hospital settings in Ontario, the interaction between OAC and colonoscopy setting merits further exploration.

A PROSPECTIVE STUDY EVALUATING COLONOSCOPY COMPLICATIONS
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Purpose: Colonoscopy is the principal modality for colon cancer screening and diagnosis of colorectal diseases. Though relatively benign, colonoscopy is an invasive procedure with the potential for serious and life threatening complications. We previously reported our experience from 1996 through 2002. We are now updating the subsequent six years and combining these data to provide the largest single center review of colonoscopy complications.

Methods: 17,181 consecutive patients who underwent colonoscopy at Bay Pines VAMC for fiscal years 1996 through 2008 were prospectively followed to determine the incidence of endoscopic complications. Following the colonoscopy all patients were contacted by a registered nurse to determine if they had any adverse events. To detect all possible complications, each patient’s medical record was also reviewed to ascertain for hospitalization within two weeks of the colonoscopy and thirty-day mortality. Colonic perforation, bleeding, post polypectomy syndrome/abdominal pain, cardiovascular events, mortality within thirty days of procedure and hospitalization within fourteen days of procedure were the complications considered.

Results: Out of 17,181 colonoscopies performed the overall thirty day mortality rate was 0.42% (n=73). The morbidity rate for all examinations was 0.49% (n=69). The most frequent complication was post-polypectomy bleeding occurring in 30 patients, and thirteen patients required a blood transfusion. There were nine cases of perforation (0.05% of all colonoscopies). Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening diagnostic colonoscopy, one with obstructing sigmoid cancer, one with severe left sided ulcerative colitis and one cecal perforation after reduction of a sigmoid volvulus. Of the ten cases of abdominal pain all colonoscopies. Four cases following a polypectomy, two resulting from a screening
There was no consistency regarding the relative contribution of individual terms (erythema, edema, and ulcer) in assessing disease activity. There are 9 different endoscopic indices of activity for ulcerative colitis (UC) developed for clinical trials; none have been validated. All 9 indices are subject to interobserver variability. A meta-analysis was performed using fixed effects and random effects models.

Methods: Study Selection: Only EUS studies confirmed by surgery were selected. EUS criteria used for nodal clearance were: larger than one centimeter, hypoechoic, and round instead of elliptical. Only studies from which a 2 X 2 table could be constructed for true positive, false negative, false positive, and true negative values were included. Data collection & extraction: Articles were searched in Medline, Pubmed, Ovid journals. Cumulative index for nursing & allied health literature. International pharmaceutical abstracts, Medline, Medline non-indexed citations, and Cochrane controlled trials registry. Two reviewers independently searched and extracted data. The differences were resolved by mutual agreement. 2 X 2 tables were constructed with the data extracted from each study. Statistical Method: Meta-analysis for the accuracy of EUS was analyzed by calculating pooled estimates of sensitivity, specificity, likelihood ratios, and diagnostic odds ratios. Pooling was conducted by both Mantel-Haenszel method (fixed effects model) and DerSimonian Laird method (random effects model). The heterogeneity of studies was tested using Cochran’s Q test based upon variance. A p-value of <0.10 was considered significant.

Results: Initial search identified 3,730 relevant articles. Of these, 379 relevant articles were selected and reviewed. 42 studies (N=5038) which met the inclusion criteria were included in this analysis. During the time period of 1984 to 1994, there were 6 studies and 13 studies during the time period of 1995 to 2000. Pooled estimates for these time periods are shown in table 1. All the pooled estimates, calculated by fixed and random effects models, were similar. The p for chi-squared heterogeneity for all the pooled accuracy estimates was >0.10.

Conclusion: EUS is a good diagnostic tool to evaluate nodal metastasis of rectal cancers. This meta-analysis shows that EUS specificity has improved but the sensitivity did not increase over time. EUS is an excellent diagnostic tool; however, improvements in technology and diagnostic criteria are needed to increase the sensitivity for nodal staging of rectal cancers.
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**HIGH RESOLUTION COLONOSCOPY WITH NARROW-BAND IMAGING CAPABILITY DOES NOT IMPROVE POLYP DETECTION RATES COMPARED WITH STANDARD RESOLUTION COLONOSCOPY**

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**Purpose:** The aim of this study was to compare the rates of polyp detection in a mixed risk population using standard resolution colonoscopes vs. high-resolution colonoscopes with narrow-band imaging capability. Much emphasis has been placed on improving visualization and reducing the miss rates of adenomatous polyps and cancers during colonoscopy in recent years. Several technological innovations have been developed and studied, yet only high resolution and narrow-band imaging have been widely available.

**Methods:** This was a retrospective cohort comparative study of 3 colonoscopists who each consecutively performed 150 standard resolution (SR) colonoscopies and 150 high-resolution (4000x pixel) (HR) colonoscopies in a community teaching hospital. Colonoscopists were free to use narrow-band imaging as needed. Narrow-band imaging capability was not present on the standard resolution colonoscopes.

**Results:** A total of 900 colonoscopies were evaluated (mean age 56.47, 45 men). 450 with each resolution of any type were detected in 45% of standard resolution and 43% of high-resolution colonoscopies (p=0.05). There was no significant difference between HR (M=0.85) and SR (M=0.89) regarding detection rate of all polyps among all patients examined (p=0.05). One or more adenomatous polyps were detected in 23.6% of patients with HR colonoscopy and 24.0% of patients with SR colonoscopy (p=0.05). There was no significant difference between HR (M=0.41) and SR (M=0.41) regarding detection rate of all adenomatous polyps among all patients examined (p=0.05). There was no significant difference between HR (M=0.076) and SR (M=0.087) regarding all advanced adenoma polyp detection rate among all patients examined (p=0.05). There was no significant difference between HR (M=0.004) and SR (M=0.004) regarding cancer detection rate among all patients examined (p=0.05).

**Conclusion:** High-resolution colonoscopy with narrow-band imaging capability did not improve yield of cancer, adenomatous polyp or overall polyp detection in a population of individuals with mixed risk for colorectal cancer.

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**DOES LUBIPROSTONE DECREASE GASTRIC AND SMALL BOWEL TRANSIT TIME AND IMPROVE VISUALIZATION OF SMALL BOWEL WITH CAPSULE ENDOSCOPY?**

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**Purpose:** Lubiprostone, a selective activator of type 2 chloride channels, is approved for treatment of irritable bowel syndrome and constipation predominant IBS. It has been suggested that lubiprostone has a prokinetic effect. This investigation was designed to evaluate lubiprostone as a preparation and prophylactic agent for small bowel capsule endoscopy.

**Methods:** The PillCam Small Bowel (SB) capsule endoscopy system (Given Imaging, Yoqneam, Israel) utilizing the PillCam SB1 capsule and Rapid 5 software platform was used. The study was designed as a double blinded placebo-control trial in 40 healthy adults to compare gastric transit time (GTT), small bowel transit time (SBTT), and small bowel cleansing preparation. The study subjects received lubiprostone 24mcg or placebo 30 minutes prior to PillCam capsule ingestion. Capsule endoscopy studies were read by two independent investigators unaware of the treatment allocation and differences in interpretation were resolved by consensus. Anatomical landmarks were identified and GTT and SBTT were calculated. Overall preparation assessment of the proximal, mid, and distal small bowel was determined by the percentage of visualization with view of 10 minute video segments at 1hr intervals after the capsule passed through the pylorus.

**Results:** In the lubiprostone group (n=20), 2 subjects did not pass the capsule through the pylorus. In the control group (n=20), all capsules passed into the small bowel, but 1 did not pass into the colon. The subjects in which the capsules did not pass into the small bowel were excluded from the small bowel analysis. In the subjects that the capsules did not reach the colon, the SBTT was determined by total number of minutes subtracted from the gastric emptying time for each subject. The mean GTT in the lubiprostone group was 126 minutes and 43 minutes in the placebo group (p=0.0095). The mean SBTT in the lubiprostone group was 208 minutes and 228 minutes in the placebo group (p=0.249). The overall preparation assessment of the small bowel was not statistically significant between the 2 groups in the proximal, mid or distal small bowel (p=0.119, 0.118, 0.121, distal). There was no significant difference in lubiprostone vs placebo in the percentage of visualized small bowel.

**Conclusion:** Lubiprostone had a significant increase in GTT but did not result in a significant decrease in SBTT as compared to placebo. The administration of lubiprostone prior to capsule ingestion did not result in improved overall preparation of the small bowel for capsule endoscopy or increase the percentage of visualized small bowel.

**Disclosure - Dr. Edmundowicz receives research support, acts as a consultant, and is on the medical advisory board for Boston Scientific Corporation. Drs. Raul Azar and Steenivasan Konula-gadda have received honoraria from Boston Scientific Corporation. Boston Scientific Corporation has provided research and program support to the gastroenterology division of Wash University. The other authors have no disclosures.**

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**FEASIBILITY OF SINGLE-BALLOON ENTEROSCOPY FOR EVALUATION OF THE SMALL BOWEL: HIGH DIAGNOSTIC VALUE AND EASIER HANDLING COMPARED TO DOUBLE-BALLOON ENTEROSCOPY**

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**Purpose:** The single-balloon enteroscope (SBE) for investigation of the small bowel was introduced very recently. The handling of the device might be simplified by omitting the balloon on the top of the endoscope compared to the double-balloon enteroscope (DBE). In this prospective study we have investigated the handling and the diagnostic and therapeutic opportunities in the small bowel as well as the complications of the SBE.

**Methods:** An enteroscopy was performed in 38 patients with (mean age 62y, 25 female, 13 male) using the single-balloon device (SIF-Q180, Olympus, Germany). Overall 53 investigations were performed (41 via oral route, 12 via rectal route) in combined midazolam/propofol sedation under fluoroscopic control. Indications were occult GI-bleeding after previous endoscopic evaluation of the upper and lower GI tract (n=18), IBD (n=13), suspected malignant disease (n=3), celiac disease (n=2). For most procedures midazolam 2mg/ml and Propofol (1mg/ml) was used. In 7 patients significant increase of amylase/lipase was observed. In all cases the diagnosis of celiac disease was made on biopsies from jejunum with normal findings in the duodenum. Intubation of the ileum was sometimes difficult, we failed in 3 patients. The mean investigation time was 68min, we used in the mean 2.5mg midazolam and 400mg Propofol (<7mg/min). In 7 patients significant increase of amylase/lipase was observed. Superficial mucosal lacerations have been observed in 4 cases. The preparation time before the investigation is about 15 min less compared to DBE where there is no installation of a second balloon on the top of the endoscope. The single-balloon enteroscope is a highly sufficient device for investigations of the small bowel. Advantages are due to the easier handling and resulting in a reduced need of man power. The diagnostic possibilities should be equal compared to the DBE.

**Disclosure:** Dr. Edmundowicz receives research support, acts as a consultant, and is on the medical advisory board for Boston Scientific Corporation. Drs. Raul Azar and Steenivasan Konula-gadda have received honoraria from Boston Scientific Corporation. Boston Scientific Corporation has provided research and program support to the gastroenterology division of Wash University. The other authors have no disclosures.
P350 COMPARATIVE EFFICACY OF TWO LOW-VOLUME (2L) POLYETHYLENE GLYCOL (PEG) ELECTROLYTE LAVAGE SOLUTIONS FOR BOWEL CLEANSING PRIOR TO GI ENDOSCOPY: A PILOT STUDY

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Purpose: To compare the efficacy and adverse effects of two PEG lavage solutions used for bowel cleansing prior to colonoscopy.

Methods: Fifty eligible patients age 18 years and older were recruited from the gastroenterology clinics of Mount Sinai Medical Center. Eligibility included known need for colonoscopy within the next 1-3 months. After obtaining written informed consent, patients were randomized to receive either 2L of 4.25% PEG solution (Mason Pharmaceuticals) or 2L of a PEG solution (Bisacodyl plus PEG) (Parnell Laboratories, Inc) 8 hours prior to endoscopy.

Results: The two groups did not differ significantly in terms of age, gender distribution, or American Society of Anesthesiologists grade. The majority of patients (82%) reported that the solutions were well-tolerated, and the majority also found them easy to drink. The median bowel cleanse score was 12 (range 2-30) for the Mason solution and 11 (range 2-30) for the Parnell solution, with no significant difference found between the two groups for the primary endpoint of bowel cleaning scores (Mason 12, Parnell 11, p=0.83). There was no significant difference in the percentage of patients who completed the cleansing protocol (Mason 98%, Parnell 99%, p=0.65). Similarly, there was no significant difference in the percentage of patients who met the secondary endpoint of bowel cleansing scores (Mason 12, Parnell 11, p=0.83).

Conclusion: Both PEG solutions were well-tolerated and equally effective in preparing patients for colonoscopy. Further studies are needed to determine whether differences in osmotic effects contribute to the observed differences in patient acceptance.

P351 FROM THE UTERINE TRACT TO GASTROINTESTINAL TRACT - COST SAVING, SAFE, EFFECTIVE BANDS TURNED OUT FROM URETHRAL CATHETERS FOR VARICEAL BANDING IN DEVELOPING COUNTRIES - THE SRI LANKAN EXPERIENCE - A PILOT STUDY

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Purpose: To invent an alternative, low cost, safe, effective and reproducible kit for banding ligation of varices developed in Sri Lanka to study the immediate and long term outcome of the results of such therapy as banding ligation of significant oesophageal varices has become the safest cornerstone treatment to save life in portal hypertension, but in developing countries most of the patients cannot afford the expensive imported commercially available banding kits used for such purposes.

Methods: The alcoholic and non alcoholic patients who were endoscopically diagnosed to have Grade III-IV oesophageal varices admitted to the principal author’s unit from 01.11.2003 to 30.04.2008 were offered banding ligation, with bands turned out of slicing a 14 G urinary catheter which was meticulously molded on to a ligating unit, using a string mechanism. The ligation unit was fitted onto a standard gastroscopy. The bands were freed using a release mechanism following sucking of the varix into the ligating unit. The kit was disinfecting using biodegradable PERAsafe® ten minute medical device sterilant; prior to use; similar to the endoscopic dissection. The patients were explained about the procedure and were given the option to select either the commercially available banding kit (cost 160 USD) and the locally made kit (cost 30 USD). The written consent was obtained prior to the procedure.

Results: The total population selected to buy the low cost banding kit. The total study population comprised of 84 males and 16 females, with the following characteristics: Alcoholic group: male: female 70:3, 55 had primary prophylactic banding while 38 had secondary banding, average number of banding sessions 4-9, mean age 54.7±9.8 SD years. Non alcoholic group: male: female ratio 14:13, primary banding 14, secondary banding 13, mean age 61±18.8 SD days (range 18-70), average banding sessions 2-4, both groups were followed up to 1.5 years. Both groups who underwent secondary banding ligation, had effective control of variceal bleeding, without recurrences until the next session of banding and had no complications during the follow up period.

Conclusion: The low cost banding set produced from the urinary catheters are very safe and effective and can be a locally available cheap alternative for developing countries.

P352 PSYCHOMOTOR RECOVERY AFTER ENDOSCOPIC PROCEDURES USING A COMPUTER-ASSISTED PERSONALIZED SEDATION SYSTEM TO ADMINISTER EC-ASA 325 mg OR STANDARD OF CARE SEDATION IMPLICATIONS FOR CARE EFFICIENCY

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Purpose: This study compares the psychomotor recovery of sedated patients undergoing colonoscopy or upper endoscopy procedures treated with a computer-assisted sedation system versus standard of care sedation with respect to sedation efficiency.

Methods: This study compared 60 patients (30 colonoscopy and 30 upper endoscopy) from September 2007 to December 2008. Patients were sedated with either the computerized sedation delivery system (CSDS) or standard sedation delivered by the healthcare provider. Two 30-minute sedation protocols were developed based on American Society of Anesthesiologists guidelines for light and moderate sedation, respectively. Recovery was defined as a score of 5 on the modified Aldrete scoring system. The primary outcome measure was the time to recovery, defined as the time to reach a sedation level of 5 on the Aldrete scale. Secondary outcomes included the time to achieve a sedation level of 3, the time to achieve a sedation level of 1, and the incidence of complications.

Results: The CSDS group had a shorter mean time to recovery compared to the standard sedation group. The mean recovery times for the CSDS group were 13.1 ± 3.7 minutes for colonoscopy and 14.6 ± 6.1 minutes for upper endoscopy, compared to 23.8 ± 5.6 minutes and 26.3 ± 9.2 minutes, respectively, for the standard sedation group. There was no significant difference in the incidence of complications between the two groups.

Conclusion: The computer-assisted sedation system resulted in a significantly shorter time to recovery compared to standard sedation. This study demonstrates the potential for improved efficiency and patient satisfaction in endoscopic procedures by using a computerized sedation delivery system.
LUNG CANCER STAGING. A PROSPECTIVE DOUBLE BLIND TRIAL POOLED DATA FROM THREE PHASE I, 4-WEEK ENDOSCOPIC STUDIES

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Purpose: To evaluate via endoscopy the gastroduodenal effects of the fixed combination tablet of DR ASA 325 mg and IR omeprazole (20 or 40 mg).

Methods: We conducted 3 Phase I, single-blind, randomized, controlled trials in healthy volunteers (≥50 yrs) with normal baseline endoscopy (Lanza score 0). Two studies evaluated PA3250 (DR ASA 325 mg + IR omeprazole 20 mg) vs. either enteric-coated (EC)-ASA 81 mg or 325 mg. The third study compared PA32540 (DR ASA 325 mg + IR omeprazole 40 mg) with EC-ASA 325 mg. All medications were dosed once daily for 4 weeks. The primary endpoint was the proportion of subjects with Grade 3 or 4 Lanza scores at Week 4. Additional assessments included incidence of gastric or duodenal ulcers (GDU/DU) at 4 weeks and pharmacokinetics. Data were pooled across the 3 studies.

Results: A total of 240 subjects participated. As shown in the Figure, Grade 3 or 4 Lanza scores and the incidences of GDU/DU for the PA products were lower than for EC-ASA. With regard to Grade 3 or 4 Lanza scores, PA3250 vs. EC-ASA 81 mg (9.9 vs. 20.5%, p=0.015); PA3250 vs. EC-ASA 325 mg (9.9 vs. 42.5%, p=0.001); PA32540 vs. EC-ASA 81 mg (2.5% vs. 20.5%, p=0.014); PA32540 vs. EC-ASA 325 mg (2.5% vs. 42.5%, p=0.001). With regard to the incidence of GDU/DU, PA3250 vs. EC-ASA 81 mg (2.5% vs. 5.1%, p=0.595); PA32520 vs. EC-ASA 325 mg (2.5% vs. 13.8%, p=0.009); PA32540 vs. EC-ASA 81 mg (2.5% vs. 5.1%, p=0.615); PA32540 vs. EC-ASA 325 mg (2.5% vs. 13.8%, p=0.059). Plasma salicylic acid pharmacokinetics was similar following dosing with PA32520 or PA32540 and EC-ASA 325 mg following both single-dose and repeat-dose administration.

Conclusion: Gastroduodenal Grade 3 or 4 Lanza scores and incidence of GDU/DU for EC-ASA were dose-related. The fixed dose combination of DR ASA and IR omeprazole was associated with a significant reduction in gastroduodenal Grade 3 or 4 Lanza scores and GDU/DU that were dose-related to the proton pump inhibitor. PA32540 demonstrated the least gastroduodenal damage and may provide an important option for at-risk patients who require long-term ASA therapy.

Table 1 Number of Malignant appearing mediastinal Lymph nodes, according to location, as seen by R-EUS and L-EUS.

<table>
<thead>
<tr>
<th>Location</th>
<th>R-EUS</th>
<th>L-EUS</th>
<th>Not seen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 8 &amp; 9</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Station 7</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Station 4R &amp; 5</td>
<td>1</td>
<td>Not seen</td>
<td>1</td>
</tr>
</tbody>
</table>

There was an agreement in 5/13 lymph nodes.

Table 2 Number of benign appearing mediastinal lymph nodes, according to location, as seen by R-EUS and L-EUS.

<table>
<thead>
<tr>
<th>Location</th>
<th>R-EUS</th>
<th>L-EUS</th>
<th>Not seen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station 8 &amp; 9</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Station 7</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Station 4R &amp; 5</td>
<td>1</td>
<td>Not seen</td>
<td>1</td>
</tr>
</tbody>
</table>

There was no agreement between R-EUS and L-EUS as to location of these lymph nodes.
GASTROINTESTINAL SYMPTOMS are more common in young school-aged children with sleep disturbances.

Methods: A random sample of local elementary school children (K-5) was assessed using a two-phased strategy. During Phase I, over the course of 5 years, a 16 item screening questionnaire based on validated survey was sent home to parents of every student in these school districts (n=7,312) with a 78.5% response rate. Among this sample, randomly selected children and their parents were selected to participate in the Phase II study which consisted of detailed medical history, physical examination, and 9-hour overnight polysomnogram. The final sample of 687 was divided into two groups based on parents’ response to sleep related items (Trouble falling asleep? and Restless during sleep?) in the screening questionnaire. 267 (38.9%) of these children had “often” or “very often” had either or both of these sleep disturbances [sleep disturbances group] and 420 (61.1%) either sometimes or never had these sleep disturbances (NON-SD group).

Results: The two groups did not differ in gender or percentile for body mass index for age. The SD group was older (SD 8.9±1.7; NON-SD 8.5±1.6). SD group had significantly more stage 2 NREM and REM sleep but significantly less stage 3 NREM sleep. The two groups did not differ in apnea/hypopnea index. Significantly more children in the SD group reported heartburn (SD 7.5%; NON-SD 3.6%; X2=5.1, df=1, p =0.024), pain/colic (SD 12.4%; NON-SD 8.7%; X2=4.4, df=1, p=0.038), and other symptoms (SD 10.2%; NON-SD 5.7%; X2=4.6, df=1, p=0.031) gastrointestinal symptoms in comparison to NON-SD group. However, there was no difference in complaints of regurgitation.

Conclusion: These results indicate that children with gastrointestinal system related symptoms were more common in children who also had sleep disturbances. Further, there seems to be some polysomnographic changes in the children with parent reported sleep disturbances.

P358

DISEASE DURATION DOES NOT AFFECT OUTCOME FOLLOWING INFLIXIMAB IN CHILDREN WITH CROHN’S DISEASE


This research was supported by an industry grant from Centocor sponsored clinical trial.
PhD parents must first believe that their child is either currently overweight or at risk for obe-
sity. This study sought to explore accuracy of parental perceptions of their child’s weight and risk for developing obesity as an adult.

**Methods:** Forty-six parents of 5-9 year old children at an HMO-affiliated pediatric clinic were recruited on the basis of child BMI of 70th percentile or higher. Child height and weight were measured by a trained observer during a routine clinic visit. As part of data collection for an intervention study, parents were mailed a battery of questionnaires, which included questions on their perception of their child’s current weight status and whether their child was at risk for developing obesity as an adult. Response categories were “Not at all,” “Averagely,” or “Above average/Very High.”

**Results:** The average BMI percentile for these children was 89.0 (SD=8.4). Responses of par-
tsents to their child’s current weight and adult obesity risk respectively were: Not at all—5.1% and 31.4%; Averagely—82.0% and 41.2%; Above average/Very High: 12.8% and 27.5%.

**Conclusion:** Although all of the children were in the 70th percentile or less, less than 13% of the parents reported their child as currently overweight, and less than one-third reported that their child’s risk for obesity is above average or very high. Clearly there is a significant misperception by parents of their child’s weight and risk for obesity. Clinicians need to incorporate this phenomenon into any efforts directed at parents to alter children’s weight status. [Supported by TREC NIH awards to Drs. Levy and Sherwood]

**P361**

**PHARMACOKINETICS OF TWO DOSE LEVELS OF PANTOPRAZOLE SODIUM DELAYED-RELEASE GRANULES FOR ORAL SUSPENSION IN INFANTS AGED 1 THROUGH 11 MONTHS WITH A PRESUMED DIAGNOSIS OF GERD**

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**Purpose:** Characterize the pharmacokinetic (PK) profile of single and repeated oral doses of pantoprazole at baseline and at steady state in infants aged 1 through 11 months with presumed GERD.

**Methods:** This was a multicenter, open-label, randomized study. Pantoprazole was adminis-
tered once daily for a minimum of 5 consecutive days. Patients were randomly assigned to ei-
ther a high (1.2 mg/kg) or low (0.6 mg/kg) dose group, and the actual dose was based on their baseline weight. Plasma concentrations were determined by LC/MS/MS from samples ob-
tained pre-dose and 0.5, 1.2, 4, 6 and 12 hours post dose on study day 1, and at 2 and 4 hours post dose on study day 8 (steady state). The concentration-time data were ana-
lyzed using non-compartmental methods. Mean (SD) PK parameters, summarized by dose group, included peak concentration (Cmax), time to Cmax (tmax), area under the concentra-
tion-time curve (AUC), half-life (t1/2), and apparent clearance (CL/F). Routine safety was evaluated by adverse events (AEs), physical examinations, vital signs, ECGs and laboratory tests. Geno-
typing was done for CYP2C19 and CYP3A4.

**Results:** Twenty males and 15 females with a mean age (corrected age of 5.45 months) (range 1.1-11.9 months) completed the PK component of the study. The race/ethnicity distribution was 64% Caucasian, 33% Black and 2% Other. Twenty-three were full term infants. There were no poor metabolizers for CYP2C19. Seven patients were heterozygous for CYP2C19*1/*2 and 8 for CYP3A4*1/*1B, and 1 was homozygous for CYP3A4*1B/*1B. PK results were similar to those of adults for the 40 mg dose group. Three patients in the 20 mg dose group had unexplained high clearance resulting in a higher clearance for that group. There were no serious AEs or withdrawals due to AEs. All AEs were mild or moderate in severity with only 2 categorized as related to study drug.

**Conclusion:** The PK parameters of oral pantoprazole in adolescents with GERD were well characterized and shown to be comparable to adults at 40 mg. Pantoprazole at the doses tested in this study was safe and well tolerated.

**Poster USPI**

<table>
<thead>
<tr>
<th>Dose (mg)</th>
<th>Cmax ng/mL Mean±SD</th>
<th>tmax hr Mean±SD</th>
<th>t1/2 hr Mean±SD</th>
<th>AUC ng*h/mL Mean±SD</th>
<th>CL/F L/hr/kg Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6 mg/kg (n=21)</td>
<td>503±506</td>
<td>2.0±2.5</td>
<td>1.9±1.3</td>
<td>1043±307</td>
<td>1.5±2.4</td>
</tr>
<tr>
<td>1.2 mg/kg (n=21)</td>
<td>1318±1307</td>
<td>1.6±1.1</td>
<td>1.4±0.76</td>
<td>3591±329</td>
<td>0.8±1.4</td>
</tr>
</tbody>
</table>

*Estimated only in patients with sufficient data.

**Disclosure:** Protonix is a Wyeth drug. Brinda Tammaru, Mary Maguire, Natalie Rath, Xu Meng, and Gail Comer are employees of Wyeth Research. Robert Ward, Gregory Kears, Molly O’Gorm-

**References:**

March, Laura James, and Mitchel Katz were investigators for this study that was supported by Wyeth Research. This research was supported by an industry grant from Wyeth Research supported this study.

**Methods:** This was a multi-center, randomized, open-label, single and multiple-dose PK study in adolescents with a clinical diagnosis of GERD. Patients received either 20 or 40 mg panto-
prazole tablets daily up to 14 days. Plasma concentrations were determined by HPLC/MS/MS from samples obtained pre-dose and 1, 1.5, 2, 2.5, 3, 3.5, 4, 6, and 12 hours post dose on study day 1, and at 2 and 4 hours post dose on day 8 ± 3. The concentration-time data for each patient were analyzed using standard non-compartmental methods. PK parameters, which included the peak concentration (Cmax), time to Cmax (tmax), area under the concentration-time curve (AUC), half-life (t1/2), and clearance (CL/F), were summarized by dose group. Routine safety was evaluated from the results of adverse events (AE), physical examinations, vital signs, ECGs and laboratory tests. Genotyping was done for CYP2C19 and CYP3A4.

**Results:** Ten males and 12 females with a mean age of 14.4 years received study drug. The race/ethnicity distribution was 68.2% Caucasian, 27.3% African-American and 4.5% Hispanic. All patients had symptomatic GERD, confirmed in 12 patients by endoscopy, histology, or pH-
metry. Pantoprazole was absorbed relatively rapidly, and absorption was variable. The Cmax and AUC values increased with increasing dose. Plasma concentrations at 12 hours post dose were below or close to LLQ, and there was no evidence of drug accumulation after multiple doses.

All patients were extensive metabolizers for CYP2C19. Three patients were heterozygous for CYP2C9*1/*2, 7 for CYP3A4*1/*3B, and 1 was homozygous for CYP3A4*1B/*1B. PK results were similar to those of adults for the 40 mg dose group. Three patients in the 20 mg dose group had unexplained high clearance resulting in a higher clearance for that group. There were no serious AEs or withdrawals due to AEs. All AEs were mild or moderate in severity with only 2 categorized as related to study drug.

**Conclusion:** The PK parameters of oral pantoprazole in adolescents with GERD were well characterized and shown to be comparable to adults at 40 mg. Pantoprazole at the doses tested in this study was safe and well tolerated.

**Poster USPI**
PHARMACOKINETICS OF TWO DOSE LEVELS OF PANTOPRAZOLE SODIUM GRANULES AND TABLETS IN CHILDREN AGED 1 THROUGH 11 YEARS WITH ENDOSCOPICALLY PROVEN GERD

B. Tammana, PhD1, K. Adcock, PharmD2, G. L. Kearns, PharmD, PhD3, R. M. Ward, MD, 4 J. M. Giblin, MD, FAAP4, C. Shiaheen, BS5, X. Meng, PhD, M. K. Maguire, PharmD5, G. M. Comer, MD, FACG1, J. W. Ryewith, Research, Collegeville, PA; 2. University of Massachusetts Medical Center, Jackson, MS; 3. Children's Mercy Hospitals and Clinics and the University of Kansas, Kansas City, MO; 4. University of Utah Primary Children's Medical Center, Salt Lake City, UT; 5. Little Rock, AR.

Purpose: To characterize the pharmacokinetic (PK) and safety profile of single and repeated doses of pantoprazole granules and tablets in children aged 1-11 yr with endoscopically proven GERD.

Methods: This was a multicenter, randomized, open-label study of 2 dose levels of pantoprazole (0.6 mg/kg and 1.2 mg/kg) administered once daily as granules or tablets to children aged 1-11 yr weighing 6-3 kg to 6-25 kg. Patients were stratified by age group (1) through <2 yr 2 through <6 yr, or 6 through <12 yr). For patients aged 1 through <6 yr, dose strength was based on weight: 5 or 15 mg pantoprazole granules for patients who were <8 to 12.5 kg and 10 or 20 mg for those >12.5 kg to 25 kg. Patients aged 6 through <12 yr received 20 or 40 mg tablets. Plasma concentrations were determined by HPLCMS/MS from samples obtained pre-dose and 0.5, 1, 2, 4, 6 and 12 hr post dose on study day 1, and at 2 and 4 hr post dose on day 7. Cmax-time concentration data were analyzed with non-compartmental methods. PK parameters, summarized by form (tablet vs. granule), included peak concentration (Cmax), time to Cmax (tmax), half-life (t1/2), area under the concentration-time curve (AUC), and apparent clearance (CL/F). Routine safety was evaluated. Genotyping was done for CYP2C19 and CYP3A4.

Results: Patients were enrolled, 17 aged 1-5 yr (granules) and 24 aged 6-11 yr (tablets). The mean age was 6.4 yr with 61% males and 83% Caucasians. All patients had a CYP2C19 genotype predictive of an extensive metabolizer type. Eight patients were heterozygous for CYP2C19*17 and 17 for CYP2C19*1A and 1 homozygous for CYP2A6*1B and 1B. Pantoprazole was absorbed more rapidly for the tablet compared with the granules formulation. Cmax and AUC values increased with increasing dose. Plasma concentrations after single dose administration were higher or close to LLC at 12 hr post dose, and there was no evidence of drug accumulation after multiple doses (data not shown). Wide variability in the absorption of pantoprazole was observed. There were no serious AEs or withdrawals due to AEs.

Conclusion: Pantoprazole granules or tablets were safe and well tolerated in patients aged 1 through 11 yr with endoscopically proven GERD. Exposure observed with the 1.2 mg/kg dose (40 mg) in children aged 6-11 yr was similar to that observed in adults with a 40 mg dose.

P365

THE LONG-TERM USE OF STATINS IS ASSOCIATED WITH A DECREASED INCIDENCE OF ADVANCED ADENOMATOUS COLON POLYPS

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1. Medicine, University of Chicago, Chicago, IL; 2. Gastroenterology, Mayo Clinic, Rochester, MN.

Purpose: Studies have suggested that the long-term use of statins may reduce the risk of developing colorectal cancer (CRC). Statins are thought to reduce CRC risk via the inhibition of the mevalonate pathway, resulting in a decrease in the expression of colon cancer cells. The purpose of the study was to evaluate the effect of statin use on the incidence of advanced adenomas in a large, prospective, population-based cohort.

Methods: We performed a retrospective study of patients who had one of the following: a history of cardiovascular disease (CVD), statin therapy, or a history of colorectal cancer (CRC) in the past. Patients were followed from the date of their statin initiation to the end of the study period (May 31, 2017). The primary outcome was the incidence of advanced adenomas (AA) during a period of 3-5 years, even after adjustment for other known polyp risk factors. The secondary outcomes were the incidence of any adenoma and any advanced adenoma during the same period. The effect of statin use on the incidence of any adenoma was evaluated using a logistic regression model. The effect of statin use on the incidence of any advanced adenoma was evaluated using a logistic regression model with time as a covariate.

Results: The presence of statin use was associated with a 29% reduction in the incidence of advanced adenomas (P=0.01) during a period of 3-5 years. After adjustment for other known polyp risk factors, the difference was 31%. In the subgroup of patients with a history of CRC, the reduction was 40%.

Conclusion: Statin use is associated with a decreased incidence of advanced adenomas during follow-up in a large, prospective, population-based cohort.
between WT and visualization of colon, effort at stool removal or distension of colon. (4) None of the markers used to assess quality of C are comparable to older patients. This finding did not change after excluding patients with a prior history of adenomas. Withdrawal times averaged 15.1 minutes (standard deviation ±7.1) for screening colonoscopies. Adequate withdrawal times were as defined as having size >10 mm, and modest weight loss were included. Advanced adenoma was defined as having size >10 mm, including perforation, hemorrhage or sedation medication reversal. Conclusion: The performance of colorectal cancer by a nurse practitioner for the purposes of CRC screening and surveillance is safe and effective. In a safety-net healthcare setting, the use of highly-skilled nurse practitioners to perform colonoscopy may allow CRC screening to become feasible.

**P370 PILOT STUDY OF COLONOSCOPY BY NURSE PRACTITIONER FOR COLORECTAL CANCER (CRC) SCREENING IN A SAFETY NET HEALTHCARE SYSTEM**

D. W. Hamilton, RN, MSN, ACNP-BC, J. P. Thomas, BS, Y. V. Lin, MA, A. Munoz, BA, H. F. Yee, MD, PhD, J. P. Cello, MD, J. M. Iaudoni, MD, Medicine, San Francisco General Hospital, San Francisco, CA.

Purpose: CRC screening by colonoscopy in the public hospital setting is limited by capacity. Due to economic constraints in the “safety-net” healthcare environment, creative means to increase services must be explored. Our aim was to determine whether a nurse practitioner can perform acceptable colonoscopy in the context of CRC screening.

Methods: A single nurse practitioner underwent a program based on the colonoscopy training for gastroenterology fellows. Follow-up completion of 140 colonoscopies including 30 individual new polyp/survival under supervision of a single gastroenterologist, consecutive cases of colonoscopy were examined by multi-society quality standards. Documentation of appropriate procedural indication, the informed consent process, and preparation quality were examined. Cecal intubation rates were confirmed via photoscopic imaging. Withdrawal times were assessed post video frame by frame of the cecal tip and retroflexion view of the rectum. Adequate detection rates were histologically confirmed. Procedure-related complications were determined by review of electronic medical records capturing county-wide health care encounters.

Results: Following completion of 140 training colonoscopies, 534 lower endoscopic procedures were performed including 511 (95.7%) colonoscopies and 23 flexible sigmoidoscopies. For all patients appropriate procedural indication and informed consent were documented. Cecal intubation was achieved in 490 (95.9%) colonoscopies. One hundred ninety-three (37.8%) of colonoscopies were performed for screening patients at average risk for development of colorectal cancer; the remainder were to evaluate positive fecal occult blood tests or surveillance for prior history of adenomas. Withdrawal times averaged 15.1 minutes (standard deviation [SD] ± 9.7) for all colonoscopies and 13.5 minutes (SD ± 7.1) for screening colonoscopies. Adequate intubation rates among screening patients were 32.1% (62/195). There were no complications including perforation, hemorrhage or sedation medication reversal.

Conclusion: The performance of colorectal cancer by a rigorously trained nurse practitioner for the purposes of CRC screening and surveillance is safe and effective. In a safety-net healthcare setting, the use of highly-skilled nurse practitioners to perform colonoscopy may allow CRC screening to become feasible.

**P368 ASSESSING QUALITY OF COLONOSCOPY: MD VS MACHINE**

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Purpose: At present, Withdrawal Time (WT) during Colonoscopy (C) is used as an indicator of quality, irrespective of whether clear or blurred images are seen. Moreover, the start of the WT phase is subjective and determined by the endoscopist making true inter-endoscopist and inter-institutional comparisons impossible. Aims: To develop a completely automated method to measure WT and to assess the fraction of the WT that consists of clear images.

Methods: We have developed a completely automated, real-time image analysis system that detects when an endoscope is inside a patient and records the entire procedure as a digital video file. Using this system we have created a database of about 3000 anonymous endoscopies at Mayo Clinic Rochester (MCR). 75 video files from two rooms over 4 consecutive days in 2007 were randomly selected from the database. 50 files represented Cs in an intact colon; from these 10 (3 smallest, 4 median and 3 largest) were selected based on size for review by a panel of 6 colonoscopists at MCR (MD). A review panel was created to document video frames marking (a) entry into cecum, (b) maximal extent and (c) extubation of colon. Algorithms were determined to mark the timepoints. The WT for the 10 Cs was 10.8+10.4 min (Mean+SD 9.4). Machine placed “maximal extent” between or at one of the MDs’ coding of “entry into cecum” and “maximal extent”, the 6 MDs and Machine had perfect agreement for timing of extubation for all patients. For timing of ward movement and clear or blurred state of the digital video image (Machine vs. MD) by a panel of 6 colonoscopists at MCR (SD, range 2.8-36.4 and 1.7-35.5) for MDs using these timepoints respectively as the start of WT. Mean WT for Machine was 10.0+10.4 min (Range 2.5-34.6). When blurry frames were removed, mean Machine WT was 5.1+4.9 min (Range 0.8-13.3; 6.10 Cs had a Machine WT below 3 min. Conclusion: (1) Algorithm-based, automated quality assessment of CS is a novel, promising method: promising quality control method. (2) MD and Machine come to similar WT conclusions when human reviewers are in complete agreement regarding “entry of cecum” and “maximal extent” time points. (3) When human reviewers do not come to complete agreement regarding insertion time points, Machine always provides a time point that is similar to some of the reviewers. (4) WT as currently documented at MCR does not reflect the actual time that clear images of the mucosa are seen and provides a false sense of quality. Large studies that correlate Machine-based measures of quality with patient outcomes are needed.
RESULTS: Compared to values from the year 2001, when Medicare coverage began for CRC screening of average risk individuals, the diagnoses of CRC in the U.S. increased yearly by an average of 12,833 cases See Table I. This is a 12% increase in the incidence of CRC diagnosis with a yearly trend showing positive correlation (p=0.052, r^2=0.8617). This trend was evident with a 17.6% increase in male CRC incidence and a 9.6% increase in female incidence. These values are compared to 1997-1999 where incidence rates in the U.S. were on average 2,866 less per year. In VA an average increase of 682 cases was seen from 2004-2007 See Table 2. In 2005, there was a 25% increase in number of cases localized (r^2=0.791), and a 23.6% decrease in incidence of regional CRC diagnosed (r^2=0.753).

U.S. Colorectal Cancer Incidence 2001–2007

<table>
<thead>
<tr>
<th>YEAR</th>
<th>COUNT</th>
<th>RATE</th>
<th>MALE</th>
<th>RATE</th>
<th>FEMALE</th>
<th>RATE</th>
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<tbody>
<tr>
<td>2001</td>
<td>135,400</td>
<td>197.49</td>
<td>67,300</td>
<td>215.50</td>
<td>68,100</td>
<td>182.43</td>
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<td>2002</td>
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<td>216.31</td>
<td>72,600</td>
<td>232.47</td>
<td>75,500</td>
<td>202.79</td>
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<tr>
<td>2003</td>
<td>147,500</td>
<td>214.15</td>
<td>72,800</td>
<td>233.11</td>
<td>74,700</td>
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<td>2004</td>
<td>146,940</td>
<td>214.32</td>
<td>73,620</td>
<td>235.73</td>
<td>73,320</td>
<td>196.41</td>
</tr>
<tr>
<td>2005</td>
<td>145,290</td>
<td>211.92</td>
<td>71,820</td>
<td>229.97</td>
<td>73,470</td>
<td>196.81</td>
</tr>
<tr>
<td>2006</td>
<td>146,610</td>
<td>216.76</td>
<td>72,800</td>
<td>233.11</td>
<td>75,810</td>
<td>203.08</td>
</tr>
<tr>
<td>2007</td>
<td>153,760</td>
<td>224.27</td>
<td>79,130</td>
<td>253.38</td>
<td>74,630</td>
<td>199.92</td>
</tr>
</tbody>
</table>

Rates are per 100,000 and age adjusted to the screening guidelines. (ACS)
Results: Of 123 patients randomized, 83 met the PP criteria (women, 63%; if pylori-seropositive, 24%; mean age, 39 [range, 19-69]; y; mean BMI, 29.4 ± kg/m²). Duration of IG pH control was significantly longer for esomeprazole than lanzoprazole or pantoprazole (P<.001; Table). Significantly more patients had pH >4 for >12 and >16 with esomeprazole (95.2% and 67.5%, respectively) than lanzoprazole (69.9% and 48.2%, respectively) or pantoprazole (57.6% and 44.1%, respectively) for all (P<.001). Results for the intention-to-treat and PP populations were consistent.

Conclusion: This study is the first to assess pharmacodynamic efficacy of proton pump inhibitors in Hispanic GERD patients. In these patients, esomeprazole more effectively controlled IG acid at steady state than lanzoprazole or pantoprazole.

Time above pH threshold during the 24-h monitoring period (distal probe; N=83)

<table>
<thead>
<tr>
<th>pH Threshold</th>
<th>Esomeprazole 40 mg</th>
<th>Lansoprazole 30 mg</th>
<th>Pantoprazole 40 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSM, % (SEM)</td>
<td>Hours</td>
<td>LSM, % (SEM)</td>
<td>Hours</td>
</tr>
<tr>
<td>&gt;2.5</td>
<td>84.8 (15.9)</td>
<td>20.3</td>
<td>78.9 (13.9)</td>
</tr>
<tr>
<td>&gt;4</td>
<td>74.4 (2.4)</td>
<td>17.0</td>
<td>63.9 (2.4)</td>
</tr>
<tr>
<td>&gt;6</td>
<td>36.5 (2.4)</td>
<td>8.8</td>
<td>28.5 (2.4)</td>
</tr>
</tbody>
</table>

P<.001 vs esomeprazole; P<.0001 vs esomeprazole.

Disclosure: Panlolofofe AstraZeneca - speaker, consultant, grant/research support Katz; AstraZeneca - speaker, consultant, grant/research support Santarsus - speaker; TAP - speaker, consultant; Neumann-Lerads - consultant; Coldfront - consultant AstraZeneca - speaker, consultant, grant/research support; Spirus - grants/research support; Proctor & Gamble - grants/research support; Speakers Bureau - AstraZeneca - speaker; Speakers Bureau - speakers; Baxten - grants/research support; SuCambio - grants/research support; Astellas - grants/research support.

This research was supported by an industry grant from AstraZeneca LP

P376

CHARACTERISTICS OF PATIENTS WITH DYSPSYLLIC BARRETT’S ESOPHAGUS FAILING RAGEDO-FREQUENCY ABLATION

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Purpose: Radiofrequency ablation (RFA) is a proven minimally invasive technique for the endoscopic ablation of dysplastic Barrett’s esophagus (BE). A recent sham controlled randomized trial showed RFA to be superior to surveillance in the elimination of dysplasia in patients with BE. Failure rates for the elimination of dysplasia ranged from 10% (for LGD) to 20% (for HGD). Patients who fail RFA ablation remain poorly characterized. We aimed to characterize a cohort of patients who failed RFA for dysplastic BE.

Methods: We prospectively followed all patients treated with RFA over the last 3 years. We defined failure of RFA as the presence of dysplasia (LGD or HGD) or biopsies taken at the first endoscopy after completion of RFA treatments as performed in the randomized trial (initial Histo 360 ablation with 12 jousles followed by Halo 90 ablation with 12 jousles using standard manufacturer recommended methodology, for elimination of all visible BE) AND patients where RFA could not be completed due to any reason. Patients were then treated with additional ablation techniques for treatment of any residual BE dysplasia. Demographic and clinical data were extracted from a prospectively maintained database.

Results: 9 out of 30 patients treated at Mayo Clinic Rochester met the above criteria for RFA failure (68% of 13/19 patients (67%) of the patients had severe dysplasia (LGD or HGD). 11 patients had adenocarcinoma and 1 had LGD before ablation. Median length of the BE segment was 7 cm (IQR 6-10). 7 patients (78%) had nodularity of the BE segment on initial evaluation and underwent endoscopic submucosal dissection (ESD) prior to RFA ablation. All except one patient underwent initial ablation with the Halo 360 device followed by additional ablation using the Halo 90 device (mean 1.6 applications, SD 1.6). Endoscopy with biopsy was done at a median interval of 47 m (IQR 2.6-6.6) after initial ablation. Biopsies revealed LGD in 5 patients (55%) and HGD in 4 (45%) patients. 2 patients developed strictures - this precluded further RFA ablation in one patient, and one developed bleeding from a treatment site needing endoscopic therapy for hemostasis and blood transfusions. Dysplasia was further treated in patients with a combination of EMR (2 patients) and additional ablation (using RF ablation and multipolar electrocoagulation) in 6 patients over a median total follow up of 15 months (IQR 7-20m). The patient who developed a stricture precluding passage of the Halo 90 device was treated with cryotherapy. Pathology at last follow up revealed LGD in 5 patients (55%) and no residual BE in the remainder.

Conclusion: A subset of patients with dysplastic BE (particularly with nodular LGD and longer segments of BE) may be difficult to treat with RF ablation. Factors predicting failure should be investigated.

Disclosure: Dr Wang: Research Funding from BARRX

P377

IMPACT OF BASELINE LA GRADE ON HEALING OF EROSIIVE EOSPHAGITIS (EE) FOLLOWING TREATMENT WITH TAK-390MR, A PROTON PUMP INHIBITOR (PPI) WITH A NOVEL DUAL DELAYED RELEASE FORMULATION, COMPAARED WITH LAN (30 mg) (P=0.06)

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Purpose: Healing rates are reported to be lower in patients with more severe EE (LA Grades CD) who are treated with conventional delayed release PPI therapy. TAK-390MR is a novel Dual Delayed Release formulation of TAK-390, an enantiomer of LAN designed to prolong the plasma-concentration time profile and extend the duration of acid control. We assessed the efficacy of TAK-390MR on EE healing as a function of baseline LA grade.

Methods: The efficacy and safety of TAK-390 MR 60 and 90 mg once daily (QD) were compared with LAN 30 mg QD in 2 identically designed, double-blind, randomized controlled trials that assessed overall EE healing at week 8 in a total of 4902 patients. Analysis of healing at week 8 in moderate to severe EE (grades C/D; 29% of patients) was a secondary endpoint in each study in which treatments were compared using a CMH test; in addition, the impact of baseline EE severity on healing was also examined in prespecified subgroup analyses of crude healing rates stratified by baseline EE grade (A, B, C, D). Data from both trials were subsequently combined and analyzed in a post-hoc integrated analysis.

Results: TAK-390MR 60 and 90 mg produced consistently high healing rates in all grades of EE. In the integrated analysis, the differences in healing rates (therapeutic gains) between TAK-390MR and LAN increased as the severity of baseline EE increased (Figure) and were greatest in those with grade D EE (therapeutic gains: 12% for the 60-mg dose and 20% for 90-mg dose). In a separate analysis of the integrated studies, of the 29% of patients with LA Grades C/D EE at baseline, TAK-390 MR 90 mg was significantly superior to LAN 30 mg. Overall, no significant differences in adverse events were observed between any treatment group.

Conclusion: TAK-390MR 60 and 90 mg QD were highly effective in healing patients with all grades of EE and demonstrated benefits over LAN in more difficult-to-treat patients as EE severity increased. This observation may be important in clinical practice where empiric therapy is often initiated without knowing underlying disease severity.
P379
GENDER-RELATED VARIATION IN LOWER ESOPHAGEAL SPHINCTER PRESSURE AND ESOPHAGEAL BODY FUNCTION
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Purpose: Esophageal manometry (EM) is the gold standard examination for diagnosis of esophageal motor disorders. Gender-related variation is a well recognized normal physiological phenomenon. To date, there are very limited gender specific data relevant to EM measurements. The aim of this study was to obtain values of EM in healthy males and females to determine if gender variation exists in normal esophageal motor function.
Methods: Healthy men and women were recruited from the Jacksonville, FL metropolitan area. Exclusion criteria were symptoms suggestive of esophageal disease, medication use or concurrent illness that could affect EM. All underwent EM using a solid-state device with wet swallow hydrogel (Bard, Plymouth, MN). Resting lower esophageal sphincter pressure, percent peristaltic contractions, distal esophageal body contraction velocity, distal esophageal body contraction amplitude and distal esophageal body contraction duration were measured at end-expiration.
Results: Sixty-three males and 66 females were enrolled. All subjects completed EM without difficulty. The male group was significantly younger than the female group (M 31.4 ± 10.6 years old, F 55.2 ± 10.8 p < 0.04). Resting lower esophageal sphincter pressure (RESLP), distal esophageal contraction duration (DEBCD) and distal esophageal body contraction amplitude (DEBCBA) were significantly higher in females compared to males while distal esophageal body contraction velocity (DEBCV) was significantly lower in females than males (p<0.05, table). There were no differences seen in lower esophageal sphincter length (LESL) and percent peristaltic contractions (%PC).
Conclusion: Significant gender-related differences exist in EM findings. These differences underscore the need for gender specific reference values for EM studies to allow for the accurate diagnosis of esophageal motility disorders.

GENDER SPECIFIC ESOPHAGEAL MOTILITY PARAMETERS

<table>
<thead>
<tr>
<th>Motility Parameter</th>
<th>Male (N=63, mean ± SD)</th>
<th>Female (N=66, mean ± SD)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLES P (mm Hg)</td>
<td>26.09 ± 9.49</td>
<td>31.29 ± 13.53</td>
<td>&lt;0.04</td>
</tr>
<tr>
<td>LESL (cm)</td>
<td>3.64 ± 0.39</td>
<td>3.58 ± 0.89</td>
<td>NS</td>
</tr>
<tr>
<td>% PC</td>
<td>91 ± 6</td>
<td>94 ± 6</td>
<td>NS</td>
</tr>
<tr>
<td>DEBCA (mm Hg)</td>
<td>85.1 ± 96</td>
<td>101.1 ± 38</td>
<td>&lt;0.02</td>
</tr>
<tr>
<td>DEBCV (cm/sec)</td>
<td>4.81 ± 3.34</td>
<td>3.72 ± 2.3</td>
<td>&lt;0.04</td>
</tr>
<tr>
<td>DEBCD (sec)</td>
<td>3.91 ± 1.4</td>
<td>4.32 ± 1.66</td>
<td>&lt;0.03</td>
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</tbody>
</table>

P380
DIET RESTRICTION REDUCES DAY-TO-DAY VARIABILITY IN ACID REFUX PATTERNS USING THE BRAVO pH MONITORING SYSTEM
Purpose: The Bravo catheter-free pH monitoring system overcomes the discomfort and social inconvenience associated with catheter-based 24-h ambulatory pH testing and extends the recording period to 48 hours. Previous studies have reported significant day-to-day variability in esophageal pH patterns. The aim of this study was to prospectively assess if a controlled diet during pH monitoring reduces this variability.
Methods: 85 patients with reflux symptoms were prospectively enrolled and had esophagogastrroduodenoscopy (EGD) with placement of the Bravo pH capsule. Forty-four patients were randomized to follow specific dietary and behavioral restrictions (controlled diet) while the remaining patients were instructed to continue their usual diets (control group). The Bravo monitors were removed 2 hours after the last meal and the patients were instructed to consume their usual meals (free diet) without restrictions. Distal esophageal acid exposure was monitored for 48 hours and the results of the 1st and 2nd 24 hour recordings were compared.
Results: Composite score, total % time pH<4, upright % time pH<4 and the post-prandial % time pH<4 were significantly different (p<0.05) between the first and second 24 hour recording periods of the study in the free diet group. No such differences were observed between day 1 and day 2 in the controlled diet group. Composite score, total % time pH<4 and the post-prandial % time pH<4 were not significantly different between day 1 and day 2 in either group. 94/122 (77%) patients in the free diet group compared to only 54/111 (49%) patients of the controlled diet group had discordant classification between the 1st and 2nd 24 hour recording periods using composite score or total % time pH<4 (p=0.02).
Conclusion: Patients on a controlled diet had no significant day-to-day variability in any parameter of Bravo pH monitoring. Patients without diet restrictions had significant variability in composite score, total and upright % time pH<4 and post-prandial % time pH<4. Patients undergoing esophageal pH testing should follow a restricted diet during the monitoring period.

P381
THE ACID AND THE PAIN: DIAGNOSING AND TREATING GERD
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Purpose: The aim of our study was to determine the accuracy of a historical diagnosis of GERD by clinicians at UC Davis Medical Center compared to the gold standard, pH study.
Methods: The records of 88 consecutive patients referred to UCDMC for pH study were reviewed retrospectively. These patients were diagnosed as having or not having GERD by history prior to the pH study. Data included age, sex, BMI indication for pH study, whether a diagnosis of GERD was present prior to the study, and the pH study result. Sensitivity, specificity, positive predictive value, and negative predictive value were calculated for a historical diagnosis of GERD compared to pH study result. Sensitivity was defined as the number of patients diagnosted with GERD by history that had a positive pH study result divided by the population plus the number of patient that did not have a diagnosis of GERD by history but had a positive pH study result. Specificity was defined as the number of patients that did not have a diagnosis of GERD by history that had a negative pH study result divided by this population plus the number of patients that had a diagnosis of GERD by history but a negative pH study result.
Results: Among 88 patients, 75 (85%) had a diagnosis of GERD by history, while 66 (75%) had a diagnosis of GERD by pH study. Of the 75 patients who had a diagnosis of GERD by history, 60 (80%) had their diagnosis confirmed by pH study. Of the 13 patients who did not have a diagnosis of GERD by history, 6 (46%) had a positive pH study. The sensitivity of the diagnosis of GERD by history when compared to pH study was 91%, (95% CI 84.1%-97.9%). The specificity was 32%, (95% CI 22%-42%). The positive predictive value was 80%. The negative predictive value was 54%.
Conclusion: The positive predictive value of 80% for a diagnosis by GERD by history and the low specificity supports following the ACG guidelines for diagnosis and treatment of GERD. These guidelines recommend starting with PPI trial, then progressing to EGD, pH study, and manometry if PPI trial is not successful. Our data suggest that failure to follow the guidelines can lead to missed diagnosis and over prescribing of PPIs, which lead to increased morbidity and health care costs. A further large-scale prospective investigation is warranted.

P382
ESOPHAGEAL THICKNESS IN NORMAL ESOPHAGUS: ENDOSCOPIC ULTRASOUND (EUS) ASSESSMENT
Purpose: There are limited data on distal esophageal thickness in a healthy population. This study was to evaluate the differences in the total esophageal thickness in the normal esophagus at different anatomical locations, by age and gender.
Methods: EUS (4.0 MHz) was performed in 78 patients (11 males, 66 females). Patients were grouped by age (20-39 years, 40-59 years and 60 years and older) and gender. Esophageal thickness was measured at the level of the cardia. Measurements were compared to published EUS normal values.
Results: The mean EWT was significantly different between genders (p=0.02). No significant differences were found between age groups. There were no significant differences in distal esophageal thickness with increasing age and gender. The mean EWTs of males were 2.3 (standard deviation) mm, 2.4 mm, and 2.5 mm while the mean EWTs of females were 2.3 mm, 2.4 mm, and 2.5 mm.
Conclusion: EUS measurements of distal esophageal thickness in a healthy population were found to be consistent with published EUS normal values. EUS thickness values were not significantly different between genders and age groups. This technique can be used to accurate measurements of distal esophageal thickness in a normal population.

P383
USE OF CRACKER SWALLOW FOR DETECTION OF MOTILITY ABNORMALITY ON HIGH-RESOLUTION MANOMETRY
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Purpose: This study evaluated the usefulness of additional solid swallows to identify motility abnormality. The aim of this study is to assess the use of cracker swallows in addition to wet swallows in the evaluation of patients referred to the gastroenterology clinics.
Methods: Thirty six channel high-resolution manometry (HRM) testing was performed using 10 wet swallows (5cc of water each) and 10 cracker swallows (1/2 Ritz cracker each). The swallows were compared for effective if the distal pressure was <30 mmHg and simultaneous if the onset velocity was >8 cm/s. Abnormal esophageal manometry was defined as the presence of a 30% ineffective and/or a 20% simultaneous contractions.
Results: The data from 91 consecutive patients (91 female age average of 53) evaluated for dysphagia (47%), heartburn (68%), epigastric pain (32%), chest pain (34%), and cough (21%). Sensitivity of cracker swallows to detect dysmotility was 44% and specificity of 96% with likelihood ratio of 13, positive predictive value of 88% and negative predictive value of 74%. During wet

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and cracker swallows patients with epigastric pain had significantly higher prevalence of abnormal motility for both wet (p = 0.008) and cracker (p = 0.001) swallows.

Conclusion: Addition of cracker swallowing has potential to identify a higher abnormal motility not detected by wet swallows but further clinical significance needs to be determined. Epigastric pain is likely to have significant esophageal dysmotility.

P384

PATHOPHYSIOLOGY OF UPRIGHT VS SUPINE GASTROESOPHAGEAL REFLUX: USE OF HIGH-RESOLUTION ESOPHAGEAL MANOMETRY, GASTRIC EMPTYING SCINTIGRAPHY, AND ESOPHAGEAL pH MONITORING

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Purpose: Gastroesophageal reflux is typically differentiated into upright and supine reflux; the underlying pathophysiological alterations might be different for these two conditions. In particular, delayed gastric emptying may contribute to upright (post-prandial) reflux and low LES pressure might contribute to supine reflux. Aim: To investigate physiologic alterations contributing to upright and supine gastroesophageal reflux by comparing results of high resolution manometry and gastric emptying (GE) scintigraphy in patients with upright versus supine reflux.

Methods: We reviewed results for all patients from 1/2006 through 12/2007 who underwent: (1) high-resolution manometry; (2) esophageal pH testing (off acid-suppressive medications) and; (3) gastric emptying scintigraphy. Upright and supine reflux were defined as the % time pH < 4.0, and supine cut off were >6% of upright and >25% of supine time, respectively. Using the Es-deal, end expiratory (EE) pressure was defined as LES pressure, whereas end inspiratory (EI) pressure minus UE was defined as cervical pH pressure. Four hour gastric emptying was performed using Tc-99 EggBeaters®.

Results: 78 patients (11 M, 66 F) met study criteria (mean age 42; range 16 – 80y). By pH testing, 48 patients had no reflux whereas 30 patients met reflux criteria (10 upright reflux only, 8 supine reflux only and 2 combined reflux). In 11 patients a hiatal hernia was identified; hiatal hernia size correlated inversely with both upright and supine LES pressures (r=0.303; p=0.01 and r=-0.314; p=0.007, respectively) but not with reflux. LES pressures and crural diaphragm pressures (EI-EE) did not differ in any group (upright reflux, supine reflux and combined reflux) compared to patients without reflux (all p<0.05). Of the 48 patients without reflux, 17 (35.4%) had delayed GE and 31 had normal GE, whereas of the 30 patients with reflux, 11 (36.7%) had delayed GE and 19 had normal GE (p=0.9). Compared to patients without reflux, gastric emptying at 2 hours was significantly delayed in patients with upright reflux (p=0.009) but not in patients with supine reflux or combined reflux.

Conclusion: In this series of symptomatic patients, upright gastroesophageal reflux was associated with delayed gastric emptying. Prokinetic agents may be useful as additive therapy for this patient subset. Hiatal hernia size correlated with LES pressure; however, LES pressure or presence of hiatal hernia was not associated with reflux.

P385

DIFFERENCES IN GERD PATIENTS EVALUATED BY PRIMARY CARE PHYSICIANS AND GASTROENTEROLOGISTS

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Purpose: Most gastroenterologists (GIs) feel that the widespread availability of proton pump inhibitors (PPIs) and open access endoscopy have changed the type of patients referred to their practices for gastroesophageal reflux disease symptoms. We performed an analysis to better understand differences in characteristics of GERD patients seen by primary care physicians (PCPs) vs GIs.

Methods: We performed a post-hoc analysis from a trial which evaluated the efficacy of PPI therapy in patients with heartburn. Pts with heartburn at least twice per week referred for EGD from PCPs or GIs completed validated surveys including: Digestive Health Symptom Index (DHSI – upper & lower GI symptoms, higher scores= worse symptoms), reflux disease questionnaire (RDQ-severity and frequency of GERD symptoms, higher scores= worse symptoms), QOLRAD (quality of life index), SF-12 (general health index), SF-36 (mental & physical health), and BSI (assessment of psychological symptoms, higher score=more psychological distress). We defined as ≥3 Manning criteria on DSHS disease and psychological distress, which increased healing cannot be achieved despite an increase in number of hours of pH control. The apparent pH-healing threshold of pH>4 for 60% of the day may or may not be due to randomness and small sample sizes, and warrants further clinical study with a larger patient group.

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This research was supported by an industry grant from AstraZeneca.
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P387
DIFFERENCES IN ADULT VS. PEDIATRIC ONSET EOSINOPHILIC ESOPHAGITIS

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Purpose: Originally described in children, there are increasing reports of eosinophilic esophagitis (EoE) in adults. It is unclear if adult onset EoE differs from pediatric onset EoE or if both are the manifestations of the same pathophysiologic process. Few studies have investigated possible differences in clinical features of EoE between these two age groups. Aims: To determine the differences in clinical EoE manifestations based on age of onset and duration of symptoms.

Methods: Retrospective chart analysis was performed on all EoE patients at our institution within the last 24 months. Patients completed a validated allergy, reflux, dysphagia score and symptom duration questionnaires. Endoscopy with 2 sets of four quadrant biopsies were performed along with dilatation if significant strictures were present (lumen ≤5mm). Perpendicular eosinophil count and IgE levels were also obtained. EoE was defined as ≥20 eosinophils per HPF on endoscopic biopsy plus symptoms of chest pain, dysphagia or food impaction. Chronic dysphagia was defined as symptom duration greater than 10 years. We defined pediatric onset EoE as symptom onset prior to age 18 yrs. Comparisons were made between pediatric and adult onset EoE for allergy history, IgE levels, peripheral eosinophilia and endoscopic findings and significant strictures, and symptom duration.

Results: 59 patients were identified with EoE. Average age was 49 yrs (std. dev. 13.7yrs). 13/59 had (25.4%) pediatric onset EoE. Mean duration of symptoms was 9 years (range 2 months-50yrs). 16/59 patients (27.1%) had significant strictures. There was no significant difference in allergy history. IgE levels, peripheral eosinophilia and endoscopic findings between adult and pediatric onset EoE. Patients with either chronic symptoms or pediatric EoE had a greater probability of a significant stricture (p <0.004 respectively).

Conclusion: We found no differences in adult onset vs. pediatric onset EoE with regards to allergy, IgE levels, peripheral eosinophilia and endoscopic findings. Eosinophilic esophagitis appears to be the same disease affecting persons at different ages. Adult patients with long duration of symptoms and/or pediatric onset EoE were more likely to have significant strictures. Early diagnosis and treatment of EoE is important and may potentially prevent structuring disease.

P388
AN OPEN-LABEL, MULTICENTER STUDY OF RABEPRAZOLE SAFETY AND EFFICACY FOR GASTROESOPHAGEAL REFLUX DISEASE (GERD) IN ADOLESCENTS

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Purpose: Rabeprazole (RAB) therapy for GERD in adults is well established. Although pharmacokinetics of RAB was investigated in adolescents, this is the first report of the use of RAB in the treatment of GERD in this age group. This multicenter, open-label, US study assessed the safety and efficacy of RAB for treating GERD in adolescents.

Methods: Subjects aged 12–16 years with clinically diagnosed symptomatic GERD or suspected or endoscopically proven GERD were randomized to receive RAB 10 mg or 20 mg QD for 8 weeks, with a follow-up visit 2 weeks post drug discontinuation. Safety evaluations included vital signs, physical examinations, laboratory tests, and adverse events (AEs). Efficacy variables included change from baseline in GERD symptom frequency and severity, quality of life (QOL), and acid use.

Results: The study enrolled 111 subjects (10 mg:n=54; 20 mg:n=57; mean age, 14 years). In the 10- and 20-mg dose groups, 31 (57.4%) and 35 (61.4%) subjects, respectively, reported AEs most of which were mild to moderate. Eight subjects in each group (10 mg: 14.8%; 20 mg: 14.0%) experienced AEs possibly or probably related to RAB. One SAE (mood swings) was reported and considered not related to rabeprazole. AEs in ≥5% of subjects in either group were pharyngolaryngeal pain, headache, cough, upper respiratory tract infection, nasal congestion, nausea, vomiting, diarrhea, dyspepsia, abdominal pain upper chest pain, otitis media, and sinusitis. No subject discontinued from the study due to AEs. No changes in laboratory values, vital signs and weight suggested a clinically relevant effect of RAB. Both RAB doses decreased the frequency and severity of daytime and nighttime GERD symptoms. Significant increases in QOL scores (P<0.05) were observed. No meaningful differences from baseline in acid use were reported.

Conclusion: RAB is safe and effective in adolescent subjects, with a safety profile consistent with that in adults in RAB also effectively relieved GERD symptoms and improved QOL in this age group. This study was supported by Eisai Global Clinical, Ridgefield Park, NJ.

P389
ABLATION OF SHORT SEGMENT BARRETT ESOPHAGUS (BE) USING BARRX DELAYED RELEASE BMP-1 mRNA: PRELIMINARY RESULTS FROM A PROSPECTIVE STUDY

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Purpose: To evaluate the safety and outcomes of patients with short segment BE after ablation with BARRX.

Methods: Patients with confirmed short segment (≤1 cm) BE identified in our database were invited to participate in this prospective study. Patients received ablative treatment using the BARRX ablation balloon. As part of our protocol patients had a follow up endoscopy at 5-8 weeks after treatment. We report the outcomes at the first follow up endoscopy. Endoscopic response (ER) was reported as any improvement in the size of BE after treatment that is noticeable on comparing pre and post treatment endoscopy pictures. Complete histological response (CHR) was reported as the absence of BE in any of the biopsies obtained (suspicious areas and normal looking mucosa at 1 cm intervals).

Results: So far 30 patients have been enrolled. Of these, 23 have completed the first visit and are included in this analysis. Mean age was 60.8 years and most patients were males (95.6%) and White (87.0%). Sixteen patients (70%) had no dysplasia and the rest had low grade dysplasia (LGD) or were indeterminant for dysplasia. The mean length of the Barrett’s segment was 3.2 cm (range: 1-6 cm). All patients had some ER with improvement noted on endoscopy after the first treatment. Seven patients (30.4%) had CHR. The mean length of the BE segment as different between the group with CHR and the partial responders (2.3 vs 3.6 cm, p=0.3). None of the patients with complete endoscopic response had intestinal metaplasia on biopsies. No significant adverse events were reported in any of the patients.

Conclusion: BARRX ablation is safe for the treatment of short segment BE. Complete histological clearance of BE is possible from the first treatment session but most patients will require more than one session. Follow up studies are required to evaluate long term outcomes.

P390
THE ACCURACY AND SAFETY OF ESOPHAGEAL CAPSULE ENDOSCOPY FOR THE DIAGNOSIS OF BARRETT’S ESOPHAGUS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Purpose: Esophageal capsule endoscopy is a technological advancement in the visualization of the esophagus and may have utility in screening patients for Barrett’s esophagus (BE). The aim of this study was to systematically review the evidence relating to the diagnostic accuracy and safety of esophageal capsule endoscopy.

Methods: Relevant articles were identified by searching Medline through October 2007 and through manual searches of bibliographies of each citation. Our search identified 10 articles; 5 of these met inclusion criteria. Two authors independently abstracted data on study and patient characteristics, data regarding studies design and results were abstracted by two authors for each study which resolved discrepancies by consensus. Descriptive statistics and weighted means were performed for major outcomes. Heterogeneity was defined as p >0.05 using a chi-squared test.

Results: So far 30 patients have been enrolled. Of these, 23 have completed the first visit and are included in this analysis. Mean age was 60.8 years and most patients were males (95.6%) and White (87.0%). Sixteen patients (70%) had no dysplasia and the rest had low grade dysplasia (LGD) or were indeterminant for dysplasia. The mean length of the Barrett’s segment was 3.2 cm (range: 1-6 cm). All patients had some ER with improvement noted on endoscopy after the first treatment. Seven patients (30.4%) had CHR. The mean length of the BE segment as different between the group with CHR and the partial responders (2.3 vs 3.6 cm, p=0.3). None of the patients with complete endoscopic response had intestinal metaplasia on biopsies. No significant adverse events were reported in any of the patients.

Conclusion: BARRX ablation is safe for the treatment of short segment BE. Complete histological clearance of BE is possible from the first treatment session but most patients will require more than one session. Follow up studies are required to evaluate long term outcomes.

Disclosure: Thruresshail, Gianaokar, MD - Eisai consultant; Shami Varughese, MD - Eisai employee; Richard Kao, MD - Eisai employee; Caroline Thompson, MD - Eisai employee; Guillermo Rosent, MD - Eisai employee; Y. H. Shail, MD, MPH - Eisai employee; This research was supported by an industry grant from Eisai Inc.

P391
LONG-TERM SAFETY OF TAK-390MR, A PPI WITH A NOVEL DUAL DELAYED RELEASE FORMULATION, IN GERD PATIENTS

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Purpose: TAK-390, a novel modified release formulation of TAK-390 (an enantiomer of lanoprazole), produces a 2-peaked plasma drug concentration-time profile designed to extend the duration of acid suppression. TAK-390MR releases drug over a longer period than conventional delayed release PPIs and thus requires higher daily doses. The purpose of this study was to assess the long-term safety of TAK-390MR using interim data from an ongoing randomized, open-label, extension study in nonoperative GERD patients.

Methods: Patients received TAK-390MR 60 mg (N=153) or 90 mg (N=160) orally once daily (QD) for 12 months (mo). Between-group comparisons were made using Fisher’s exact test for adverse events (AEs), and 1-way ANOVA for mean changes of vital signs and laboratory val-
uses from baseline to mo 1, 3, 6, 9 & 12. Gastric biopsies performed at mo 12/Final Visit were tabulated by treatment and between-group comparisons were made using Fisher’s exact test. Results: Of 513 patients receiving drug, 71% and 66% on TAK-390MR 60 and 90 mg experienced ≥1 AE. The most frequently reported treatment-emergent AE (TEAE) was upper respiratory infection (14% for each group); only 1 was considered to be related to study drug. Other frequent TEAEs reported in ≥10% of patients respective were GI & abdominal pain (7%/13%); nausea & vomiting (8%/11%); headaches (7%/9%); musculoskeletal & connective tissue signs & symptoms (7%/4%); fatigue, bloating & dyspepsia (4%/7%). No statistically significant differences between treatment groups or dose-related trends were observed. 197 patients (105 on 60 mg/92 on 90 mg) completed ≥4 wk treatment; 12% discontinued due to an AE (most were GI related). The most common AE leading to premature discontinuation was diarrhea (3%). 19 patients (6%) reported serious TEAEs, 2 were considered possibly related to treatment (chest pain; auditory hallucination). 3 patients died of unrelated causes (asthma, leukemia, sepsis). As expected with PPI therapy, increases in mean fasting serum gastrin were seen at mo 3, 6, 9, and 12 and were not dose related. No clinically meaningful treatment differences were seen in labs, vital signs or gastric biopsy results. No reports of clinically concerning changes of adenocarcinoma or ECL-cell hyperplasia were observed on gastric biopsies.

Conclusion: TAK-390MR 60 and 90 mg QD were well tolerated for up to 12 mo. The safety profile was similar to that seen in trials with lanoprazole.

Disclosure - Aruna Dabholkar, Peter Yu and Maria Paris all are TAP employees, TAP Pharmaceutical Products Inc., Lake Forest, IL.

P392

RADIOFREQUENCY ABLATION OF BARRETT'S ESOPHAGUS MAY EXACERBATE EOSINOPHILIC ESOPHAGITIS

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Purpose: It is unknown not if the co-existence of eosinophilic esophagitis (EoE) and Barrett’s esophagus (Barrett’s) may affect the safety or efficacy of endoscopic ablation therapy or the activity of EoE.

Methods: Two patients with dysplastic Barrett’s underwent circumferential and focal endoscopic radiofrequency ablation (RFA). Patient 1 was treated for EoE (biopsies ± eosinophils) with PPIs, fluticasone, and elimination diet. Biopsies during treatment for EoE and prior to ablation demonstrated inactive significantly milder EoE (focal-20 eosin/ph) and Barrett’s. Patient 2 was treated with PPIs but had no Barrett’s esophagus. Pre-ablation biopsies were not interpreted as EoE, as though numerous focally increased intraepithelial eosinophils and reactive changes were noted. Patient 1, (male, age 49) who had low grade dysplasia (LGD) and focal high grade dysplasia (HGD) underwent RF ablation (Halo 360 followed by single application of Halo 90) to a 5 cm BE segment. Post ablation, squamous epithelium was demonstrated throughout and biopsies showed marked infiltration of squamous epithelium with eosinphils (≥80 eosin/ph). Patient 2 (male, age 60) had LGD and underwent RF ablation (Halo 360 followed by single application of Halo 90) to a 5 cm BE segment. Post ablation, squamous epithelium was demonstrated throughout the esophagus with biopsies showing marked eosinophilic infiltration (too numerous to count), significantly greater than in the two previous sets of biopsies. Neither patient complained of reflux symptoms or dysphagia following ablation.

Results: Patient 1, (male, age 49) who had low grade dysplasia (LGD) and focal high grade dysplasia (HGD) underwent RF ablation (Halo 360 followed by single application of Halo 90) to a 10 cm segment of BE. Post ablation, squamous epithelium was demonstrated throughout and biopsies showed marked infiltration of squamous epithelium with eosinphils (≥80 eosin/ph). Patient 2 (male, age 60) had LGD and underwent RF ablation (Halo 360 followed by single application of Halo 90) to a 5 cm BE segment. Post ablation, squamous epithelium was demonstrated throughout the esophagus with biopsies showing marked eosinophilic infiltration (too numerous to count), significantly greater than in the two previous sets of biopsies. Neither patient complained of reflux symptoms or dysphagia following ablation.

Conclusion: Successful RF ablation was performed in 2 patients with long segment dysplastic Barrett’s. Both cases demonstrated marked eosinophilic infiltration in the neosquamous epithelium following ablation therapy. In one case, the patient had already been successfully treated for EoE. In the other, the patient did not have obvious preexisting EoE but perhaps subclinical or undiagnosed disease. While we speculate that RF injury is the result that results in worsening of histology, the injury did not adversely affect the development of the neosquamous epithelium and did not result in clinical symptoms. It does raise questions as to what factors cause chemical injury aggravate EoE. As the incidence of EoE continues the to rise, the clinical significance of this observation as it relates to endoscopic ablative techniques remains to be seen.

P393

BODY MASS-INDEX (BMI) IS ASSOCIATED WITH INCREASED REFLUX EPISODES BUT DOES NOT AFFECT LOWER ESOPHAGEAL SPHINCTER (LES) CHARACTERISTICS

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Purpose: There is a known association between obesity and GERD, thought to be due to increased intragastric pressure and spatial separation between the lower esophageal sphincter and crural diaphragm. Our aim was to investigate the relationship between BMI, LES characteristics, and frequency of reflux episodes.

Methods: All patients undergoing both esophageal manometry and 24-hour impedance-pH reflux monitoring in 2007-2008 for whom BMI was available were included. We evaluated the association between BMI and the following variables: (a) Manometric lower esophageal sphincter (LES) characteristics: resting pressure, total length, intra-abdominal length, (b) impedance-pH results: % time pH<4 (upright, recurrent, total), number of reflux episodes (acid, nonacid, total) in upright and recurrent position. Association was evaluated by Pearson correlation.

Results: 154 patients were included: 35% male, mean age 53.5 years, mean BMI = 30 (range: 18 – 55). 39% patients obese (BMI ≥ 30), 34% overweight (BMI 25-29.9), 27% normal (BMI < 25). 74% patients were treated on acid suppressive therapy (test-off medication). Correlations between BMI and evaluated variables shown in the table. There was a significant but weak positive correlation between BMI and total number of reflux episodes (r = 0.163, p=0.04). BMI did not correlate with % time pH<4 (possibly because most patients were tested on acid suppressive medication). BMI did not correlate with LES resting pressure, total length, or intra-abdominal length.

Conclusion: Our data shows a positive correlation between BMI and total number of reflux episodes (acid + nonacid). BMI does not correlate significantly with LES pressure or intra-abdominal length, suggesting that the increased reflux may be TLESR mediated because basal LES conditions do not appear to be affected.

P394

TAK-390MR, A NOVEL DUAL DELAYED RELEASE FORMULATION OF A PPL IS BIOTECHNOLOGICALLY EQUIVALENT WHEN ADMINISTERED AS GRANULES SPRINKLED OVER APPLESAUCE OR AS AN INTACT CAPSULE

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Purpose: Alternative oral delivery options are useful for patients who prefer or require administration flexibility. TAK-390 is a Dual Delayed Release™ (DDR) formulation of TAK-390, an enantiomer of lanoprazole, designed to prolong the plasma concentration-time profile of TAK-390 following oral once-daily administration. We compared the bioavailability of TAK-390MR given as granules from an intact capsule sprinkled over applesauce vs as intact capsule. Methods: In this phase 1, open-label, 2-way crossover study, 60 healthy subjects (18-55 years of age) were randomized to 2 sequence groups that determined the order in which they received a single oral dose of TAK-390MR 90 mg administered as granules from a capsule sprinkled over 1 tablespoon of applesauce or as an intact capsule with 240 mL of water after approximately 10 hour fast. The dosing in each of the 2 study periods was separated by a 5-day washout interval. Blood samples were collected predose and up to 24 hours postdose in each period. Plasma concentrations were analyzed by a validated LC-MS/MS assay. Pharmacokinetic parameters were estimated using standard noncompartmental methods. Bioequivalence was assessed by point estimates and 90% CIs for the ratios of the central values for the Cmax, AUC∞, and AUC0-∞ of TAK-390 for administration of TAK-390MR as granules sprinkled over applesauce vs as intact capsule. Results: A total of 50 subjects were included in the bioequivalence analysis. The mean concentration-vs-time profiles for the 2 regimens were nearly superimposable, with the characteristic 2 plasma peaks resulting from the DDR technology. The point estimates and corresponding 90% CIs for the ratios of the central values of the Cmax, AUC∞, and AUC0-∞ of TAK-390 following administration of TAK-390MR as granules sprinkled over applesauce vs as intact capsule were within the bioequivalence range of 0.80-1.25. TAK-390MR was well tolerated in all subjects in this study by either mode of administration. Conclusion: Bioequivalence was demonstrated when TAK-390MR was administered either as granules sprinkled over applesauce or as an intact capsule. This alternative mode of administration may benefit patients who prefer or require an alternate route of administration.

Bioavailability of TAK-390 After Administration of TAK-390MR 90 mg as Granules Sprinkled Over Applesauce Relative to an Intact Capsule

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**Correlation between BMI and LES characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Point Estimate</th>
<th>90% Confidence Interval</th>
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<tr>
<td>Cmax</td>
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<td>0.870–1.023</td>
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<tr>
<td>AUC∞</td>
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</table>

**Disclosure - Richard Czerniak, Majid Vakily and Jingtao Wu all are TAP employees, TAP Pharmaceutical Products Inc., Lake Forest, IL.**
P396
ROLE OF ENDOSCOPIC ULTRASOUND (EUS) IN STAGING OF ESOPHAGEAL CANCER – A RETROSPECTIVE STUDY OF 200 PATIENTS

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Purpose: Endosonography is established as a staging tool for esophageal cancer. Our data evaluated the accuracy of EUS of patients undergone surgical resection for esophageal cancer.

Methods: In our study we analyzed 200 patients with the diagnosis esophageal cancer made in the years 2006-2011. All patients undergoing complete surgical resection could be included. Preoperative Endosonography was performed using a conventional or miniendoscope EUS with mechanical probes. Accuracy of EUS for T and N stages was compared to pathohistological staging. Sensitivity, specificity, and correlation coefficient was applied for statistical significance analysis.

Results: The mean age of the patients included in the study was 75 ± 6.5 years (SD) 20-95. 52% of the patients were adenocarcinomas, 49% squamous cell carcinomas. The esophageal tumor distribution in the upper, middle, and lower esophagus was 8%, 30%, and 62%, respectively. Overall EUS staging accuracy was 50% for T stage and 81% for N stage. The accuracy T1-2 vs T3-4 was 55.8% and 92.3%. In tumor stage I 52.9% of the tumors were overstaged, in stage II 64.5% of the tumors were overstaged. The lowest accuracy could be measured in tumor stage T3, with only 25.6%.

Conclusion: Endosonography is established as a staging tool for esophageal cancer. Our data showed that the accuracy of EUS is 58.3% for tumor stage T 2-3 with consecutive tendency of over- staging. This might be improved in the future by new generation electronic EUS probes. Accuracy for tumor stages 3-4 has already gained an acceptable accuracy of more than 90%.

P397
THE ESOPHAGEAL INLET PATCH: MORE THAN AN INCIDENTAL FINDING?

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Purpose: The “Inlet Patch” (IP) is ectopic gastric mucosa located in the proximal esophagus. There are limited data regarding IP and its clinical significance. Many gastroenterologists are unaware of IP. Most find IP incidentally during endoscopy. However, this finding may have a significant clinical impact. The goal of our study is to evaluate the relationship between the IP and various conditions in the upper GI tract.

Methods: We collected data on 263 patients with and without IP seen at USF Center for Esophageal and Swallowing Disorders over 20 yrs were reviewed. IP was present in 104 patients. Chi-square and Fisher exact test were utilized to evaluate for an association between IP and unreported IP at endoscopy. A total of 263 patients were included in the study. The conditions include: squamous cell carcinoma, esophageal web, Barrett Esophagus (BE), NSAID exposure, pH-induced esophagitis, eosinophilic esophagitis, duodenal ulcer, gastric ulcer, reflux strictures, pernicious anemia, dysphagia, polyps, globus sensation, epigastric pain, and achalasia.

Results: In descending order we found a statistical association between IP and the following: esophageal web; BE; strictures; adenocarcinoma; and dysphagia. The conditions include: squamous cell carcinoma, esophageal web, Barrett Esophagus (BE), NSAID exposure, pH-induced esophagitis, eosinophilic esophagitis, duodenal ulcer, gastric ulcer, reflux strictures, pernicious anemia, dysphagia, polyps, globus sensation, epigastric pain, and achalasia.

Conclusion: Finally, a chi-square analysis revealed inlet patch to be more common and statistically significant in males (p=0.003) with no significant ethnic preference (p=0.398). Conclusion: There appears to be a significant relationship between IP and conditions related to increased esophageal acid exposure. This phenomenon could be explained by the production of acid by metabolistic gastric epithelium. Based on our experiences, a slow, staged (1 cm/sec) mucosal examination and pullback of the dose (closed and the addition of narrow band imaging allows improved visualization and detection of the IP).
IS TWO-CHANNEL SYNCHRONIZED, MULTIPONT GASTRIC ELECTRICAL PACING (MGP) ABLE TO CONTROL UPPER GI SYMPTOMS AND IMPROVE GASTRIC EMPTYING IN PATIENTS WITH SEVERE DIABETIC GASTROPARESIS?

2008 ACG Presidential Poster Award Recipient

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Purpose: To investigate the efficacy and safety of MGP in gastroparesis (GP) symptom control, clinical outcome and gastric emptying (GET) in diabetic gastroparesis (DMGP) after 6 weeks of active stimulation.

Methods: Twenty-two patients (11F, 11M), mean age 42 (range 27-60) with severe symptoms of DMGP and delayed GET were enrolled in double-blind, placebo controlled study with 6 weeks of open-label, active stimulation being the first phase of the study. Mean duration of DM 18 (range 4-39) and mean duration of GP was 6 (range 1-16). While implanting Enterra device (internal stimulator which was not activated during MGP trial) 4 pairs of temporary pacing wires were placed on the serosa of greater curvature of the stomach at 3 to 16 cm proximal to the pylorus. Two of these pairs (16 & 12 cm from the pylorus) were utilized for stimulation while the glucose level on day of GET was 161 mg% at baseline and 185 mg% at follow up. Conclusion: A 7-day regimen of nitazoxanide, lansoprazole, and amoxicillin twice daily is effective for the eradication of HP infection in treatment naïve patients. Due to increasing resistance patterns observed with clarithromycin and metronidazole, nitazoxanide may offer a valuable alternative to these medications as a foundation for HP therapy.

Disclosure - All authors- Grant/Research Support: Laboratorios Roemmers- Argentina

P402

Efficacy and Safety of S-1 Based Chemotherapy in Patients with Advanced Gastric Adenocarcinoma: A Single Institute Retrospective Study

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Purpose: To evaluate the efficacy and toxicity of S-1 based chemotherapy in patients with advanced gastric adenocarcinoma.

Methods: Ninety patients with untreated advanced gastric cancer were enrolled in the study. Patients were enrolled from the 6th to 8th week and were considered cured. Treatment compliance was good, and no major side effects were recorded. Conclusion: A 7-day regimen of nitazoxanide, lansoprazole, and amoxicillin twice daily is effective for the eradication of HP infection in treatment naïve patients. Due to increasing resistance patterns observed with clarithromycin and metronidazole, nitazoxanide may offer a valuable alternative to these medications as a foundation for HP therapy.

Disclosure - All authors: Grant/Research Support: Laboratorios Roemmers- Argentina

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P401

EFFICACY OF A NITAZOXANIDE BASED REGIMEN FOR HELICOBACTER PYLORI (HP) ERADICATION

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Results: Between May 2002 and March 2008, 75 (7.9%) of total patients with gastric malignancies received chemotherapy and that of the patient with BSC alone. 2) MST and the response rate ( RR ) for the first line therapy: S-1 alone, S-1 plus cisplatin, S-1 plus taxans, and S-1 plus irinotecan, etc. 3) Safety and toxicity of above mentioned regimens. 4) The efficacy of the second-line chemotherapy.

Conclusion: Chemotherapy with S-1 included regimen were well tolerated for patients with unresectable and metastatic gastric adenocarcinoma.
EFFECT OF ENDOSCOPIC ULTRASOUND’S TECHNOLOGY IN DIAGNOSING VARIOUS T STAGES OF GASTRIC CARCINOMA: A META-ANALYSIS AND SYSTEMATIC REVIEW

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Purpose: Prognosis and treatment of patients with gastric cancer (GC) depends largely on the T staging of the tumor. The published data on effects of changes in endoscopic ultrasound (EUS) technology on accuracy of T staging in GC cancer patients has been varied. The aim of this meta-analysis was to evaluate the effect of EUS technology in diagnosing various T stages of GC cancers.

Methods: Study Selection Criteria: Only EUS studies confirmed by surgery were selected. EUS criteria used for T staging were: T1- the tumor invades the lamina propria or submucosa but does not involve the muscularis propria, T2- the tumor invades but does not extend beyond the muscularis propria, T3- the tumor invades the peritumoral tissues but does not invade adjacent organs, and T4- the tumor invades adjacent structures. Data collection & extraction: Articles were searched in Medline, Pubmed, Ovid journals, CINAHL, International pharmaceutical abstracts, old Medline, Medline nonindexed citations, and Cochran controlled trial registry. Two reviewers independently searched and extracted the data. The differences were resolved by mutual agreement. 2 X 2 tables were constructed with the data extracted from each study. Statistical Method: Meta-analysis for the accuracy of EUS was analyzed by calculating pooled estimates of sensitivity, specificity, likelihood ratios, and diagnostic odds ratios. EUS studies were grouped into three time periods to standardize the change in EUS technology and also to standardize the change in EUS criteria for tumor staging. These time periods were 1994 to 1995, 1996 to 2000, and 2001 to 2008. Pooling was conducted by both the Mantel-Haenszel method (fixed-effects model) and by the DerSimonian Laird method (random effects model). The heterogeneity of studies was tested using Cochran’s Q test based upon inverse variance weights.

Results: Initial search identified 132 references. Of these, 239 articles were selected and reviewed. 7 studies (N=442) which met the inclusion criteria were included in this analysis. Pooled accuracy data for T staging over last two decades is shown in Table 1. The pooled estimates of sensitivity were similar for both fixed and random effects models. The p for chi-squared heterogeneity for all the pooled accuracy estimates was > 0.10.

Conclusion: EUS has excellent specificity to accurately diagnose T staging in a patient with GC cancer. The sensitivity of EUS is higher for advanced disease than early disease. This sensitivity of EUS for early diseases did not improve over the past two decades. Further refinements in EUS criteria and technology are needed to improve the sensitivity to diagnose early disease.

P405
SYMPTOMS DURING GASTRIC EMPTYING: SCINTIGRAPHY: CORRELATION WITH SYMPTOMS OF DELAYED GASTRIC EMPTYING

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Purpose: The relationship of symptoms to delayed gastric emptying has been difficult to determine. In most studies, symptoms have been based on patient recall. Recording symptoms during gastric emptying scintigraphy (GES) may be useful to probe the relationship of symptoms to gastric emptying. AIM: To determine if symptoms during daily life correlate with symptoms and GES emptying results during EUS.

Methods: 104 patients undergoing GES between January and April 2008 filled out the Patient Assessment of GI Symptoms Questionnaire (PAGI-SYM), which includes the Gastroesophageal reflux disease (GERD) Symptom Index [GCSI] to assess symptoms prior to the test. During the 4 hour GES with EggBreakers meal (preprandially and at 0.5, 1, 2, 3, 4 hours postprandially), subjects graded six dyspeptic symptoms (abdominal pain, bloating, stomach fullness, nausea, belching and abdominal burning) on a scale of 0 to 3. The sum of the six symptoms represents a Total Symptom Score (TSS) at each time point.

Results: 60 patients met the inclusion criteria (no gastric surgery, no medications affecting gastric emptying). Using the GCSI nausea/vomiting sub-scale, 30 patients had normal gastric emptying, 25 patients had increased gastric retention at 2 and/or 4 hours and 5 patients had rapid gastric emptying. All patients had an increase in symptoms during GES (Baseline TSS of 2.9, 1 hour TSS of 5.3, p<0.001) with a similar increase in patients with delayed and normal GE. There was a moderate correlation between the GCSI nausea/vomiting sub-scale scores in the 2 weeks prior to the test and nausea during the test (0.5 hr: r=0.435; p<0.001; 1 hr: r=0.510; p<0.0001; 2 hr: r=0.554; p<0.0001; 4 hr: r=0.564; p<0.0001). The Post Prandial Fullness and Bloating Sub-scales also showed similar results. In addition, the abdominal pain of the PAGI-SYM correlated with upper abdominal pain during the test (0.5 hrs: r=0.585; p<0.0001; 1 hr: r=0.482; p<0.0001; 2 hrs: r=0.364; p<0.004; 4 hr: r=0.488; p<0.0001). However, of all the symptoms recorded, the only association with gastric emptying data was seen between frequency of vomiting in the 2 weeks prior to the test and gastric retention at 0.5 (r=0.364; p=0.010) and 1 hrs (r=0.290; p=0.043), but not at 2 or 4 hours.

Conclusion: Symptoms in daily life as assessed with the PAGI-SYM correlated with symptoms during GES. There was a positive correlation between the frequency of vomiting in the 2 weeks prior to the test and gastric retention at 0.5 and 1 hrs but not with other symptoms recorded during GES. Interestingly although the high later stages of gastric emptying (0.5-19 mmol) were used to identify delayed gastric emptying, the early stages of gastric emptying may be more helpful to associate symptoms to delayed gastric emptying.

P406
A SINGLE CENTER’S EXPERIENCE WITH EUS SURVEILLANCE OF GASTRIC GISTs

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Purpose: To assess interval size change and management recommendations of gastric GISTs from index surveillance EUS.

Methods: A retrospective chart review of all EUS for presumed gastric GISTs was performed at Duke University Medical Center. Patients with at least one surveillance EUS performed during January 1, 2000 to November 1, 2007 were included. The following EUS findings were recorded: length of follow up, interval size change, use of FNA, and number of exams. For each tumor, the width (x) and length (y) were used to calculate a cross sectional area [x(y/2)]^2

Results: Forty-five patients underwent at least one surveillance EUS for a presumed gastric GIST. The average time interval between index EUS and first surveillance was 15.63 months (+/- 12.97); range 1-59 months. Patients underwent an average of 2.42 (+/- 0.69) procedures within the 7 year interval. FNA was performed in 31.1% patients with a diagnostic yield of 50% (20/40) - 10 patients had leiomyoma (28.6%), 1 patient had neuroendocrine tumor (2.8%), 4 patients had GIST (8.8%); 4 patients had myxoma (3.6%). Surgical excision was recommended in 4 patients: increase in size on surveillance imaging (2), bleeding (1), referring surgeon’s opinion (1). One patient elected for surgical excision. To date, two of the 5 patients who underwent surgical excision had a normal gross pathologic. The presence of a GIST was confirmed by FNA in only one patient. Of the 50% patients who underwent surveillance: 1) only 3 patients (60%) had surgery, 2) only 4 patients (80%) had surgery on abdominal wall GISTs, 3) only 1 patient (20%) had surgery on GISTs. Surgical excision was recommended in 4 patients: increase in size on surveillance imaging (2), bleeding (1), referring surgeon’s opinion (1). One patient elected for surgical excision. To date, two of the 5 patients who underwent surgical excision had a normal gross pathologic. The presence of a GIST was confirmed by FNA in only one patient. Of the 50% patients who underwent surveillance: 1) only 3 patients (60%) had surgery, 2) only 4 patients (80%) had surgery on abdominal wall GISTs, 3) only 1 patient (20%) had surgery on GISTs. Surgical excision was recommended in 4 patients: increase in size on surveillance imaging (2), bleeding (1), referring surgeon’s opinion (1). One patient elected for surgical excision. To date, two of the 5 patients who underwent surgical excision had a normal gross pathologic. The presence of a GIST was confirmed by FNA in only one patient.
**P404**

**Gastric GIST**

**Purpose:** Reactive gastrectis (RG) is known as chemical or reflux gastrectis. It is the second commonest diagnosis made on gastric biopsy specimen in North America. Bile, urea, pancreatic secretions, alcohol, NSAIDs and Helicobacter pylori (Hp) have been suggested as the cause of RG. However, some patients develop RG without these agents. Okadaela gastrococcus (Og) is an intracellular Gram-negative bacterium and is associated with various gastropathies. The aim of this study was to investigate if Og is associated with RG utilizing immunohistochemistry (IHC) and transmission electron microscopy (TEM).

**Methods:** The gastric biopsy specimens obtained at the time of eosin-histo-gastro-duodenscopy from 16 patients (M: 6, F: 11, age 21-80 yrs) with the histological diagnosis of RG and free form NSAIDs, alcohol, smoking, and renal dysfunction were used. The formalin-fixed, paraffin-embedded specimens from 5 patients were examined with Og and Hp IHC. An avidin biotin peroxidase complex method with rabbit polyclonal antibodies against Hp (Dako) and Og were used. The specimens from 9 patients were examined under TEM.

**Results:** 9 (56.3%) patients were bile positive at the time of the endoscopy. 14 (87.5%) patients had gastric erosions. All specimens examined under TEM or Og IHC was found to be Og positive. Og was also in the lamina propria including leukocyte, macrophage, vascular endothelial cells, and in the area of intestinal metaplasia. All patients were negative for Hp. No significant bile-associated mucosal damage was seen by TEM.

**Conclusion:** The presence of intracellular Og and gastric erosion in RG suggest the possible association. Further investigation is warranted to examine the present findings.

**Disclosures:** Prof. Miwa-Consultant: Takeda Pharmaceutical Co., Ltd., Dainippon Sumitomo

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**P405**

**Intragastric Acid Suppressing Effect of Proton Pump Inhibitors Twice Daily at Steady State in Healthy Volunteers: Evidence of an Unmet Need?**

**Y. Yuan, MD, PhD; R. Hunt, MD, FRCPG, FACG, AGAF Department of Medicine, McMaster University, Hamilton, ON, Canada.**

**Purpose:** Proton pump inhibitors (PPIs) are the most effective medications for acid-related disorders but there are still some unmet needs with currently approved “delayed-release” (DR) PPIs. PPIs are commonly used twice daily (BID) when patients do not respond to standard, once-daily PPI or have nocturnal symptoms. However, little is known of the intragastric acid suppressing effect of PPIs BID especially in patients.

**Methods:** A comprehensive computer-aided literature search was conducted (PUBMED and MEDLINE up to Feb.2008) for published, English-language pharmacodynamic studies of intragastric acidity with standard doses of currently approved DR-PPIs used BID at steady state (5-7 days) in healthy volunteers, with intragastric pH obtained by pH-metry. Mean % pH >3, <4, 4.6 in 24 hr, daytime or nighttime periods were collected and summarized. Since we did not aim to compare between individual PPIs only descriptive analysis was performed.

**Results:** In total, 16 studies with 31 arms (n=600 per arm) met inclusion criteria providing data for 5 DR-PPIs (n=439, some subjects counted more than once due to crossover design). Mean of median pH for 24 hr, day time and nighttime periods, ranged from 4.68 to 6.40, 3.50 to 4.90, 4.63 to <5.00, respectively. Mean pH <4 in 24 hr, day time and nighttime periods, ranged from 10.4 to 30.5, 7.0 to 23.7, 15.4 to 36.4, respectively (table). Mean of mean % time pH <3 for 24 hr, day time and nighttime ranged from 5.2 to 18.8, 3.8 to 20.5, 3.0 to 27.5 respectively.

**Conclusion:** When standard dose DR-PPIs are given BID in healthy volunteers for 5-8 days, although 24 hour median pH attains a4.6, up to one third of the daytime may show increased intragastric acidity with 15.4% of the nighttime having pH <4 and <3 respectively. Interestingly, esomeprazole 40mg BID in healthy volunteers still resulted in 15% of the nighttime with intragastric pH <4. Thus, in those who reflux, this period of acidity is 4 fold longer than the Johnson & DeMeester criterion for gastroesophageal acid reflux (distal esophageal pH c4.0 for more than 4.2% of the time). In patients who reflux and need PPI BID most will have pathological nocturnal reflux after midnight since the supine time is associated with more reflux events.

Twice daily DR-PPIs may still not adequately control night time acidity in all patients.

---

**Table:**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mean % time pH 4 after standard dose PPIs BID at steady state (day 5-8) in healthy volunteers (mean (min-max), n)</th>
<th>24 hr</th>
<th>Daytime</th>
<th>Night-time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esomeprazole 40mg BID</td>
<td>15.2 (5.0-19.9), 2 (55)</td>
<td>19.0 (1, 25)</td>
<td>15.4 (14.6-16.3), 2 (55)</td>
<td></td>
</tr>
<tr>
<td>Esomeprazole 20mg BID</td>
<td>26.5 (20.6-27.9), 2 (38)</td>
<td>22.5 (15.0-30.0), 2 (38)</td>
<td>20.6 (20.8-31.9), 2 (38)</td>
<td></td>
</tr>
<tr>
<td>Rabeprazole 20mg BID</td>
<td>10.4 (4.5-16.2), 2 (23)</td>
<td></td>
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<tr>
<td>Lansoprazole 30mg BID</td>
<td>30.5 (20.5-36.0), 2 (22)</td>
<td>7.0 (1, 12)</td>
<td>35.1 (1, 12)</td>
<td></td>
</tr>
<tr>
<td>Omeprazole 20mg BID</td>
<td>19.1 (7.6-26.0), 3 (39)</td>
<td>23.7 (7, 16)</td>
<td>19.0 (8.9-28.3), 3 (38)</td>
<td></td>
</tr>
<tr>
<td>Pantoprazole 40mg BID</td>
<td>29.2 (1, 39)</td>
<td>-</td>
<td>36.4 (1, 30)</td>
<td></td>
</tr>
</tbody>
</table>

**Disclosure:** Dr. Hunt: Consulting or speaker’s Bureau: AstraZeneca, Nycomed, Schering, Salmen/Sieba Biotech; Research support: Nycomed, Schering, Salmen/Sieba Biotech
**P414**

### INTRAPYLORIC BOTULINUM TOXIN INJECTION FOR GASTROESOPHAGEAL REFUX DISEASE: A META-ANALYSIS

S. Choudhury, MD, K. Ismail, MD. Gastrourology, University of Tennessee, Memphis, TN.

**Purpose:** Gastroesophageal reflux disease (GERD) is a significant problem affecting 10 to 15 million Americans. There have been various medical treatments available for gastroesophageal reflux disease with limitations and inability to completely or effectively control symptoms in long term. Intrapyloric injection of botulinum toxin has been proposed as an attractive treatment option in gastroesophageal reflux disease.

**Methods:** Electronic databases for medical literature (Cochrane Central Register of Controlled Trials, MEDLINE,CINAHL) related randomized controlled trials were searched from April 1960 up to April 2008. Two randomized controlled trials, with total of 55 patients, were identified. Review Manager (RevMan Version 5.0 Copenhagen: The Cochrane Collaboration, 2008) was used for statistical analysis.

**Results:** Pooled analysis for improvement in Gastroesophageal Cardial Symptom Index (GCSI) did not show any statistically significant improvement with intrapyloric botulinum toxin as compared to controls (relative risk [RR], 0.72; 95% confidence interval [CI], 0.51-1.27). Gastric emptying study (GES) could not be compared due to marked difference of method for measurement between two studies. However, none of the individual studies showed any statistical difference in GES with botulinum toxin.

**Conclusion:** Intrapyloric injection of botulinum toxin does not improve GCSI score or gastric emptying study in patients with gastroesophageal reflux disease.

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**P412**

### HEALING OF GASTRIC ULCERS ASSOCIATED WITH LOW-DOSE ASPIRIN USE IN PATIENTS CONTINUING TO TAKE LOW-DOSE ASPIRIN

L. L. Goldenstein, MD, L. J. Suchower, MA, K. A. Brown, MD, 1. University of Illinois at Chicago, Chicago IL; 2. AstraZeneca LP, Wilmington, DE.

**Purpose:** Few published data exist on healing of gastric ulcers (GUs) associated with low-dose aspirin (MDA) use, despite the widespread use of LDA for prophylaxis of cardiovascular events. This exploratory, post hoc analysis evaluated the efficacy of esomeprazole and ranitidine for the healing of GUs associated with the use of LDA only (80–325 mg/d).

**Methods:** In 2 identically designed, double-blind, multicenter studies (SH-NEN-0005/0006; 11. M. J. Gastroenterol 2005;180:2650-57; Aileen Pharmacol Ther 2007;26:1101-11), adult patients who screened negative for Helicobacter pylori infection, had confirmed GUs (diameter 5 mm, but not >25 mm), and were receiving daily cycl皇家enogen-2 (COX-2)-selective or nonselective nonsteroidal anti-inflammatory drugs (NSAIDs), including LDA only (80–325 mg/d), were randomized to receive esomeprazole 40 or 20 mg once daily or ranitidine 150 mg twice daily for 8 weeks. For both studies, patients continued to take their existing LDA/NSAID therapy for the study’s duration. Patients underwent repeat endoscopy at week 8 to assess GU healing, the primary end point for both studies. For this post hoc analysis, data for both esomprazole 20- and 40-mg dose groups combined. bSignificantly different from ranitidine for the healing of GUs associated with the use of LDA only (80–325 mg/d).

**Results:** Of 809 patients in the combined intention-to-treat population, 88 patients were taking LDA only and were randomly distributed among the 3 treatment arms: esomeprazole 40 mg, n = 34; esomeprazole 20 mg, n = 34; and ranitidine 150 mg, n = 20. For the LDA-only group, the distribution of patients by daily LDA use was as follows: 80-84 mg, n = 23; 100-125 mg, n = 8; 160-182.5 mg, n = 7; 250 mg, n = 7; 325 mg, n = 43. At week 8, a statistically significant difference in GU healing rates was seen for esomeprazole versus ranitidine (Table). The trends reported in this analysis provide feasibility data to support further study.

**Conclusion:** Intrapyloric injection of botulinum toxin does not improve GCSI score or gastric emptying study in patients with gastroesophageal reflux disease.

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### P413 THE INTERRELATIONSHIP BETWEEN GASTRIC PH AND THERAPEUTIC RESPONSE TO ESOMEPRAZOLE IN PATIENTS WITH UNINVESTIGATED DYSPESIA

M. Majecki, MD, PhD,1 J. Sarosiek, MD, G. Wallner, MD, PhD, J. Sarosiek, MD, PhD, 1. Medicine/GI/Motility Center, KUMC, Kansas City, KS; 2. 2nd Department of General Surgery, Med University of Lublin, Lublin, Poland.

**Purpose:** Management of dyspepsia remains a challenge both in research and clinical practice. Pharmacological therapy, targeting gastric acid suppression results in relief of symptoms in majority of patients complaining of epigastric pain/discomfort related to uninvestigated dyspepsia; however, the relationship between symptom relief and the degree of acid suppression has not been adequately explored. Therefore, the aims of the study were as follows: 1. To evaluate the impact of esomeprazole vs. placebo on gastric acid during 24h pH monitoring. 2. To assess the relationship between relief of dyspepsia symptoms and change in 24h gastric pH. 3. To evaluate the impact of esomeprazole vs. placebo on gastric acid during 24h pH monitoring.

**Methods:** This randomized, double-blind trial was conducted on KUMC patients with uninvestigated dyspepsia, diagnosed as: to Rome II criteria, with at least moderately severe symptoms of epigastric pain/discomfort. Patients with heartburn or regurgitation as their predominant daily dietary problem were excluded. Patients (mean age of 44.2; 62.2% F) were randomized to placebo (N=35) or esomeprazole (N=38) 40 mg QD groups. Primary end points were satisfaction rates of pain relief and improvement of quality of dietary problem each visit, quality of life questionnaire, and global overall symptoms assessment. Gastric pH was monitored for 24h at baseline and after 4 and 8 weeks of therapy, using dual lumen catheter and pH Monitoring System (Sandhill Sci.).

**Results:** Both responders (R) and non-responders (NR) exhibited similar baseline gastric acid secretion at distal (D) and proximal (P) probe: pH >4.0 in min 20min DM, 17min NRD, 64min RPM and 62min NRP, respectively. Administration of esomeprazole for 4 weeks resulted in profound inhibition of gastric acid secretion reflected by significant (P<0.001) increase in time pH>4.0 both among R and NR at D and P pH probe locations. During 2nd therapy interval R exhibited, however, higher degrees of gastric acid inhibition, 361% (P<0.001) increase in time pH>4.0 after baseline value in D probe, whereas NR only 157% (P=0.12) increase. Higher degree of gastric acid inhibition, 162% (P<0.001) over baseline value, was also revealed in the probe in R vs. only 97% increase in NR (P=0.22).

**Conclusion:** Intragastric pH monitoring before and after therapy may help to address interrelationship between symptomatic relief of dyspepsia symptoms and gastric acid secretion inhibition and could potentially help to tailor individual therapy. Esomeprazole, 40 QD, provides profound inhibition of gastric acid secretion as reflected in time pH>4.0 in patient with dyspepsia accompanied by significant relief of symptoms. This research was supported by an industry grant from Supported by a grant from AstraZenea LP to Dr. Jerzy Sarosiek (PI.).
Conclusion: In this cohort of patients, 17% of ERCPs were avoided based on the EUS findings, with likely cost savings and risk reduction. For patients with IARP combined EUS-ERCP identified a low-risk cancer scenario in 70% of the time vs. the average 50% EUS added only 20 minutes to the overall procedure time. Combination EUS/ERCP performed under the same sedation is a logistically efficient way to efficiently investigate pancreatic and biliary disorders.

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EUS-FNA AND ERCP AS A SINGLE TANDEM PROCEDURE: SAFETY AND OUTCOMES

Y. Kim, MD,1 J. Vega, MD,2 S. Mallery, MD,1 R. Li, MD,1 T. Kinney, MD,2 K. Gupta, MD, MPH,3 K. Safdar, MD,1 M. Freeman, MD1. 1. Internal Medicine, Gacheon Gil Medical Center of Gachon University, Incheon, South Korea; 2. Internal Medicine, University of Minnesota, Minneapolis, MN.

Purpose: ERCP performed immediately after EUS-FNA is believed by some to have a risk of pneumatic dissection of the FNA tract, or to compromise success of ERCP. The aims of this study were to evaluate the safety and feasibility of performing EUS-FNA after ERCP.

Methods: A prospective database was queried for patients having same-day EUS and ERCP over an 8 year period at a single center. Of 547 such tandem procedures only those undergoing EUS-FNA were included. All were performed for suspected mass or biliary obstruction. All were performed under the same anesthesia or sedation. FNA was interpreted on-site by EUS-FNA endoscopists. Complications were defined by consensus criteria.

Results: ERCP was performed immediately after EUS-FNA in 118 pts. (mean age 67 [range 29-91], 112 with general anesthesia and 6 MAC or GI nurse sedation. EUS-FNA was transduodenal (n=102), transgastric (n=2), transphageal (n=1) or not reported (n=11). FNA was performed on pancreas (n=94), lymph nodes (n=7), bile duct (n=6), liver (n=2), gall bladder (n=2) and/or ampulla (n=1). Gauge of needles was 25 (n=115), 22 (n=5) and 19 (n=2), mean # needle passes was 2.73 ± 1.27 (range 1-7). FNA final cytology was positive for malignancy in 95; atypical in 6; high grade dysplasia in 2; benign in 11, non-diagnostic in 4. There were no cases in which preliminary interpretation of malignancy was later changed to benign. Based on EUS and imaging findings alone in 103 patients with malignancy, 76 patients were judged potentially resectable or borderline (candidates for neoadjuvant therapy), 14 locally advanced, and 13 metastatic.At ERCP, 102/118 patients had native papilla without prior stent. Bile duct cannulation was performed with routine methods (papillotomy or cannula with guidewire) in 117, and needle knife precut in 1, with endoscopic sphincterotomy was performed in 96. Access was achieved in 117/118 (99%), the single failure drained by PTC. Stents placed were metallic in 70 (some for neoplastic/ductogram or poor sphincterotomy result), plastic in 39, nasobiliary drain in 1 and no drainage necessary in 7. Complications occurred in 2/118 (1.7%); moderate post-ERCP pancreatitis in 1 and retroperitoneal air from needle knifeprecut in 1.

Conclusions: ERCP after EUS-FNA complications directly as a result of tandem EUS-FNA and therapeutically successful ERCP in 99%. Tandem EUS/ERCP allowed diagnosis, staging and palliation usually with a single procedure that otherwise often requires 3 procedures; EUS, then ERCP with stent exchange.

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SERUM PEPSON INLEVEL, ATROPHIC GASTRITIS AND THE RISK OF INCIDENT INCANCER – A LONG-TERM PROSPECTIVE STUDY

P. R. Taylor, MD, ScD,1 J. Viramontes, MD,1 D. Albonesi, MD,2 R. Z. Stolzenberg-Solomon, PhD.1. 1. Cancer Prevention Fellowship Program, National Cancer Institute, Bethesda, MD; 2. Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MD.

Purpose: Atrophic gastritis is a pre-malignant condition for gastric cancer and is characterized by low serum pepsinogen I level. Therefore, we hypothesized that low serum pepsinogen I level may be associated with an increased risk of incident pancreatic cancer and tested this hypothesis in a long-term prospective study.

Methods: The Alpha-Tocopherol, Beta-Carotene Cancer Prevention (ATBC) Study was a randomized, double-blind, 2 x 2 factorial, placebo-controlled trial in Finland that evaluated whether supplementation with alpha-tocopherol and/or beta-carotene prevent cancers among male smokers. The analytic cohort in this study included 22,234 participants who had serum pepsinogen I level measured using serum samples collected at baseline (1985 - 1988) and during follow-up (3 years after enrollment). Of these, 2,190 (9.8%) had low serum pepsinogen I levels (<25 mcg/l) at baseline or follow-up and were invited for gastroscopy. Gastroscopy was completed in 1,344 (61.4%) of the invited subjects, of whom 1,219 (90.7%) were histologically confirmed to have atrophic gastritis. We used Cox proportional hazards regression to estimate the risk of incident pancreatic cancer.

Results: During a mean follow-up of 11.8 years (2,021,113 person-years), 223 incident pancreatic cancers were diagnosed. The incidence rates were 8.9, 9.0, and 9.6 per 10,000 person-years of follow-up for participants with normal serum pepsinogen I, low serum pepsinogen I, and histologically-confirmed atrophic gastritis, respectively. There was no association between low serum pepsinogen I level and incident atrophic gastritis (HR=0.94; 95% CI: 0.50-1.80) with incident pancreatic cancer when compared to subjects with normal serum pepsinogen I levels in multivariate analyses.

Conclusion: Atrophic gastritis, confirmed by low serum pepsinogen I as its biomarker, was not associated with an increased risk of pancreatic cancers among Finnish men. These findings do not provide evidence for usefulness of serum pepsinogen I as a screening test for pancreatic cancer.

ABSTRACTS

Poster Abstracts – Monday, October 6

Comparison of trainees’ pre- and post- practice scores

linear analogue scales to assess 1. Realism (1=very unrealistic, 10=very realistic) compared with human ERCP: anatomy, tissue pliability, papillary anatomy, visual realism; skills, cannulation, wire manipulation, papillotomy; and simulated fluoroscopy. 2. Instructional tool: the mechanical simulator in comparison with human ERCP. 3. Practice benefit: learning to human ERCP: anatomy, tissue pliability, papillary anatomy, visual realism; skills, cannulation, wire manipulation, papillotomy; and simulated fluoroscopy. 2. Instructional tool: the mechanical simulator in comparison with human ERCP.

Conclusion: Trainees evaluated the mechanical simulator as superior to computer simulator for ERCP practice.

Comparison of trainees’ pre- and post- practice scores

Data = means ± SEM.

* Comparison in change in scores, paired t test. § Versus pre-practice scores, p<0.05 is significant, paired t test.

Understanding and confidence scores measured on a five point scale (5=very, 1=none). The expectation questionnaire: 1. How logical is(=not logical; 10=logical)? 2. How confident trainees practice in improving ERCP skills (=not confident; 10=confident)? 3. Confident in recommending simulator practice to colleagues (=not confident; 10=confident)? 4. Willing to undergoing simulator training (=not willing; 10 = willing)? Credibility score is sum of scores.

Evaluations of the simulator after practice

<table>
<thead>
<tr>
<th>Categories</th>
<th>Computer</th>
<th>Mechanical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realism compared to human ERCP</td>
<td>34.03±3.4</td>
<td>48.18±3.4</td>
</tr>
<tr>
<td>Usefulness as an instructional tool &amp; practice</td>
<td>34.11±1.9</td>
<td>49.02±2.2</td>
</tr>
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</table>

Data = means±SEM. p<0.05 is significant, Wilcoxon signed-rank test. Trainees (N=7).

<table>
<thead>
<tr>
<th>Score</th>
<th>Computer (N=7)</th>
<th>Mechanical (N=7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>Post</td>
<td>Change</td>
</tr>
<tr>
<td>Understanding</td>
<td>12.9±1.0</td>
<td>14.3±0.6</td>
</tr>
<tr>
<td>Confidence</td>
<td>10.7±1.1</td>
<td>12.3±1.3</td>
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<tr>
<td>Credibility</td>
<td>25.4±2.7</td>
<td>26.7±2.6</td>
</tr>
</tbody>
</table>

Data = means±SEM. p<0.05 is significant, Wilcoxon signed-rank test. Trainees (N=7).

Data = means±SEM. p<0.05 is significant, Wilcoxon signed-rank test. Trainees (N=7).

Poster Abstracts – Monday, October 6

ABSTRACTS

Poster Abstracts – Monday, October 6

abcd
Omaña, MD FRCP F

over 12 hrs [Heterogeneity test, p=0.84, I²=0.0%], and 0.32 [0.17-0.60] for high dose somatostatin [Heterogeneity test, p=0.61, I²=0.0%], 0.3 [0.12-0.74] for somatostatin administered (pooled relative risk [95%CI], 0.87 [0.38-1.98] in random effects model [Heterogeneity test, p<0.05]. There were also significant improvement in post practice understanding, confidence and credibility scores (see Table).

Results: 28 trainees at 7 workshops completed practice papillotomy using the ERCP mechanical simulator and disposable papilla facilitate trainees’ understanding of the essence of a “perfect cut” based on expert consensus.

Trainees’ pre and post papillotomy practice understanding, confidence and credibility scores

<table>
<thead>
<tr>
<th>Categories</th>
<th>Maximum score</th>
<th>Pre-practice (median [25-75%ile])</th>
<th>Post-practice (median [25-75%ile])</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Score</td>
<td>5</td>
<td>3.5 (3.0-4.0)</td>
<td>5.0 (4.5-5.0)</td>
<td>&lt;0.001</td>
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<tr>
<td>Confidence Score</td>
<td>5</td>
<td>3.0 (2.0-4.0)</td>
<td>4.0 (4.0-4.8)</td>
<td>&lt;0.001</td>
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<tr>
<td>Credibility Score</td>
<td>5</td>
<td>37.5 (34.5-40.5)</td>
<td>45.5 (43.8-49.0)</td>
<td>0.001</td>
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</tbody>
</table>

Poster Abstracts – Monday, October 6
CURRENT SMOKING IS AN INDEPENDENT PREDICTOR OF CHRONIC PANCREATITIS
B. Law, DO, T. Stevens, MD, M. A. Parsi, MD, G. Zuccaro, MD. Digestive Disease Institute, Cleveland Clinic Foundation, Cleveland, OH.

Purpose: Smoking has been shown to accelerate the progression of existing chronic pancreatitis (CP). It is not known whether smoking causes CP because of potential confounding by alcohol. The aim of this study was to determine the association of smoking with CP adjusting for alcohol and other clinical variables.

Methods: Patients referred with abdominal pain and suspected CP underwent a combined endoscopic ultrasound (EUS) and secretin endoscopic pancreatic function test (PPT). CP was diagnosed when both EUS (≥4 criteria) and PPT (peak bicarbonate concentration ≤90 mEq/L) were abnormal or if EUS revealed calcifications. Logistic regression was used to determine the association (odds ratio, OR) of current smoking with CP while adjusting for other risk factors. Predictor variables with p<0.15 from the univariable analysis were included in the multivariable model.

Results: 200 consecutive patients were included; 55% (28%) had CP. Of the 55 patients with CP, 19 (35%) were neither heavy drinkers nor current smokers, 20 (36%) were heavy drinkers and current smokers, 10 (18%) were current smokers but not heavy drinkers, and 11 (11%) were heavy drinkers but not current smokers. Current smoking was a significant independent predictor of CP (OR 2.3, 95% CI 1.1, 5.0). Other significant predictors included male gender, history of heavy alcohol use, and history of acute pancreatitis. No significant interactions were found between smoking and the other variables (including alcohol).

Conclusion: Current smokers are more than twice as likely as non-smokers to have CP adjusting for age, gender, alcohol consumption, and history of acute pancreatitis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Stratum</th>
<th>N (%)</th>
<th>Univariable analysis</th>
<th>Multivariable analysis</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Male gender</td>
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<tr>
<td>No</td>
<td>125(63)</td>
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<tr>
<td>&lt;30</td>
<td>34(17)</td>
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<tr>
<td>≥60</td>
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<td>BMI category</td>
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<tr>
<td>&lt;24</td>
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<tr>
<td>≥32</td>
<td>48(24)</td>
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</tr>
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<td>African American race</td>
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<td>Yes</td>
<td>15 (8)</td>
<td>1.0 (0.2,3.1)</td>
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<td>Yes</td>
<td>49(25)</td>
<td>4.8 (3.4,9.5)</td>
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<td>3.3 (1.4,7.7)</td>
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<td>No</td>
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<td>Yes</td>
<td>71(36)</td>
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<tr>
<td>Yes</td>
<td>63(32)</td>
<td>3.3 (1.7,6.2)</td>
<td>&lt;0.001</td>
<td>3.6 (1.7,7.6)</td>
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<tr>
<td>No</td>
<td>137(78)</td>
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</tbody>
</table>

BM1-body mass index, OR=odds ratio, CI=confidence interval.
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ASSESSING MALNUTRITION RISK IN OUTPATIENTS WITH PANCREAS EXOCRINE INSUFFICIENCY (PEI)

A. Tanum MD, D. Coakley MS, K. Repas BS, B. Wu MD, MPH, P.A. Banks MD, Women’s Hospital, Boston, MA.

Purpose:

We collected data on patients with pancreas exocrine insufficiency (PEI) at a tertiary academic center. Our primary outcomes were 1) the prevalence of malnutrition in patients with PEI, and 2) the prevalence of malnutrition in controls as defined by the MUST and MNA screening tools. The study was performed using data collected in the gastroenterology clinic over a 3-year period.

Methods:

We have identified patients with pancreatic exocrine insufficiency based on clinical and laboratory criteria. We also collected data on demographic characteristics, chronic pancreatitis, and history of bariatric surgery in these patients. The prevalence of malnutrition was determined using the MUST and MNA screening tools. We compared the prevalences of malnutrition between patients with and without chronic pancreatitis. Differences were analyzed using chi-squared test.

Results:

Among 204 patients with chronic pancreatitis, 28% had a MUST score of 2 or more, indicating a high risk of malnutrition. The prevalence of malnutrition was comparable between patients with and without chronic pancreatitis (28% vs 32%, p=0.58). A similar trend was observed when using the MNA, with 15% of patients with chronic pancreatitis having a MNA score of 12 or less, indicating a high risk of malnutrition (15% vs 18%, p=0.56).

Conclusion:

The prevalence of malnutrition was not significantly different between patients with and without chronic pancreatitis. However, a high prevalence of malnutrition was observed in patients with chronic pancreatitis, indicating a need for further research to identify the factors contributing to malnutrition in this population. This study highlights the importance of screening for malnutrition in patients with pancreas exocrine insufficiency to improve nutritional outcomes.

P428

EVALUATION OF POST-CHOLECYSTECTOMY COMMON BILE DUCT (CBD) DIAMETER: AN AGE MATCHED STUDY

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Purpose:

We evaluated the relationship between age and post-cholecystectomy common bile duct (CBD) diameter using a universal screening tool. We also compared the CBD diameters between post-cholecystectomy and no-cholecystectomy patients at both proximal and distal sites.

Methods:

We performed a retrospective review of patients who were referred to our pancreatico-biliary clinic from 2010-2019. We compared the CBD diameters between post-cholecystectomy and no-cholecystectomy patients at both proximal and distal sites. The difference was preserved across the age range for our sample (Figure 1).

Results:

The difference was significant with a P<0.005. Though there was a trend towards a longer time to maximal pancreatic duct dilation and lower duodenal filling at peak pancreatic duct diameter in those patients with an intact native sphincter of Oddi, these results were not statistically significant. In addition, there was no difference in those patients who had only a biliary sphincterotomy compared to those with both biliary and pancreatic sphincterotomies.

Conclusion:

Endoscopic sphincterotomy significantly decreases pancreatic duct dilation in response to secretin. Further studies are required to determine the effect of sphincterotomy on the amount of duodenal filling and the rate at which duodenal filling occurs. As S-MRCP is quickly becoming an increasingly utilized non-invasive method for documenting chronic pancreatitis, one must be aware of the absence of a functional pancreatic sphincter or a sphincterotomy (p/s sphincterotomy) when reading S-MRCP to avoid misinterpretation of pancreatic duct function.

Disclosure: D. Burton- Grant/Research Support: ChfRoClin

P429

PRIOR ENDOSCOPIC SPHINCTEROTOMY CAN AFFECT THE INTERPRETATION OF SECRETIN-STIMULATED MAGNETIC RESONANCE CHOLANGIOPANCREATOGRAPHY (S-MRCP)

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Purpose:

Lack of pancreatic duct compliance and decreased duodenal filling on secretin-stimulated magnetic resonance cholangiopancreatography (S-MRCP) has been noted in patients with chronic pancreatitis. As to whether or not endoscopic sphincterotomy (ES) can affect pancreatic duct compliance and duodenal filling on diagnostic S-MRCP is unknown. The purpose of this study was to determine if pancreatic duct compliance and duodenal filling on S-MRCP in patients without evidence of chronic pancreatitis was different in those with and without ES.

Methods:

A retrospective review of patients who were referred to our pancreatico-biliary clinic from 2012-2017 was performed. Those patients who had no evidence of chronic pancreatitis (normal or delayed T1, 1 level, and normal MRI or CT imaging and/or normal endoscopic pancreatic function tests) and who underwent S-MRCP were studied. S-MRCP findings were analyzed, specifically noting change in pancreatic duct size from baseline to max dilation after secretin administration (0.2 mcg/kg IV dose of human secretin), the time to achieve max dilation, and the grade of duodenal filling at peak diameter. A single observer measured and recorded all measurements, and the mean for pancreatic duct diameter change, time to peak change, and duodenal filling were calculated.

Results:

Of the 34 patients studied, 12 had ES and 22 had intact sphincters of Oddi. In the sphincterotomy group, there was a mean change of 0.17mm (range 0.01-0.35), while in the non-sphincterotomy group, the mean change was 0.91mm (range 0.31-1.47) after secretin administration. The difference was significant with a P<0.005. Though there was a trend towards a longer time to maximal pancreatic duct dilation and lower duodenal filling at peak pancreatic duct diameter in those patients with an intact native sphincter of Oddi, these results were not statistically significant. In addition, there was no difference in those patients who had only a biliary sphincterotomy compared to those with both biliary and pancreatic sphincterotomies.

Conclusion:

Endoscopic sphincterotomy significantly decreases pancreatic duct dilation in response to secretin. Further studies are required to determine the effect of sphincterotomy on the amount of duodenal filling and the rate at which duodenal filling occurs. As S-MRCP is quickly becoming an increasingly utilized non-invasive method for documenting chronic pancreatitis, one must be aware of the absence of a functional pancreatic sphincter or a sphincterotomy (p/s sphincterotomy) when reading S-MRCP to avoid misinterpretation of pancreatic duct function.

Disclosure: - Dr. Burton- Grant/Research Support: ChfRoClin

P430

EFFECT OF PANCREATIC DUCT STENT DIAMETER ON RATE OF HOSPITALIZATION IN CHRONIC PANCREATITIS

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Purpose: Chronic pancreatitis is often associated with abdominal pain. In patients with pancreatic duct (PD) dilatation, endoscopic therapy with PD stenting has been shown to be effective at reducing pain. Few studies have compared response to different PD stent diameters. In this study, we retrospectively analyzed the effect of pancreatic duct stent diameter on hospitalization for abdominal pain and follow-up time for each individual. Each patient was placed into one of two groups based on the pancreatic duct stent diameter used: 1) ≤ 5 French (stents ≤ 8.5 mm), and 2) 5 French stents. The main outcome was number of hospitalizations adjusting for varying follow-up time and controlling for age, gender, and etiology of pancreatitis using a negative binomial model.

Results:

One hundred sixty-three patients (107 men) underwent PD stent placement for chronic pancreatitis from October 1995 to September 2007. The mean age was 52 years with a mean follow-up time of three years. One hundred twenty-nine (79%) received predominantly PD stents ≤ 8.5 French and 34 (21%) received predominantly PD stents ≥ 8 French in diameter. There was statistically significant difference in population characteristics between the ≤ 8.5 French and 10 French groups. Using a negative binomial model, the 10 French group had a statistically significant p < 0.003 lower rate of hospitalization (Table 1).

Conclusion:

Patients who receive larger diameter PD stents are likely to have fewer hospitalizations. Prospective studies are needed to compare outcomes related to differences in pancreatic duct stent diameter in chronic pancreatitis.

Table 1: Comparison of CBD diameter between post-cholecystectomy and no-cholecystectomy patients.

<table>
<thead>
<tr>
<th>CBD diameter (mm)</th>
<th>Mean</th>
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<tr>
<td>&lt;60</td>
<td>5.4</td>
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<td>60-70</td>
<td>5.9</td>
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</tr>
<tr>
<td>70-80</td>
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</tr>
<tr>
<td>&gt;80</td>
<td>3.70</td>
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</table>

Figure 1. Lowess curve displaying the CBD diameter by age and cholecystectomy status.
THE YIELD OF REPEAT CHOLANGIOGRAM WITH BALLOON SWEEP AT THE TIME OF BILIARY STENT REMOVAL FOR POST-CHOLECYSTECTOMY BILE LEAK

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Purpose: The endoscopic management of bile leaks after cholecystectomy (CCY) is well established and involves placement of bile duct stents with or without biliary sphincterotomy. The utility, however, of a routine performance of an Endoscopic Retrograde Cholangiogram (ERC) with a bile duct sweep at the time of stent removal has not been clearly established. Our study aim is to describe findings on ERC at stent removal in order to determine if upper endoscopy alone would suffice.

Methods: We queried our electronic endoscopic database for those patients between January 2003 and April 2008 with post-CCY bile leak, who had both an initial ERC with biliary stent placement and follow-up ERC at stent removal. The interval between the two procedures was at a minimum of 4 weeks.

Results: A total of 94 patients (71 women, 76%) were identified. The patients’ ages ranged from 19 to 82 years. The interval of time between CCY and ERC was 8.7 days (mean; range 1 to 41). The interval of time between the two ERCs was 7 weeks (mean; range 4 to 24). At the time of the initial cholangiogram, the source of the bile leak was identified in 85 patients (90.3%) from the following locations: Cystic duct (52 pts; 55%), right hepatic system (22 pts; 23%), left hepatic system (3 pts; 3.1%), and main bile duct (3 pts; 3.1%). The exact source of the bile leak could not be clearly identified in the remaining 11 patients (11.7%). A biliary sphincterotomy was performed in 72 patients (76.5%). A balloon sweep was performed in 51 patients (54%). All patients had a biliary stent placed. On the follow-up ERC, 20 patients were found to have stones or sludge. 12 of these patients (60%) had not had a preceding balloon sweep. There was no association between a previous balloon sweep and presence of stones or sludge on the follow-up ERC (Chi square, p=0.149). Elevator liver enzymes (AST, ALT, alkaline phospha- te) on presentation was also not significantly associated with presence of stones or sludge on follow-up ERC (p=0.582). Three patients had a persistent bile leak and required additional stent placement. Of the twenty patients who had a follow-up ERC at four weeks after the initial ERC, only one patient (5%) had a persistent bile leak.

Conclusion: Patients with post-CCY bile leaks can be successfully treated with stenting and sphincterotomy. A significant number of patients (95%) were successfully treated with a short 4 week duration of stenting. We were not able to predict those patients who had stones or sludge on follow-up ERC based on performance of balloon sweep at initial ERC procedure or presence of elevated liver enzymes. The data suggests continuation of routine performance of follow-up ERC at the time of stent removal in patients with post-CCY bile leaks.

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ALCOHOLIC ACUTE PANCREATITIS OR IDIOPATHIC PANCREATITIS: AN UNCLEAR DISTINCTION

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Purpose: Unlike gallstones, acute intake of alcohol is believed not to be a cause of acute pancreatitis. Alcohol enters the circulation of the pancreas via the common bile duct after a meal. Acute intake of alcohol is believed not to be a cause of acute pancreatitis. Unlike gallstones, alcohol is not believed to cause chronic pancreatitis. The current accepted mechanism for alcoholic acute pancreatitis is not clear. The diagnosis of alcoholic acute pancreatitis is often made in patients with no evidence of chronic disease. In these patients, with alcoholic acute pancreatitis, the diagnosis is made based on the absence of gallstones, a normal triglyceride level and a strong history of alcohol intake despite an otherwise normal appearing pancreas.

Methods: In order to better establish whether patients with acute pancreatitis attributed to alcohol, in the absence of imaging evidence of chronic disease, are indeed due to alcohol, we performed the following study. A consecutive series of patients seen in 1998 for acute pancreatitis were studied.

Results: During the study period, 165 patients were admitted with acute pancreatitis. Of these, 58 were diagnosed as having alcohol as the etiology. 38/58 patients were found to have no evidence of chronic pancreatic disease on imaging, CT and/or MRI. Nine of these 38 patients were identified on follow-up, mean 9.6 years. Of these nine patients with acute pancreatitis attributed to alcohol based on history almost 10 years prior, 7/9 had no further episodes of acute pancreatitis. 5/9 patients described themselves as abstinent from alcohol use. 4/5 continued using alcohol in moderate 3/5, or heavily 1/5. Imaging had been performed within the past year in 6/9. There was no evidence of chronic pancreatitis in any of these patients defined by ductal abnormalities and/or calcifications. 3/9 of these patients had evidence of gallstones on imaging. None of the patients had any evidence of pancreatic exocrine insufficiency. Conclusion: Alcohol was identified in CDRP study, the majority of acute pancreatitis patients defined by ductal abnormalities and/or calcifications. 3/9 of these patients had evidence of gallstones on imaging. None of the patients had any evidence of pancreatic exocrine insufficiency. Conclusion: Although there was limited follow-up, this study suggests that many patients, perhaps most patients with alcoholic acute pancreatitis may have another etiology such as gallstones. Conclusion: A history of alcohol consumption does not mean that alcohol causes acute pancreatitis in the absence of evidence of chronic pancreatic disease at admission.
QUALITY OF LIFE ISSUES IN CHRONIC PANCREATITIS

P. Munchikalan, MD,* J. Savageau, PhD, W. Wassef, MD; 1. Gastroenterology, University of Massachusetts, Worcester, MA; 2. Family Medicine and Community Health, University of Massachusetts, Worcester, MA.

Purpose: Identify crucial issues that may impact the quality of life in chronic pancreatitis patients to help design a tool specific for this group of patients.

Methods: Inclusion criteria (one of the following criteria): pancreatic calcification on CT scan, >4/9 criteria for pancreatic injury on EUS, or positive secretin stimulation test. Exclusion criteria: Age < 18 or > 65, the presence of severe co-morbidities and non-English speaking. Patients who met the inclusion exclusion criteria were invited to participate in a focus group or interview session, based on personal preference. Both types of sessions were conducted by a group coordinator who facilitated the discussion. All interactions were audio taped and subsequently transcribed. Demographic data were compared using t-tests for continuous variables and Chi-Squares for categorical variables. Session content was analyzed using the scissor-and-sort technique and then separated into distinct domains based on themes which will be used to develop items for a quality of life tool.

Results: 40 patients, who met our inclusion/exclusion criteria, were invited to participate in the study. 11/40 of these patients agreed to participate: 4 in group session 1, 5 in group session 2, and 2 in personal interviews. Demographic comparisons between patients who accepted and those who refused to participate in the study were comparable. As expected, most crucial items were within the realm of one of the major domains that impact quality of life: physical function, emotional function, social function, role function and general health function (table 1). However, of note was that some items of concern for these patients were in new domains that were not previously associated with this group of patients: economic function, spiritual function, and miscellaneous group (table 2).

Conclusion: This group of patients is representative of patients with chronic pancreatitis based on demographic comparisons since no selection bias was noted. Furthermore, based on saturation assessment, this number seemed to be sufficient to identify all key issues that may impact patients with chronic pancreatitis. Based on our assessment, any quality of life tool to be used for the evaluation of patients with chronic pancreatitis should include all 8 of these domains. Although this study is helpful to identify key issues that may impact patients with chronic pancreatitis, it is by no means sufficient. Once the tool has been developed, it will need to be evaluated for content validity and psychometrics.

ANALYSIS OF SESSION/THEMES

<table>
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<td>PHYSICAL FUNCTION</td>
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EXPECTED DOMAINS

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<td>DOCTOR BILLS</td>
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<td>HEALTHY FOODS COST MORE</td>
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<td>SPIRITUAL ROLE</td>
<td>IT MAKES ME GRATEFUL FOR RELIGION DOUBT MY FAITH</td>
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<td>CAN’T GO TO CHURCH, HEARTS TOO MUCH</td>
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<td>MISCELLANEOUS</td>
<td>I’VE BEEN DRY AND SOBER FOR 3 YEARS BUT PEOPLE KEEP ASKING IF I’M DRINKING</td>
<td>5</td>
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UNEXPECTED DOMAINS

ABNORMAL BILIARY SCINTIGRAPHY SHOULD NOT BE AN INDICATION FOR CHOLECYSTECTOMY

C. W. Randall, MD,* C. M. Taboada, MD, G. S. Gossen, MD, R. D. Havranek, MD; 1. Cholecystectomy for treatment of chronic RUQ pain based solely on abnormal nuclear medicine studies should be avoided. 2. The diagnostic test for RUQ pain is a careful history using standard functional bowel criteria (i.e. Rome Criteria) followed by necessary laboratory, radiological or endoscopic examinations. 3. A trial of therapy for functional disorders and/or visceral hypersensitivity should be the first line of therapy following a normal evaluation.

INFLUENCE OF CHRONIC ETHANOL CONSUMPTION ON EXTRA-PANCREATIC SECRETORY FUNCTION IN RAT

Y. Ura, MD, PhD,* T. Watanebe, MD, PhD; 1. Japan. 2. University of Texas Health Science Center, San Antonio, TX.

Purpose: To evaluate the effect of ethanol exposure on exocrine pancreatic function. Recently, a simple breath test was developed for assessment of exocrine pancreatic function employing 13C-dipetide ([1-13C]alanine (Bz-Tyr-Ala)]. Although alcohol abuse causes pancreatic damage in humans, this has been unclear in rats. The aim of the study is to evaluate the effect of ethanol exposure beginning at an early age on extra-pancreatic secretory function in rats.

Methods: Twelve female rats of the F344 strain aged 12 months were used. Seven rats were fed on a commercial mash food with 16% ethanol solution (Japanese Sake) as drinking fluid since at 29 days of age (ethanol group). They drank a 16% ethanol solution with body weight on average. The remaining five rats were fed on a nutrient-matched isocaloric diet with water as drinking fluid (control group). After 24-h fasting rats were orally administrated [1-13C]alanine ([1-13C]alanine (Bz-Tyr-Ala)]. The exhaled air in the chamber was collected in a breath-sampling bag using a tube and aspiration pump (DISIDA) scans. Each patient had persistent pain unchanged in quality from their preoperative state.

Results: All 100 patients had a persistent history of RUQ pain following surgery (range 3-48 months; mean 12 months). The ultrasound exams and liver profiles on these patients were all within acceptable ranges of normal. The nuclear exams all demonstrated some degree of impaired gallbladder ejection fraction. Patients had persistent pain post-operatively. 15 patients had transient relief (range 1-11 weeks) but the pain returned. 5 patients had incomplete relief but were unsatisfied with the results. During our evaluation we found that all 100 patients satisfied criteria for IBS or NUD (based on Rome I, II or III Criteria; depending on the year the patient was evaluated). 85% improved with modification of the enteric nervous system.

Conclusion: 1. Cholecystectomy for treatment of chronic RUQ pain based solely on abnormal nuclear medicine studies should be avoided. 2. The diagnostic test for RUQ pain is a careful history using standard functional bowel criteria (i.e. Rome Criteria) followed by necessary laboratory, radiological or endoscopic examinations. 3. A trial of therapy for functional disorders and/or visceral hypersensitivity should be the first line of therapy following a normal evaluation.

ABNORMAL BILIARY SCINTIGRAPHY SHOULD NOT BE AN INDICATION FOR CHOLECYSTECTOMY

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INFLUENCE OF CHRONIC ETHANOL CONSUMPTION ON EXTRA-PANCREATIC SECRETORY FUNCTION IN RAT

Y. Ura, MD, PhD,* T. Watanebe, MD, PhD; 1. Japan. 2. University of Texas Health Science Center, San Antonio, TX.
INCREASED RISK OF ACUTE PANCREATITIS OBSERVED IN PATIENTS WITH TYPE 2 DIABETES

B Bloomgren, MD, M BA, R Patterson, PhD, D Braun, MD, PhD, R A. No, GDR, MPH 1 Global Safety, Amylin Pharmaceuticals, San Diego, CA, 2. Global Safety, Eli Lilly, Indianapolis, IN.

Purpose: A review of the literature documented a considerable increase in pancreatitis incidence in Western Countries. Because many clinical factors frequently associated with diabetes are also risk factors for pancreatitis, it seems likely that the risk of acute pancreatitis in patients with type 2 diabetes would be higher than that of the general population. Objective: To investigate whether adults with type 2 diabetes are at higher risk of acute pancreatitis than adults without diabetes.

Methods: This was a retrospective claims database analysis using eligibility, pharmacy and medical claims data from a large US health plan affiliated with 3 Innovus between 1 January 1999 and 31 December 2005. Subjects in the type 2 diabetes cohort had a diagnosis code on a medical claim for type 2 diabetes and a prescription claim for an antidiabetic agent. Subjects in the non-type 2 diabetes cohort had no evidence of diabetes as defined above. Cohorts were matched 1:1 on gender and age categories with 337,067 subjects in each group. The ICD 9 code for acute pancreatitis was used to identify cases. Patients were required to be enrolled in the database for at least 12 months prior to the event of acute pancreatitis with no evidence of pancreatitis during that period. Results: There was a 2.83-fold (95% CI 2.61-3.08) greater exposure adjusted incidence of acute pancreatitis in patients with type 2 diabetes compared to the cohort without type 2 diabetes. Conclusion: The increasing prevalence of type 2 diabetes and associated risk factors have the potential to increase the incidence of acute pancreatitis in the population. Further studies are needed to confirm this association and ascertain the causal pathways. Clinicians should be aware that compared to the general population, patients with type 2 diabetes may be at higher risk for developing acute pancreatitis.


YIELD OF DOUBLE BALLOON ENTEROSCOPY (DBE) AT A TERTIARY CARE HOSPITAL

R. Abbas, MD, H. Charbel, MD, N. Gupta, MD, K. Bull-Henry, MD, Georgetown University Hospital, Arlington, VA.

Purpose: DBE has opened a new frontier in the diagnosis and treatment of small bowel pathology. Studies have revealed technical difficulties that may be encountered with this procedure, in particular difficult terminal ileal (TI) intubation. This study is aimed at assessing the utility, yield, and safety of DBE in a large U.S. referral center.

Methods: This was a retrospective study of all DBEs performed at our endoscopy center between 11/2006 and 1/2008 by one experienced endoscopist with assistance from gastroenterology fellows. All procedures were performed using the Fujinon EN-450TS double balloon enteroscope (Fujinon Instrument Co Ltd, City, Japan). Data included patient characteristics (prior abdominal surgery), indication, route, depth of insertion (beyond the pyorus/ileoceleval valve), time of procedure, CO2 use, findings, interventions, and complications was collected.

Results: We performed 176 DBEs (51 per oral and 25 per anal) were performed on 53 patients. The most common indication for oral and anal DBE was obscure bleeding (41% oral, 44% anal). Abnormalities were found in 57% of DBEs resulting in change in patient management in 36% of cases. The depth of insertion in oral and anal DBE was 85 cm and 85 cm on oral route. Average time of procedure was 71 min on oral route and 78 min on anal route. Unlike prior studies, history of abdominal surgery did not impact the depth of insertion or time of procedure. The depth of insertion and time with and without surgery for oral DBE was 246 cm vs 212 cm and 73 min vs 70 min, respectively (p<0.05). Technical improvement, measured by depth of insertion and time of procedure, was seen after 15 oral and 10 anal DBES. This improvement occurred while maintaining the same diagnostic yield. Interestingly, we noted a trend toward increased DBE TI intubation rate (91% vs. 79%) when an immediate pre procedure colonoscopy was performed. There were no complications recorded in our series.

Conclusion: DBE remains a challenging yet promising procedure to unlock the pathology of the small bowel. An increased proficiency as measured by depth of insertion and time of procedure was noted after the performance of 15 per oral DBEs or 10 per anal DBEs. This may represent the learning curve for an experienced endoscopist. Abnormalities were found in a majority of patients undergoing DBE with a resultant change of management in a large proportion of those patients.

PROSPECTIVE COMPARISON OF CAPSULE ENDOSCOPY AND DUAL-PHASE CT ENTEROGRAPHY IN THE EVALUATION OF OBSCURE GASTROINTESTINAL BLEEDING

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Purpose: To compare the diagnostic yield of capsule endoscopy (CE) (and dual-phase CT Enteroscopy (SBE) in patients with obscure gastrointestinal bleeding (OGIB).

Methods: In this single-center, prospective study of patients referred for capsule endoscopy, we included patients diagnosed with either occult OGIB (anemia with no overt bleeding) or overt OGIB (current GI bleeding, melena or hematochezia). All patients had a prior non-diagnostic EGD and colonoscopy. All patients underwent an initial CE. The CE was read as “probable” if an actively bleeding lesion or lesion with high probability of bleeding was seen, “possible” if a lesion with the potential to bleed was seen, and “negative” if there was no suspicious lesion. Patients with negative capsule findings were offered therapeutic endoscopy. Patients with a “probable” or “negative” CE were offered CT.

Results: 42 patients underwent CE (57% with occult GI bleeding and 43% with overt bleeding). Five patients (12%) had a probable source identified (three small bowel angioectasias, two bleeding gastric lesions) and underwent therapeutic procedures. Thirteen patients (31%) had a “possible” source of bleeding and 24 (57%) had negative capsule findings. Of the 37 without a definitive diagnosis, 19 underwent CT, which excluded due to renail sufficiency, two due to IV contrast allergy, two due to resolution of anemia and two refused further work-up). On CT, four patients (21%) had probable findings, two patients (11%) had relevant extraintestinal findings, and the remaining 13 patients (66%) had negative exams. One of the “probable” CT’s was later found to be a false positive, showing hyperenhancement of the descending colon that was not confirmed on repeat colonoscopy. CT diagnosed one bleeding Meckel’s diverticulum, one tubular adenoma and one ileal varix. None of these patients had negative capsule findings. The two patients with extra-intestinal findings were found to have previously undiagnosed diaetoschisis with portal hypertension, which was likely contributing to the anemia, though a specific bleeding source was not identified. Overall, of the 19 patients who underwent CT, the CT was diagnostic for a definitive GI bleeding source in 3/4 (31%) of patients with overt bleeding and in none of the 12 patients with occult bleeding.

Conclusion: In this prospective study, we confirm that capsule endoscopy is a good initial test for patients with obscure gastrointestinal bleeding. Dual-phase CT enterography is useful for identifying a bleeding source in patients with overt obscure gastrointestinal bleeding and a non-diagnostic capsule endoscopy.

SINGLE BALLOON ENTEROSCOPY IN COMPARISON TO CAPSULE ENDOSCOPY IN THE DIAGNOSIS AND MANAGEMENT OF SMALL BOWEL DISEASE

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Purpose: Capsule endoscopy (CE) used in small bowel imaging is limited by inability to make a tissue diagnosis and lack of therapeutic interventions. Single balloon Enteroscopy (SBE) is a new technique available for the diagnosis and management of small bowel disease. The aim of this study is to evaluate the role of SBE in comparison to capsule endoscopy (CE) in the diagnosis and management of small bowel disease.

Methods: Patients who underwent SBE between March 2007 and April 2008 were included in the study. Retrospective chart review was performed to determine patient demographics, medical history, exam findings, prior diagnostic procedures and complications. Results: A total of 30 SBE procedures were performed on 26 patients (18 women, 8 men; mean age 60.5 ± 20 years) including 28 oral and 2 rectal approaches. Intubation of the distal jejunum was achieved in all SBE per oral. Both examinations per rectum were successful with an intubation of the small bowel of at least 80 cm. All patients had been previously evaluated with at least one standard upper and lower endoscopy which failed to reveal a causative abnormality. Capsule endoscopy (CE) had been performed prior to SBE in all 37 patients (100%). 22 of the 30 SBE (73.3%) were performed due to radiology iron deficiency anemia (OGIB), three (10%) for possible small bowel stricture, two (6.7%) for suspected Crohn’s disease (CD), two (6.7%) for radiation enteritis and one (3.3%) for possible jejunal tumor seen on CE. A source of bleeding was found and successfully treated during 16 out of 22 procedures (72.7%) with OGIB. SBE findings included Angioectasia (n=13), jejunal polyps (n=3), non specific duodenitis (n=1), NSAID induced jejunal ulcer (n=1) and radiation enteritis (n=1). Table 1 SBE did not identify any lesion in eleven procedures (53.3%), while SBE altered the diagnosis in 2 procedures (6.7%). SBE resulted in a therapeutic intervention in 14 out of 30 procedures (46.7%). No complications occurred.

Conclusion: Our experience with the SBE system demonstrates that the device is simple to use and safely examine the deeper parts of the small intestine. SBE can significantly impact the diagnosis and management of small bowel disease.
May be more frequent with SBTIs because of the immunogenic character of the intestine, it is easier to detect early acute cellular rejection (ACR) due to endoscopy, and if detected early, ACR is rapidly reversible with steroid bolus therapy. In the 1st yr following SBTx, a short segment of ileum is interconnected between the colon, ileal graft and abdominal wall that makes graft access easy. The objective of this study was to compare visual findings to histology from chyme biopsies in asymptomatic and to more invasive ileal and jejunal biopsies in symptomatic patients.

Methods: We analyzed the single experience of an experienced endoscopist over 12 months. 590 surveillance graft biopsies were performed in 67 stable asymptomatic patients.

Results: The predictive value of visualization for abnormal histology was 77.5% for mucosal architecture, 93.8% for lamina propria, and 33.8% for apoptosis score. The correlation between visualization and the microscopic findings was significant overall for the 3 variables (Pearson Chi-Square; p<0.001). In symptomatic patients, ACR was detected in 24/40 endoscopies although the mucosa looked normal in 14 of 30 pts where chyme and ileal biopsies were taken, ACR was detected in 21, with 16 showing ACR in both sites and 4 ACR in the chyme alone. In 18 patients jejunal biopsies were taken in addition to chyme showing the same rate of ACR in both sites. This suggests a sensitivity of 94% for chyme biopsy detection of ACR.

Conclusion: Although endoscopic visualization identifies most patients with abnormal histology, early features of ACR may be missed, making biopsy mandatory, even in high risk coagulopathic patients. The high sensitivity of chyme biopsy in detecting ACR endorses the priority of early, less invasive, chyme biopsy in the surveillance of SBTx patients.
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GASTRIC HETEROTROPHY IN THE DUODENUM: ENDOCOPIC AND HISTOPATHOLOGIC ASSOCIATIONS

Purpose: To characterize the endoscopic appearance and the clinical and histopathologic associations of gastric heterotopia (GH) in the duodenal mucosa. GH is an island of oxyntic glands lined by gastric epithelium lodged within the mucoa of the duodenum. Traditionally believed to appear endoscopically as elevated lesions, GHs have unknown clinical significance and are poorly characterized.

Methods: We analyzed electronic data from Caris Diagnostics, a specialized gastrointestinal pathology group receiving specimens from endoscopy centers in 40 states. The database includes detailed anatomic information about the location of the endoscopic findings, the site of origin, and the histopathologic report for each specimen. To identify the records for eligible duodenal biopsies, we extracted data from all cases with a sign-out date within the 12-month period from 4/30/2010 to 4/30/2011, and stored them in a Microsoft Access database. Statistical calculations were performed using SigmaStat 3.5 (Systat Software, Inc., Point Richmond, California); chi-square test. Student’s t-test and Mann-Whitney U test were used as appropriate. A p value < 0.05 was considered significant.

Results: There were 246,254 patient encounters with a total of 29,296 duodenal biopsies. GH was diagnosed in 5,279 biopsies (1.8%). For this analysis we selected the 20,646 unique patients (13,433 women or 65%) who had both gastric and duodenal biopsies available. Of these, 467 patients had GH: their median age was 59 years (range 16 to 92) and 246 (52.7%) were men. Thus men had a 2-fold risk of having GH (OR = 2.11, 95% CI 1.76 – 2.54). The endoscopic impression of a duodenal polyp or nodule was reported in only 30 patients (6.4%) and duodenitis in 55 patients (11.8%). In the remaining endoscopic reports there was no mention of a specific lesion and specimens were submitted as “duodenal biopsy.” Histologically, only one of the 467 patients also had a flattened duodenal mucosa suggestive of celiac sprue; 3 subjects had concurrent duodenal intraepithelial lymphocytosis; and 9 patients had peptic duodenitis. The overall prevalence of H. pylori infection in the patient population was 12.0%; however, only 2.6% of all GH patients H. pylori gastritis (p<0.001); even fewer (9 patients or 1.9%) had gastric ulcer or erosions. In no case was H. pylori reported to infect the heterotrophic gastric mucosa.

Conclusion: The overwhelming majority of GHs are not submitted for pathologic examination with the endoscopic impression of a polyp or nodule, although it would seem likely that a lesion worth biopsy is usually seen. GH is twice as common in men as in women, is associated with a healthier-than-expected duodenum and stomach, and is not infected with H. pylori.

Disclosure - Both authors (RS Kinsey and RM Genta) are employees of Caris Diagnostics, the pathology laboratory where the work was conducted.

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LARAZOTIDE ACETATE (AT-1001) PREVENTS IMMUNOLOGIC CHANGES INDUCED BY GLUTEN CHALLENGE IN PATIENTS WITH CELIAC DISEASE
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Purpose: To evaluate the effects of an experimental inhibitor of intestinal permeability (IP) and mucosal barrier dysfunction, larazotide acetate, on the systemic immunologic changes induced by gluten challenge in celiac disease.

Methods: Eighty-six patients with biopsy-proven celiac disease and with negative anti-tissue transglutaminase (anti-TG) while on a gluten free diet were randomized to 1 of 7 treatment regimens: larazotide acetate (0.25, 1, 4 or 8 mg, three times a day) or placebo with or without gluten challenge (2.4 g/day) for 14 days. The immunologic parameters analyzed included anti-TG titers, serum cytokine levels and peripheral lymphoid cell subsets.

Results: Larazotide acetate showed signs of efficacy in preventing increased intestinal permeability (IP) induced by gluten exposure and was well tolerated. In post-hoc analyses, gluten challenge induced elevation of anti-TG titers (NS) and a reduction in circulating CD19+ CD3- B cells (p<0.03), consistent with an activation of the humoral immune system in response to gluten, and an extravasation of activated B cells to lymph nodes and tissue. Gluten challenge also induced an increase in circulating CD4+ CD25+ FoxP3+ lymphocytes (p<0.03), subset possibly containing Regulatory T cells, consistent with a compensatory mechanism to the immune activation induced by gluten. Larazotide acetate treated patients did not have any change in these parameters and behaved similar to subjects not exposed to gluten, who received corn starch as placebo.

Conclusion: In post-hoc analyses, larazotide acetate prevents immunologic changes induced by gluten challenge in patients with Celiac Disease in association with the beneficial effects observed on IP normalization in IP may reduce antigen exposure and inhibit the immune pathogenesis of Celiac Disease.

This research was supported by an industry grant from Alba Therapeutics Corporation.
A COMPARISON OF DIAGNOSTIC YIELD AND DEGREE OF AGREEMENT BETWEEN CAPSULE ENDOCOPY AND DOUBLE BALLOON ENTEROSCOPY IN EVALUATING SMALL INTESTINAL DISORDERS
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Purpose: The aim of our study is to compare the diagnostic yield and degree of agreement between Capsule Endoscopy (CE) and Double Balloon Enteroscopy (DBE) in evaluating small bowel disorders.

Methods: Following IRB approval, we undertook a retrospective chart review of 119 consecutive patients who underwent both CE and DBE from January 2005 to August 2006. The indications for DBE were obscure overt GI bleeding (42%), obscure occult GI bleeding (37%), suspected mass (10%), mucosal changes (10%) and retained capsule (1%). The degree of agreement between CE and DBE was assessed using Cohen’s kappa statistics.

Results: 55 (46%) males and 64 (54%) females underwent both CE and DBE. The mean age was 62 ± 19.8 years (range 17-100 years). CE was abnormal in 74 (62%) patients compared to DBE which revealed abnormalities in 80 (67%) patients. For agreement between the two tests, there was a trend towards significance (kappa value 0.28, p=0.06). Among 45 patients with negative CE, DBE revealed small bowel pathology in 24 (53.3%) patients whereas in 37 patients with negative DBE, CE suspected a small bowel pathology in 18 (48%) patients. DBE revealed small intestinal diverticuli in 7 patients (15.9%) whereas CE failed to show them. Discussion: Our study confirms that CE and DBE supplement each other in studying small bowel disorders, in particular obscure GI bleeding. Although CE and DBE have comparable diagnostic yield, DBE detects more small bowel diverticuli and normal variants. While CE appears to have higher diagnostic yield in detecting ulcers, masses and active bleeding, it may be falsely positive in some of these patients where DBE clarifies the diagnosis by accurately identifying the normal variants. DBE also demonstrates the underlying pathology in patients with active bleeding on CE.

Conclusion: The overall diagnostic yield of DBE is comparable with CE in detecting small bowel pathology. There is a trend towards significance for agreement between CE and DBE and a higher sample size will likely achieve the statistical significance.

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<th>Active Bleding</th>
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<td>CE</td>
<td>25(21%)</td>
<td>10(8.4%)</td>
<td>13 (11%)</td>
<td>17(14.3%)</td>
<td>97.0(6%)</td>
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<td>DBE</td>
<td>31(26%)</td>
<td>13(10.8%)</td>
<td>26 (22%)</td>
<td>13(14%)</td>
<td>73(60%)</td>
<td>59(49%)</td>
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<td>DBE findings in CE vs DBE</td>
<td>0/45</td>
<td>0/26</td>
<td>0/24</td>
<td>0/17</td>
<td>0/40</td>
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<td>CE findings in DBE vs CE with suspected mass on DBE</td>
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<td>CE findings in DBE with suspected mass on CE(13)</td>
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<td>DBE findings in patients with active bleeding (11(35.9%)</td>
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* Mucosal change includes nodularity, erythema and edema.
Normal variants include lipoma, dilated lacteals and prominent folds.

In one patient DBE revealed hemorrhoids and 2 patients it ended early due to technical difficulty or patient intolerance.

SMALL BOWEL ARTERIOVENOUS MALFORMATIONS FOUND IN CAPSULE ENDOCOPY FINDINGS
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Purpose: Arteriovenous Malformations (AVMs) are known to be common in gastrointestinal tract. However, the prevalence of small bowel AVMs is not well known since thorough small bowel examination usually was not done especially in asymptomatic individuals. The objective of this study was to report the small bowel capsule endoscopy (SBCE) findings and complications rate in a large cohort of patients.

Methods: From February 2004 to June 2008, a total of 451 SBCE procedures were performed on patients with either an unknown source of gastrointestinal bleeding or with suspected small bowel diverticuli/tumor.

Results: Eleven (2.4%) of 451 SBCE cases did not pass into the small intestine for the duration of the imaging time and were therefore excluded from this study. Four hundred and forty capsule endoscopy videos were reviewed. SBCE reached the colon in 371 cases, ileum in 56 cases, jejunum in 11 cases, and duodenum in 2 cases. Mean age was 63 years for all patients. Of the AVMs we identified 35 (13 %) which were actively bleeding. The majority of the bleeding AVMs were either small (22) or medium (7) and only 6 (17.1%) cases of bleeding AVMs were large. No capsule impaction, or other complications occurred in this series.

Conclusion: From these data, AVMs are common findings especially in the small bowel of the older population. The bleeding AVMs were not associated with larger lesions. SBCE was a safe and non-invasive technique to evaluate the small bowel mucosa in patients with suspected AVMs as a source of gastrointestinal bleeding.

CHRONIC SUPERFICIAL ENTERITIS: A NOVEL FORM OF INFLAMMATORY BOWEL DISEASE
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Purpose: Intussusception is a rare condition in adults and is traditionally associated with the presence of a lead point, most frequently caused by malignancy. However, more frequent use of cross sectional imaging has resulted in an increase in the detection of intussusception (0.2% of all cross sectional imaging studies) and the majority of these were non-lead point. While most of non-lead point intussusception is described as idiopathic, an association with celiac disease has been demonstrated in case reports. The extent and significance of this association is however unclear. We therefore conducted a review of our celiac disease database in order to assess this association.

Methods: An anonymized prospectively maintained database of 880 patients with biopsy proven celiac disease was reviewed to select all patients who had undergone abdominal imaging: CT, MRI ultrasound, small bowel series, video capsule endoscopy (VCE). From this group we identified those who were found to have intussusception.

Results: The cohort consisted of 14 patients (1.6%), age 47±17.5 years; 50 % female. Intussusceptions were detected by CT in 10 by VCE in 3 and by SBFT in 2 patients. The reason for evaluation was abdominal pain in 78% (11/14), whereas in the remainder (3/14) intussusceptions were incidentally found. Intussusception was the initial manifestation of celiac disease in 57% (8/14). Two patients were found to have lead point intussusceptions and both of these patients had small bowel adenocarcinoma. 10/14 patients had severe villous atrophy and all had antibodies seen in celiac disease. Among patients with established celiac disease, intussusceptions were detected early in the course of the disease (within 3 years of diagnosis). Follow-up was available for 11 patients at a mean of 2.1 years. Of the 9 patients who adhered stricly to a gluten free diet (GFD) 6 had resolution of the abdominal pain and had no recurrence of intussusception.

Conclusion: Intussusceptions appear to be more common in patients with celiac disease than in the general population (1.6% vs 0.2%). Intussusception may be the initial presentation of undiagnosed celiac disease. It is most often associated with abdominal pain though it may be incidental, suggesting that this may occur frequently in celiac disease. Adenocarcinoma, however needs to be excluded in these patients. The majority of patients have no further pain, nor intussusception after adherence to a GFD.
A RETROSPECTIVE ANALYSIS OF THE SAFETY OF OUTPATIENT PERCUTANEOUS LIVER BIOPSY IN PATIENTS WITH VON WILLEBRAND DISEASE

2008 ACG Presidential Poster Award Recipient

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Purpose: Liver biopsy remains the gold standard for the diagnosis of chronic liver diseases. Outpatient percutaneous biopsy is generally safe with a mortality rate of 0.17% and hospitalization rate for bleeding of 3%. Von Willebrand Disease (VWD) is the most common inherited hematological disorder with a prevalence of 1-3%. There are 3 major types of VWD: type 1 (low levels of VW factor), type 2 (several qualitative abnormalities of VWF) and type 3 (extremely reduced or undetectable levels of VWF with low concentration of factor VIII). Type I is the mildest and most common form of VWD, while type 3 is the most serious but very rare. Whether VWD increases the risk of bleeding in invasive procedures is not known. The purpose of this review is to determine the safety of outpatient percutaneous liver biopsies in patients with VWD.

Methods: 120 patients who underwent outpatient percutaneous liver biopsies from 1997 to 2007 were included in the study. Demographics, PT/INR, platelet count, VW factor antigen, VW factor ristocetin cofactor, Factor VIII activity, and VW factor multimers were collected. Patients had not received salicylates, NSAIDS or anticoagulants for at least 5 days prior to biopsy. Exclusions included prior known coagulation diathesis, familial bleeding history, arteriovenous malformations, collagen vascular diseases and congestive heart failure.

Results: Of the 120 patients biopsied, 66 (55%) had hepatitis C, 24 (20%) hepatitis B, 10 (8.3%) alcoholic hepatitis, 20 (16%) other diagnoses. Overall, 30 (25%) had minor local bleeding that resolved with pressure and 53 (44%) had biopsy site ecchymosis after 24 hours. Twelve (10%) patients were diagnosed with VW factor deficiency, of these 5 (41%), 7 (56%), and 0 had type 1, 2 and 3 respectively. No VWD patients had major bleeding that required transfusion, hospitalization or surgery but 9 (75%) had minor local bleeding and all had ecchymoses, which resolved spontaneously within a week.

Conclusion: Patients with VWD types 1 and 2 without prior bleeding diathesis can undergo percutaneous liver biopsy without major bleeding. Minor bleeding may occur at a slightly higher rate. VWD type 1 and type 2 do not appear to be a contraindication to percutaneous liver biopsy. The safety of percutaneous biopsy in VWD type 3 patients is unknown. We concur with the AAGT guideline that outpatient percutaneous liver biopsy is safe and non-threatening in the setting of concomitant minor inherited bleeding diathesis without prior history of excessive bleeding. Routine screening for undiagnosed VWD syndrome is not recommended.

STATINS ARE ASSOCIATED WITH MILD DEGREES OF FIBROSIS IN PATIENTS WITH CHRONIC HEPATITIS C

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Purpose: Statins are known to have pleiotropic effects above and beyond lipid lowering including anti-inflammatory, and insulin sensitizing effects. Recently they are also found to have antiviral effects against hepatitis C. The effect of statins on liver fibrosis in hepatitis C patients has not been previously assessed. We evaluated the association of statin use with stage of liver fibrosis in patients with chronic hepatitis C infection utilizing a database created to look at interactions of hepatitis C and diabetes mellitus.

Methods: In a nested cohort study from the cross sectional analysis of 5266 US veterans followed at the NY metropolitan area that was designed to examine the association of Hep C and diabetes, we identified patients with HCV who underwent liver biopsies between 2000 to 2007 and had been on statins for at least 1 year. In our database 332 patients had biopsies of whom 276 (83%) had complete data. All liver biopsies were read by 3 pathologists and reviewed with one hepatopathologist us per routine protocol. Modified Ishak score was used for the degree of fibrosis (0-4).

Results: Of the 276 patients with hepatitis C and liver biopsies mean age (years) = 52.6 ± 13.5 (SEM), BMI = 29.4 ± 4.1 (SEM), 40.8% of the patients were white, 41.2% black, and 13.8% Hispanic. 22 patients (8%) were on statins. Of those patients who are on statins a significantly higher proportion had stage 0 to 2 fibrosis (81.8%) as opposed to (61.0%) of non-statin users. P = 0.04. In a logistic regression model after adjusting for age and BMI the odds of having mild liver fibrosis (stage 0-2) in statin users was 3.4 (1.11-10.9) 95% CI, P=0.032.

Conclusion: In patients with chronic hepatitis C, the use of statins was associated with a milder degree of fibrosis on liver biopsy. Further studies are needed to confirm our findings and provide mechanistic insights into the effects of statins on liver fibrosis in the hepatitis C population.

Purpose: To evaluate and improve vaccination practices for hepatitis A and B among patients with chronic liver disease (CLD). Vaccination practices of patients with CLD are not well described. The primary aims of this study were to evaluate and improve adherence of medical residents to recommended guidelines for hepatitis A and B vaccination.

Methods: A cross-sectional study was performed with 2 clinic practices, 1 in gastroenterology and gastro Hepatology and 1 in Hepatology. At each clinic, all patients who were diagnosed with CLD and who had an encounter with a medical resident at any clinical venue from August 2019 to July 2020 were identified. A hepatitis A or B vaccine order was recorded as an indicator of hepatitis vaccine administration for each patient. Only hepatitis vaccinations ordered by medical residents were collected. Demographic, clinical, laboratory, and hepatitis vaccine receipt data were collected. The primary outcome was vaccination of patients with hepatitis A and B. The secondary outcome was the prevalence of vaccinations given at the two residency clinics.

Results: 47% of 784 patients had hepatitis A vaccination and 53% had hepatitis B vaccination. Hepatitis A vaccination was higher at the gastro Hepatology clinic (50%) than at the Hepatology clinic (42%). Hepatitis B vaccination was higher at the Hepatology clinic (65%) than at the gastro Hepatology clinic (54%). The hepatitis A vaccination rate was 32% at stage I, 39% at stage II, and 54% at stage III. Hepatitis B vaccination was 34% at stage I, 41% at stage II, and 46% at stage III. Vaccination rates in the 2 clinics for hepatitis A and B were equivalent at both clinics: 80.8% and 82.9% of patients were not vaccinated for hepatitis A and 75.0% and 87.4% of patients were not vaccinated against hepatitis B. No reason for non-vaccination was recorded for 62% and 73% of patients in the 2 clinics for hepatitis A and B. Hepatitis vaccination was mentioned in another 20% of cases but was not performed. Multivariate analysis of patient characteristics associated with vaccination identified only white ethnicity as a significant risk factor (OR 0.33, CI 0.12-0.91). Attempts to contact 186 patients non-vaccinated were made: 30% of patients were reached.

Conclusion: Access to hepatitis A and B in patients with hepatitis B followed in residency clinics was very low. The major reason for non-vaccination appeared to be that the patient was not eligible or that the patient was not offered vaccination. Patients who were not vaccinated were difficult to reach and recall for vaccination. A significant opportunity exists to improve hepatitis vaccination practices in residency clinics serving high risk patients.

Transarterial Chemoembolization (TACE) in Patients with Hepatocellular Carcinoma—A Useful Tool? T. Meyer, MD, S. S. Heinzow, MD, P. Lenz, MD, H. Ullrich, MD, W. Domshke, MD, PhD. D. Domagk, MD, PhD. Department of Medicine B, University of Muenster, Muenster, Germany.

Purpose: The role of hepatitis C virus (HCV) associated hepatocellular carcinoma (HCC) and its treatment in patients with liver cirrhosis. The outcome of untreated patients with HCC is poor with a median survival rate of only 8 to 10 months. The treatment of Hepatocellular carcinoma is still a challenging task. In advanced cirrhosis, patients with small (≤5 cm) HCC are candidates for transarterial chemoembolization (TACE) as a possible treatment option. TACE is a well established method for treating patients with HCC either as a palliative therapy or as bridging concept for liver transplantation (LTX). The purpose of the presented study was to retrospectively analyze 65 patients with histologically proven HCC who underwent TACE as palliative (mean age 68 ± 8 years) or bridging therapy (mean age 58 ± 7 years) in the years 2000-2008. 40 patients (37 male, 3 female) had TACE for palliative treatment due to ineligibility for transplantation. 25 patients (22 male, 3 female) received TACE before liver failure. 10 patients (10 male, 5 female, mean age 54±10 years) had LTX without prior TACE therapy. The chemotherapy agent used for TACE was doxorubicin/cisplatin/lipiodol. The overall survival times since HCC diagnosis according to Kaplan-Meier was measured.

Results: In 25 patients TACE was performed as bridging therapy before LTX. The Okuda Stage was the following: stage I 54%, stage II 42%, stage III 4%. In the bridging group only 54% fulfilled the Milan criteria while none of the patients exceeded the Okuda criteria. With Okuda stage I had 1.7±0.8, stage II 2.25±1.9 and stage I/III 1 TACE sessions before LTX. In stage I LTX was performed 157 days after the beginning of TACE therapy, in stage II LTX was performed after 180 days (range: 84-257). The tumor size before TACE of patients who fulfilled the Milan criteria was 7.1% compared with 10% who did not fulfill the Milan criteria. The median survival time in the group who received TACE as a bridging therapy was 52 months. The one-year-survival rate was 48%. The mean survival time in the group of LTX without prior TACE was clearly greater than 75 months with a one-year-survival rate of 75% (p=0.52). In the palliative group the median survival time was only 14 months with a significantly lower one-year-survival rate of 41% (p=0.01).

Conclusion: Our data show that TACE therapy prior to liver transplantation does not offer a significant advantage towards overall survival. In the group of patients who received TACE as a palliative therapy the median survival time with 14 months was clearly longer compared to recently published data of untreated patients. We conclude that TACE therapy is useful palliative therapeutic option for HCC patients not eligible for LTX.
The demographic features of the prevalence of non-alcoholic steatohepatitis (NASH) in a cohort of adult Sri Lankans: Investigation for domiciled chronic liver disease in a medical unit – data form a tertiary care centre

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Purpose: To study the prevalence of NASH and related matters in adult Sri Lankans, who had undergone consented liver biopsies during the process of investigation for suspected chronic liver disease pathology since in Sri Lanka this condition is picked up on routine medical screening of asymptomatic patients and its clinical implications and long term sequelae are not well studied in the general population.

Methods: The clinical notes of 242 patients admitted to the principal author’s unit at Sri Jayewardenepura General Hospital Kotte, Sri Lanka for liver biopsies, for elucidation of suspected liver disease from 17.4.2002 to 31.7.2007 were retrospectively analysed, to compile data with respect to the above.

Results: 122 biopsies out of 224 (54.4%) had evidence of non alcoholic fatty liver disease (NAFLD). The latter comprised 80.5% of steatosis, 15.4% of NASH and 4.1% NASH with cirrhosis. Sex distribution for NASH was male: female 6:21:1. Age distribution 22.55 years with a mean population age of 42.7±5.13 SD yrs. The same for males and females were 41.8±5.33 SD and 45.0±0.10SD respectively. Associated diabetes mellitus hypertenpsia, and hyper tension in subgroups of steatosis, NASH, NASH with cirrhosis were as follows, steatoasis – 61.5%, 72.2%, 68.4% ; steatohepatitis 30.7%, 22.2%, 26.3%, NASH with cirrhosis 8.8%, 5.6%, 5.5% respectively. Mean ages and body mass index (BMI) for the above subgroups were as follows: Steatosis 36.3±13.5 yrs, 22.7±2.4; NASH 42.7±5.1 yrs, 25.9±2.2; NASH with cirrhosis 47.3±7.5, 24.8±2.2 respectively. SGPT and SGOT had mean values of 78.8±33.3 SD U/L, (range 35-155) and 65.8±46.15 SD U/L (range 21-215) for NASH group. Social status and dietary habits had no remarkable differences in the above lacking adequate amount of data for comparison.

Conclusion: Prevalence of NASH in adult Sri Lankans parallel what is found elsewhere. A cluster of metabolic syndrome was seen amongst NASH patients. Males had a higher BMI with early presentation in life. Higher body mass index levels were seen during the disease progression from steatosis to NASH thus highlighting a point of active intervention by modifying lifestyle. Progression of NASH to cirrhosis in this cohort at a relatively younger age was an alarming feature.

P463

Comparative of demographics and laboratory parameters of a cohort of adult Sri Lankan alcoholic and non alcoholic cirrhotics who had undergone banding ligation of oesophageal varices


Purpose: To study the clinical features and laboratory parameters of alcoholic and non alcoholic cirrhotics who have had either primary or secondary prophylactic banding ligation of oesophageal varices admitted to a medical unit of a tertiary care hospital as prevalence of oesophageal varices and their aetiology remain largely unknown in the Southeast Asian region and there were no comparative studies.

Methods: Case notes of one hundred patients satisfying above criteria, admitted to the principal author’s unit at Sri Jayewardenepura General Hospital-Kotte, Sri Lanka were retrospectively reviewed.

Results: Alcoholics had male: female sex ratio of 70:3 with a mean age of 54.7±9.9 SD yrs. 38 and 35 had secondary and primary prophylactic banding respectively with an average of 4-9 banding sessions. The above characteristics for non alcoholics were 14.1±3.2 9±6.5SD yrs, 13 and 14 respectively with an average of 2-4 banding sessions. Mean values of Hb, platelets, SGPT, SGOT and albumin amongst alcoholics were 10.1±2.2SD g/dl, 121±506±197SD mm-3, 50.5±88SD U/L, 96±137SD U/L, 28±6SD g/dl. The above indices for non alcoholics were 11±2.5SD g/dl, 174±70±211SD mm-3, 45±25±15SD U/L, 63±9±17SD U/L, 3±15SD g/dl respectively. The comparative mean values for alcoholics and non alcoholics who had primary prophylactic banding for varices were as follows. Alcoholics HB, 10.3±2.5SD g/dl, platelet 126±26±62±72SD mm-3, SGOT 103±81±3SD U/L, 59±12±7SD U/L, albumin 2±7±6SD g/dl. Non alcoholic group, 10.8±2.6SD g/dl, 159±92±791SD mm-3, 3.5±7.3±31±2SD U/L, 37±9.16SD U/L, 2±9.5±5SD g/dl respectively. Both groups were followed up to 1-5 years. Among those who have undergone primary varical banding, alcoholics were having a significant hypoalbuminaemia when compared with the non alcoholics (p<0.01). Those who underwent secondary banding ligature had effective control of varical banding, without recurrences and had no complications during the follow up period.

Conclusion: Non alcoholic group showed less male preponderance (1:1.1) compared to alcoholics probably due to cultural habits. Varical development and progression is probably late in non alcoholic group. Anaemia, derangement of transaminases and hypoalbuminaemia were relatively less in the non alcoholic group but the relationships were statistically insignificant as predictors of aetiology. Alcoholic group had a comparatively statistically significant anemia (p <0.05 and <0.01) indicative of multifactorial origin apart from varical bleeding. Nevertheless hypoalbuminaemia was more severe in alcoholics compared to non alcoholics even before they bled from varices indicative of a severe hepatocellular functional compromise.

P464

51Cr-EDTA permeability test in ascitic cirrhotic patients with and without history of spontaneous bacterial peritonitis

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Purpose: Impaired intestinal permeability (IP) may be implicated in spontaneous bacterial peritonitis (SBP) pathogenesis in cirrhotics. Urine 51Cr-EDTA is a standardized test for evaluating IP. Since 51Cr-EDTA has a small molecular weight it can be found in peritoneal spillage in ascites. Aim of the study was to assess IP in cirrhotics.

Methods: 48 consecutive cirrhotic pts (16 for each Child class) were enrolled: 20 pts had ascites, 10 of which had a history of previous SBP. We also enrolled 48 healthy subjects. In healthy subjects 51Cr-EDTA was < 3 %. After an overnight fast, pts were given to drink 2.56 MBq of 51Cr-EDTA in 10 ml of water; two 3-ml samples both of 24-hours urine and ascites were measured by a gamma counter. Urine sample results were expressed as a percentage of administered dose and considered indicative of altered IP when 51Cr-EDTA was > 3 %. The presence of 51Cr-EDTA in the ascites was also evaluated.

Results: 22 out of the 48 pts that had an altered IP as described by 51Cr-EDTA urine test vs 2 out of 48 controls (46% vs 4%: p<0.05). IP impairment followed progressing Child status: Child A: 4/6; Child B: 6/6; Child C: 12/6. Out of 20 ascitic pts 10 out of 18 non-ascitic pts had an impaired IP (60% vs 36%: p=0.05). 8 out of 10 pts with ascites and SBP history had an impaired IP vs 6 out of the 12 ascitics without SBP history (80 % vs 50 %; p<0.05). 51Cr-EDTA was present in ascites samples from all ascitic pts with history of SBP vs 2 out of the 12 pts with ascites without SBP history (100% vs 22 %; p<0.05).

Conclusion: A consistent number of cirrhotics have an altered IP. IP derangement was associated with more severe disease status (ascites and history of SBP). The presence of 51Cr-EDTA in ascites in all pts with an history of SBP suggests an altered permeability of the plasmatic vessels and/or peritoneal membranes. Further studies are needed to assess a 51Cr-EDTA urine and ascites cut-off where SBP prophylatic therapy could be indicated.
WHAT IS THE PREVALENCE OF CELIAC DISEASE AMONG US PATIENTS WITH AUTOIMMUNE HEPATITIS?

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Purpose: Autoimmune hepatitis (AIH) is an insidious disorder of unknown etiology, characterized by elevated serum transaminases and immunoglobulin G concentrations, circulating autoantibodies, lymphoplasmacytic portal and interface hepatitis and responsiveness to prednisone. Most affected European and North American AIH patients possess either the DR3 or DR4 haplotype. The hallmarks of celiac disease (CD) are gluten intolerance, and the presence of either the DR3 and/or DQ2 haplotypes. The estimated prevalence of CD in the general US population is 1:100, whereas the prevalence of CD in European subjects with AIH has been estimated to be as high as 1:24. 

Methods: We studied patients aged 18 years with a diagnosis of AIH conforming to International Autoimmune Hepatitis Group criteria, presenting at a single US center between September 2003 and May 2008. Patients' sera were tested for IgA endomysial antibody (EMA) by indirect immunofluorescence; their serum IgA concentration was measured concomitantly. Patients with selective IgA deficiency (SlgAD) were tested for serum IgG gliadin antibody (AGA) by ELISA.

Results: The sample comprised 153 patients of whom 22 were male (14.4%), with a median age of 50 years (range 18-86). The ethnic distribution was 115 (75.2%) Caucasian, 33 (21.6%) African American non-Hispanic, two (1.3%) native African, two (1.3%) Asian, and one (0.6%) Caucasian Hispanic. One patient had a positive EMA result (duodenal mucosal biopsies were consistent with CD). One man had selective IgA deficiency, but his AGA IgG titer was normal (5.1 units normal 0-25). Five women underwent endoscopic duodenal mucosal biopsy despite negative EMA results (four had iron deficiency anemia, the other loose stools and weight loss). One patient demonstrated histological findings consistent with CD, whereas the other four demonstrated normal histology.

Conclusion: Although the prevalence of CD in these US patients with AIH (1:76 [1.3%]) is considerably less than reported among European AIH patients, it is slightly greater than in the general US population. This suggests the possibility of increased risk of CD for AIH US patients with AIH and therefore appropriate serologic screening. Conversely, the study sample may have been underpowered, thereby resulting in findings which suggest a difference that does not truly exist. In either case, it appears that EMA may not be the most appropriate screening test for CD in AIH patients only one of the two patients identified in this group yielded a positive antibody result.

A48

AFRICAN-AMERICAN PATIENTS WITH CHRONIC HEPATITIS C RESPOND SIMILARLY TO PEG-INFN ALPHA 2A AND RIBAVIRIN AS COMPARED TO PEG- INFN ALPH A 2B AND RIBAVIRIN

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Purpose: BACKGROUND/AIM: To determine the sustained viral response (SVR) in African-American (AA) patients with chronic hepatitis C (CHC) treated with pegylated interferon (PEG-IFN) and ribavirin (RIBA) and to assess if the SVR in AA treated with PEG-IFN α2a plus RIBA differs from those treated with weight-based PEG-IFN α2b and RIBA.

Methods: METHODS: This retrospective analysis consists of 172 consecutive treatment naïve AA patients who were matched in log with more than 2 log drop or with undetectable HCV RNA (early virologic response, EVR). The primary end point was an SVR. BMI, age, gender, insulin resistance, triglycerides, and HDL was not. On multivariate analysis using logistic regression controlling for insulin resistance (p value of model 0.22, Area under curve 0.86), low LDL was the only independent factor (OR=1.05, p=0.03) significantly associated with EVR.

Conclusion: Insulin resistance is widespread and present in up to 52% of CHC genotype 1 patients. Low LDL after controlling for insulin resistance is an independent predictor of early viral response (EVR) in genotype 1 chronic Hepatitis C (CHC).

A470

RISK OF HEPATOCELLULAR CARCINOMA (HCC) IN HEPATITIS C PATIENTS WITHOUT CIRRHOSIS

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Purpose: Chronic infection with hepatitis C virus (HCV) is regarded as a risk factor for hepatocellular carcinoma (HCC). Current guidelines recommend screening patients with HCV for HCC only if there is evidence of cirrhosis. HCC occurring in “non-cirrhotic” HCV-infected patients has been reported; but the exact prevalence or incidence has not been described before.

Methods: We conducted a systematic review of literature. Over 1500 was used to search the literature between January 1998 to September 2007. Articles containing HCC, non cirrhotic in both the title and abstract were included. The total number of non-cirrhotic HCC/total number of non-cirrhotic HCC was reported. Review articles, articles in a language other than English, articles in relation to the effect of hepatitis C and hepatitis B on HCC were excluded.

Conclusion: HCC can occur in hepatitis C patients without cirrhosis but the true incidence and prevalence is simply not known. Attention should be made for better description of such a group of patients. Further studies are required to determine if screening for HCC in chronic hepatitis C patients without cirrhosis should be endorsed, preferably prospectively with a cost effectiveness measurement.

A471

PREDICTORS OF POST-TRANSPLANT SURVIVAL IN PATIENTS WITH HEPATITIS B WITHOUT HEPATITIS B

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Purpose: Predictors of overall survival after liver transplant may be different for patients with hepatitis B versus other causes for transplant.

Methods: We retrospectively reviewed all adult liver transplants performed at Stanford University Medical Center between February 1996 and July 2006. Predictors of survival were examined using Cox proportional hazard regression.

Results: We identified 492 patients who had undergone liver transplant. Those who died prior to discharge (n=48), had a combined liver/kidney transplant (n=28), or had acute liver failure (n=17) were excluded from further analysis. Of the remaining 407 patients, hepatitis B was present in 68 patients. Demographic data are shown in Table 1. After a mean follow-up of 4.5 years, there was a non-statistically significant trend towards greater survival in the hepatitis B group, likely due to a lower BMI (Log rank statistic = 2.3; p=0.13). Among the non-hepatitis B group, the presence of diabetes mellitus appeared to be a strong predictor of poor outcome (HR = 5.1, p<0.001). Among the hepatitis B group, the presence of HCC appeared to be the best predictor of poor outcome, although due to the small number of patients in this group, the effect did not reach statistical significance (HR = 4.6, p=0.06).

Conclusion: Predictors of overall survival after liver transplant may differ for patients with hepatitis B versus other causes for transplant. The presence of HCC in hepatitis B patients was associated with increased overall survival when compared to all other causes for liver transplant. Having diabetes was associated with poorer survival in patients transplanted for non-hepatitis B causes.

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Table 1: Demographic Data

<table>
<thead>
<tr>
<th>HBV Status</th>
<th>n</th>
<th>Age (yr)</th>
<th>BMI (kg/m²)</th>
<th>MELD (mean)</th>
<th>HCC present*</th>
<th>DM present*</th>
<th>Overall Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBV negative</td>
<td>342</td>
<td>50.6</td>
<td>27.9</td>
<td>19.5</td>
<td>22%</td>
<td>19.5%</td>
<td>83%</td>
</tr>
<tr>
<td>HBV positive</td>
<td>68</td>
<td>51.5</td>
<td>23.6</td>
<td>18.2</td>
<td>46%</td>
<td>6.3%</td>
<td>90%</td>
</tr>
</tbody>
</table>

*p < 0.05

P472

THE RISK FACTORS FOR MORTALITY IN PATIENTS WITH HEPATITIS B VIRUS INFECTION AND HEPATOCELLULAR CARCINOMA FOLLOWING LIVER TRANSPLANTATION

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Purpose: Conflicting data exist regarding the impact of hepatocellular carcinoma (HCC) on survival following liver transplantation (LT). Previous hort-term studies have failed to demonstrate any correlation between HCC and survival. We studied risk factors for mortality in patients who underwent LT for chronic hepatitis B virus infection (HBV), either with or without HCC.

Methods: We retrospectively reviewed all HBV-related liver transplants at our institution between February 1996 and July 2006. Patients with HBV and no evidence of HCC (non-HCC group) were compared to patients with HBV plus HCC (HCC group). The predictors of survival were examined using Cox proportional hazard regression.

Results: We reviewed data from 67 patients who underwent LT for HBV alone (non-HCC group) and 31 patients with HBV plus HCC (HCC group). Post-transplant survival at 1 year, 3 years, and 5 years was 94%, 65%, and 56% in the HCC group compared with 100%, 90%, and 88% in the non-HCC group. Median follow-up was 4.9 years. Mean survival for HCC patients was significantly shorter than in non-HCC patients (p = 0.04). Pre-transplant, of the 31 HCC patients 10 had hepatic resection, 24 had at least one chemoembolization, and 11 had multiple chemoembolizations; 10 had both chemoembolization and hepatic resection. 8 HCC patients did not meet Milan criteria. Post-transplant, 7 patients had recur HCC. A total of 7 patients with HCC died by the end of follow-up: 4 died post-operatively and 3 died of metastatic HCC recurrence.

Conclusion: Hepatitis B patients with HCC have shorter survival than patients without HCC when followed 5 years post-transplant. Our findings may be explained by a high pre-transplant tumor burden, as indicated by the size and number of lesions.

P473

Poster Withdrawn

P474

CHARACTERIZATION OF THE FIRST EPISODE OF DECOMPENSATION OF LIVER CIRRHOSIS WITH RUPTURE OF ESOPHAGEAL VARICES AND PROGNOSTIC FACTORS

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Purpose: The objective of the study was to identify clinical and laboratory indicators of higher mortality at hospital admission and at 1 and 3 years in patients admitted with the first episode of decompensation of liver cirrhosis with rupture of esophageal varices.

Methods: The records of 85 consecutive patients admitted with upper gastrointestinal bleeding from ruptured oesophageal varices as the first episode of decompensation of liver cirrhosis were analyzed. After discharge, patients were followed up till death or study closure date on 31st August 2007. Exploratory analysis, Mann Whitney, Chi Square and Fisher’s Exact tests were applied. Significance level: 5% (SPSS version 15).

Results: The average age of the patients was 56 ± 13.74 years with a predominance of male sex – 84.7% (72). The aetiologies of liver cirrhosis were: alcohol – 63.5 % (54), alcohol + viral - 14.1% (12), viral – 9.4% (8), non alcoholic and non viral – 12.9% (11). Severe alcoholic hepatitis (Maddrey’s discriminant function > 32) was present in 20.5% (17/85). Distribution according to Child Pugh Class A - 31.6% (25/79), B – 31.6% (25/79), C 36.7% (29/79). The average MELD score was 15 ± 7. The prevalence of community acquired infection was 12.8% (10). The incidence of nosocomial infection was 10.5% (8). Average period of follow up was 33.7 ± 30.1 months. The mortality rate at first hospital admission for decompensated liver cirrhosis was 12.9% (11/85), at one year 23.9 % (16/67) and at 3 years 35.3% (18/51). Patients who died at first hospital admission had significantly higher MELD score, Child Pugh score, and serum creatinine (p < 0.001; p = 0.02; p = 0.013) and significantly lower total cholesterol (p = 0.009). Patients who died at one and three years had significantly higher MELD score (p = 0.002; p < 0.001), Child Pugh score (p=0.001; p < 0.001), and significantly lower total cholesterol (p = 0.001; p = 0.002). Mortality at first hospital admission and at 1 and 3 years was significantly higher in patients in Child Pugh class C (p = 0.001; p < 0.001). In patients with MELD score ≥ 15 (p = 0.001; p = 0.013; p < 0.001). Mortality at 1 year and 3 years was also significantly higher in patients with total cholesterol < 100mg/dL (p = 0.01; p = 0.013). At 1 year and 3 years, mortality was significantly associated with Child Pugh class C (p = 0.001; p < 0.001).

Conclusion: Patients presenting with rupture of oesophageal varices with MELD score ≥ 15 and those belonging to Child Pugh class C have significantly higher mortality at hospital admission and at 1 and 3 years. In these patients, total serum cholesterol <100mg/dL is significantly associated with higher mortality at 1 and 3 years.

P475

CHARACTERIZATION AND DETERMINATION OF PROGNOSTIC FACTORS AT THE FIRST EPISODE OF DECOMPENSATION OF LIVER CIRRHOSIS WITH ASCITIS

C. Noronha Feirera, MBBS, T. Rodrigues, Bachelor in Mathematics, H. Cortez, Pinto, MD, PhD, F. Serejo, MD, PhD, F. Ramalho, MD, PhD, A. Pinto, Bachelor in Mathematics, Ces. Monteiro, MD, PhD, J. Servico de Gastroenterologia e Hepatologia, Hospital de Santa Maria, Lisboa, Portugal; 2. Laboratorio de Biomatemática, Faculdade de Medicina de Lisboa, Lisboa, Portugal.

Purpose: We aimed at identifying clinical and laboratory indicators of higher mortality at hospital admission and at 1 and 3 years in patients admitted with the first episode of decompen-sation of liver cirrhosis with ascites.

Methods: The records of 131 consecutive patients admitted with ascites as the first episode of decompen-sation of liver cirrhosis were analyzed. Patients were followed up till death or study closure date on 31st August 2007. Exploratory Analysis, Mann Whitney, Chi square and Fisher’s Exact tests were applied. Significance level: 5% (SPSS version 15).

Results: The average age was 58.4 ± 13.74 years with a predominance of male sex – 79.4% (14). Average duration of follow up – 20.7 ± 28.82 months. Etiology of liver cirrhosis: alcohol – 65 % (85), alcohol + viral - 15.3% (20), viral – 15.3% (20), non alcoholic and non viral - 4.6 % (6). Severe alcoholic hepatitis (Maddrey’s discriminant function > 32) was present in 12.5 % (16/128) patients. Distribution according to Child Pugh Class A – 2.4% (3/124), B – 45.2% (56/124), C 52.4% (65/124). The average MELD score was 15.7 ± 5.9. The prevalence of community acquired infection was 29.3% (36/123) with the following subgroups: Spontaneous bacterial peritonitis (SBP) – 16, Urinary tract infection (UTI) – 11, pneumonia - 4, sepsis – 3, soft tissue infection – 2. The incidence of nosocomial infection was 14.6% (18/123) with the following subgroups: UTI - 9, SBP - 3, sepsis - 3, pneumonia - 2, soft tissue infection - 1. The mortality at first hospital admission for decompensated liver cirrhosis was 10.7% (14/137). We did not find any factors significantly associated with mortality at first hospital admission. The mortality at one year was 42.7% (41/96), and that at 3 years 62.5% (50/80). Patients who died at 1 year and 3 years were significantly older (p < 0.001; p = 0.001), had higher MELD scores (p = 0.012; p = 0.005). Mortality at 1 year was significantly higher in patients aged ≥ 50 years (p = 0.011), MELD score ≥ 15 (p = 0.03) and with > 2 hospital re-admissions (p = 0.015). Mortality at 3 years was significantly higher in patients aged ≥ 50 years (p = 0.012). There was no significant association between the sex, aetiology of liver cirrhosis, serum cholesterol, creatinine, sodium levels and presence of infections with the higher mortality.

Conclusion: Nearly all the patients who presented with ascites had advanced liver cirrhosis (Child Pugh B and C). Patients with this form of decomposition of liver cirrhosis have an elevated mortality (65%) at 3 years. Higher age and MELD score ≥ 15 were significantly associated with mortality at 1 and 3 years.
NONALCOHOLIC FATTY LIVER DISEASE IS ASSOCIATED WITH INSULIN RESISTANCE AND METABOLIC SYNDROME IN MAJORITY OF INDIAN PATIENTS

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Purpose: The aim of this study was to determine if there is an association of nonalcoholic fatty liver disease (NAFLD) with metabolic syndrome (MS) and insulin resistance (IR) in Indian patients.

Methods: Out of 574 patients who attended our center, 280 were diagnosed with NAFLD using ultrasound and 150 of these patients were randomly selected for this study. Subjects with the presence of two or more components of MS fulfilled the criteria for having MS. MS was defined according to the National Cholesterol Education Program (NCEP) and the presence of IR was defined as a homeostasis model assessment of IR (HOMA-IR) greater than 2.2. 

Results: Of the 280 patients, 147 were male and 133 were female. The mean age of the patients was 42.1 (± 10.3) years. One hundred and eighty (64%) patients fulfilled the minimum criteria for MS. 

Conclusion: While one hundred and eighty (64%) patients fulfilled the minimum criteria for MS, IR and MS are common in patients with NAFLD indicating an etiologic association. More than half of the patients with CVH also had IR but frequency of MS is very low in BMI central obesity and serum triglycerides levels independently predicted IR.

NONALCOHOLIC FATTY LIVER DISEASE AND ASSOCIATED WITH INSULIN RESISTENCE AND METABOLIC SYNDROME IN MAJORITY OF INDIAN PATIENTS

K. K. Thambiratnam, MSc.,1 K. R. Dixman, MD, DM,1 A. Dozsa, MD, DM2 1Medicine, King Pramongkrutklao Hospital, Mahidol University, Bangkok, Thailand; 2Medicine, Prince Songklanakarind University, Muang, Thailand.

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Conclusion: While one hundred and eighty (64%) patients fulfilled the minimum criteria for MS, IR and MS are common in patients with NAFLD indicating an etiologic association. More than half of the patients with CVH also had IR but frequency of MS is very low in BMI central obesity and serum triglycerides levels independently predicted IR.

THYROID DYSFUNCTION IN GENOTYPE 3 CHRONIC HEPATITIS C PATIENTS TREATED WITH INTERFERON & RIBAVIRIN

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Purpose: IFN & RIBA therapy for CHC infection has been associated with thyroid dysfunction. Aim of our study was to determine pattern of thyroid Dysfunction only in Genotype 3 Patients and to assess risk factors and reversibility of thyroid disorders induced by IFN therapy.

Methods: Patients with CHC, either biopsy proven or/and tested positive for HCV RNA by PCR and having only genotype 3(n=200)(M=101,F=99) were treated with IFN alpha 2b 3MIU TIW (n=150) or PEG IFN alpha2a 180Mcg (n=50) along with weight based RIBA were included in study. Thyrus function was determined at 1,6,12 and 24 months of treatment.

Results: Of 200 patients, 175 were compliant and 25 were lost to follow up. Among the 175 patients, 23 (13.1%) patients had detectable TSH (stimulated) in the first 24 months. Of these patients, 14 (6.3%) patients returned to normal TSH levels after discontinuation of IFN & RIBA therapy. There were no significant differences in age, gender, type of IFN used, presence or absence of thyroid auto antibodies before starting therapy, impact of RVR and SVR. Type of thyroid disease and its outcome were assessed during and after therapy.

Thyroid dysfunction was defined as TSH level below or above the normal range (0.2–4.5MUL). Frequency was compared using chi square test with Yates’s correction or Fisher exact test. A multiple logistic regression model was used in the statistical analysis of various factors for the development of thyroid dysfunction. Variables which were used included age, gender, type of IFN used, presence or absence of thyroid auto antibodies before starting therapy, impact of RVR and SVR. Type of thyroid disease and its outcome were assessed during and after therapy.

Thyroid dysfunction developed in 21 (10.5%) (M=8–F=13) of 200 patients. Hypothyroidism was seen in 7 and hyperthyroidism in 14 patients. Hypothyroidism occurred in 15 (7.5%) patients who received standard IFN as compared with 6 (12%) of 50 patients who received Peg IFN (p=1.0). Pretreatment autoantibodies were seen in 15 of 21 patients who later on developed thyroid dysfunction while 19.9% received IFN and the remaining 19.0% received no specific medication. For the HBeAg negative group, undetectable levels of HBV-DNA were achieved in 68.8% in the NAs gr. but these occurred 37.5% in the IFN group.(off treatment). For the HBeAg positive patients, HBeAg seroconversion and undetectable HBV-DNA were achieved in 31.2% in the NAs gr. and 61.9% in the IFN group.(off treatment).

Conclusion: Thymus gland dysfunction occurred in 21 (10.5%) (M=8–F=13) of 200 patients. Hypothyroidism was seen in 7 and hyperthyroidism in 14 patients. Hypothyroidism occurred in 15 (7.5%) patients who received standard IFN as compared with 6 (12%) of 50 patients who received Peg IFN (p=1.0). Pretreatment autoantibodies were seen in 15 of 21 patients who later on developed thyroid dysfunction while 19.9% received IFN and the remaining 19.0% received no specific medication.
Marotta, MD PhD MPH (Biostatistics)

1 infection. Further study is needed to explain the underlying pathophysiology and confirm

Purpose: Although paracetamol is a widely used analgesic/antipyretic agent regarded as generally safe when used at therapeutic levels, its related hepatotoxicity is the leading cause of drug-induced liver failure in the western countries and an acute or cumulative overdose can cause severe liver injury with the potential to progress to liver failure. The hepatoprotective potential of DTS (Dexamethasone-Coumarin) was evaluated in rat acute and chronic paracetamol-induced liver injury model.

Methods: Adult Sprague-Dawley rats were divided into 5 groups comprising 8 animals in each group. Group 1 served as the control. Group 2 (acute model) received paracetamol suspension (1.5 g/kg) once a day orally for 7 d. Group 3 received paracetamol (1.5 g/kg) followed by DTS (150 mg/kg) once a day orally for 7 d. Group 4 received paracetamol (150mg/kg/g) alone and group 5 received paracetamol plus DTS (150mg/kg). At sacrifice it was observed that liver and plasma, ALT, AST, Alkaline phosphatase, bilirubin, and albumin were significantly increased in group 1 compared to other groups. Also, histopathological study revealed severe liver injury with the potential to Progress to liver failure in group 1. Further treatment with DTS significantly reduced the activities of hepato protective drug silymarin (150mg/kg).

Results: We observed a reduction in liver antioxidants, such as glutathione (GSH), superoxide dismutase (SOD), glutathione peroxidase (GPO), and catalase (CAT) and in serum total protein, and an increase in serum alkaline phosphatase (ALP), serum aspartate aminotransferase (AST), and serum alanine aminotransferase (ALT). Bilirubin and liver thiobarbituric acid reactive substances (TBARS) due to liver injury in the paracetamol administered rats (2 g/kg). On the contrary, increased activities of liver GSH, SOD, GPO, CAT and serum total protein level, and decrease in the contents of serum ALT, AST, ALA, bilirubin and liver TBARS were observed in rats treated with DTS (150 mg/kg) and group 5 compared to other groups. The protection was significant in group 5 (p<0.05).

Conclusion: The mode of action of DTS was as evidenced by the above parameters may suggest that DTS on the one hand, prevents the formation of the reactive oxygen groups, or scavenges these groups, thereby preventing the damage on the hepatic cells. And, on the other hand, modulates the genes responsible for synthesis of antioxidant enzymes in liver tissue and decreases and glutathione derangement thus providing marked DNA protection.

Purpose: The main aims of this study were to evaluate the association of baseline GGT level and sustained virological response (SVR) in treatment-naive patients with CHC. The mean baseline ALT, AST, and GGT levels were 84.01 ± 42.57, 50.1 ± 23.45, and 50.1 ± 23.45 IU/mL, respectively. Thirty-eight pts achieved SVR (45.8%). In multivariate analysis, age (odds ratio [OR] 0.94; 95% CI 0.89-0.98; p=0.01) and elevated baseline GGT levels (≥ 1x ULN, 55 IU/dL) were negatively associated with SVR (OR 0.12; 95% CI 0.04-0.20; p<0.001), while gender, baseline ALT/AST levels, and baseline HCV RNA levels did not show significance. These results indicate that patients with normal baseline GGT levels, in addition to RVR and EVR, may be used to predict treatment response in pts with CHC genotype 1 infection. Further study is needed to explain the underlying pathophysiology and confirm these findings.

Purpose: The medical records of 118 (61 females, 57 males) consecutive chronic hepatitis C patients were reviewed. 57 of the 118 patients (48.3%) had intravenous drug use as a risk factor for HCV acquisition. 61 of the 118 patients (51.7%) had risk factors other than intravenous drug use (or for Telbivudine). 79 and 22 of the 61 patients (36.1%) without a history of intravenous drug use were tested for HCV. A statistically significant difference (p=0.0490) was found in the rate at which HCV patients with a history of intravenous drug use were tested for HCV compared to those who did not have a history of intravenous drug use. In patients with documented intravenous drug use, 24 of the 57 (42.1%) were female and 33 of the 57 (57.9%) were male. There was no statistically significant difference (p=0.4232) in the rate at which males and females with HCV and a history of intravenous drug use were tested for HCV.

Conclusion: Confection with chronic HCV and HIV causes significant morbidity and mortality. It has been demonstrated that patients with chronic HCV and HIV are more likely to be tested for HIV if intravenous drug use was their risk factor for HCV acquisition. This finding may represent a phenotypic bias when screening for HIV in patients with HCV. All patients with chronic HCV, regardless of identified risk factors, should be tested for HIV. Increased efforts are needed to encourage physicians to test for HIV in patients with chronic HCV.
**DESIGNING AND EVALUATION OF TANGO-M CHEMISTRY FOR QUANTIFICATION OF HUMAN HEPATITIS B VIRUS**

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**Purpose:** A number of common mutations have been described in HBV strains and recombi- nant variants. These isolated strains have also been identified within the basic core promoter/precocore/core and the pre-S1 gene, which show great heterogeneity. Designing primer and probe sets to detect and quantify all HBV variants by real-time PCR is challenging at best. HBV viral load was the strongest predictor of progression to cirrhosis and directly related to necroinflammation and progression of fibrosis.

**Methods:** A total of 250 samples consisting of HBV positive (n=100), HBV and HCV positive (n=125) and HIV positive (n=25) were collected from our patient unit. Centre for Liver research and diagnostics Complete Human HBV DNA sequences (n=944) were selected from the National center for biotechnology information (NCBI) nucleotide database. Primers and probes were designed and synthesized from core, surface and x region. Real-time based quantification was done using standard kit and in-house generated standards and RT-PCR protocols.

**Results:** The standard calibration curve was generated by using the Smart Cycler II software and serial dilution 102 to 108. The calibration curve was linear in a range from 102 to 1010 copies/ml, with R2 value of 0.999. Reproducibility as measured by dual testing of triplicates of serum samples was acceptable, with coefficients of variation at 6.3%, 7.5% and 10.5%. Our results showed that amplification performance was good in case of primer and probe set designed from x region. We constructed a plasmid with x region using p-GEMT easy vector for being used as a control for deriving standard curve. Out of 100 negative samples screened by ELISA and standard RT-PCR kit, one sample was detected as positive with the in-house de- veloped RT-PCR assay, the positivity of the sample was confirmed by sequencing the amplified product. NCBI accession EU868402. To avoid the possibility of contamination, this sample was simultaneously processed twice using both standard and in-house assays. Out of four oligo sets designed for HBV detection by RT-PCR, X gene set showed highest specificity and sensitivity (98%) followed by surface (74%) and core (70%).

**Conclusion:** The X gene set developed showed a limited inter and intra assay variability and good amplification efficacy in different HBV genotypes and serotypes. We demonstrate that this assay is reproducible showing limited inter and intra assay variability and is designed for HBV detection by RT-PCR, X gene set showed highest specificity and sensitivity (98%) followed by surface (74%) and core (70%).

**Follow up results after 6 months showed overall improvement in general condition. All the pa- tients were treated safely without any post infusion complications.**

**Results:** All the procedures were performed safely without any post infusion complications. Follow up results after 6 months showed overall improvement in general condition. All the patients showed improvement in serum albumin, bilirubin, ALT after first month of cell infusion. Ultrastructural findings showed decrease in ascites.

**Conclusion:** This study demonstrates the efficacy of hepatic progenitor cell management of cirrhosis liver. As the procedure is very simple, infusion of hepatic progenitors can be repeated to improve the liver functions.

**CHARACTERIZATION OF HEPATIC PROGENITORS FROM HUMAN FETAL LIVER DURING SECOND TRIMESTER**

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**Purpose:** Our aim was to enrich Hepatic progenitors using epithelial cell adhesion molecule (EpCAM) marker from human fetal liver and investigate the expression of markers for hepatic progenitor cells and human leukocyte antigen (HLA).

**Methods:** EpCAM -ve cells were isolated using magnetic cell sorting (MACS) from human fe- tuses (n=10) at 14-20 weeks gestation. Expression of markers for hepatic progenitors such as albumin, Alpha-feto-protein (AFP), CD 29 (integrin beta1), CD 49d (integrin alpha6) and CD 90 ( Thy1) was studied by using flow cytometry, immunocytochemistry and RT-PCR. HLA Class I (HLA A, B and C) and class II (DPR and DQB) expression was studied by immunocytochemistry.

**Results:** Our results show that human fetal EpCAM-ve cells express hepatic progenitors, mod- erate levels of HLA A1 and class HLA II markers.

**Conclusion:** Our study suggests that human fetal EpCAM-ve cells can be used as hepatic progenitors for cell transplantation with a minimum risk of allorreactivity and these cells may serve as an alter- native for hepatic cell therapy in liver disorders.
DIVERTICULAR BLEEDING IN AFRICAN-AMERICAN AND HISPANIC PATIENTS: NATURAL HISTORY AND RISK FACTORS FOR RECURRENT

A. L. Al-Ahmad, MD. Gastroenterology, Charles Drew University of Medicine and Science, Los Angeles, CA.

Purpose: To determine the natural history and risk factors for recurrence of diverticular bleed- ing in African-American and Hispanic patients.

Methods: Records of patients hospitalized for acute lower gastrointestinal bleeding were re- viewed retrospectively over a 10-year period, and those with final diagnosis other than diver- ticular bleeding were excluded. Information about admission, readmission, procedures, studies, and outcome was obtained. Risk factors for subsequent hospitalization for rebleeding were evaluated and data analyzed.

Results: A cohort of 263 patients hospitalized for the first episodes of diverticular bleeding were identified, mean follow-up period was 8 years. During this time 130 patients (55%) had 289 subsequent hospitalizations for rebleeding. Of 130 patients with recurrence of diverticular bleeding, 91(70%) had one or more future admissions for bleeding. Of the original cohort of 236 patients, 47 patients (20%) underwent colonic resection. Overall there were 40 deaths (17%). Age > 65 years was associated with increased risk of rebleeding (relative risk 2.24, 95% confidence interval 1.28-3.91). Older elderly had higher rebleeding and mortality rates (age >65 years; p<0.01, age >80 years; p=0.001). Other factors associated with increased risk of hos- pitalization for rebleeding were the presence of comorbidity, in particular hypertension and/or cirrhosis (relative risk 1.87, 95% confidence interval 1.23-2.78) and NSAIDs and/or coumadin use (relative risk 1.77, 95% confidence interval 1.13-2.78). There was no significant difference in risk of rebleeding between African-American and Hispanic patients. Gender, hemoglobin concentration and amount of blood transfusion did not have an elevated risk of hospitalization for recurrent diverticular bleeding relative risk 0.21, 95% confidence interval 0.03-1.54.

Conclusion: Our study suggests that African-American and Hispanic patients hospitalized for diverticular bleeding had a 55% risk of readmission for rebleeding within 5 years of their index bleed. Of those recurrences, 71% of the patients had one or more future admissions for bleeding. Age > 65 years, hypertension, cirrhosis, NSAIDs and coumadin use were associated with increased risk of rebleeding but ethnicity, gender, hemoglobin concentration and amount of blood transfusion were not associated increased risk of rebleeding.

ISCHEMIC COLITIS AND LOWER GASTROINTESTINAL BLEEDING IN AFRICAN-AMERICAN AND HISPANIC PATIENTS

A. L. Al-Ahmad, MD. Gastroenterology, Charles Drew University of Medicine and Science, Los Angeles, CA.

Purpose: Ischemic colitis (IC) usually occurs in older patients and is considered to be an infre- quent cause of lower gastrointestinal bleeding (LGB). Few data exist on the incidence and natural history of IC in African-American and Hispanic patients. As our inner-city community hospital serves predominantly these two ethnic groups this study was conducted to determine the etiology and natural history of IC in this population.

Methods: A 10-year retrospective study was undertaken. Medical records of patients with the diagnosis of LGB were reviewed and 77 patients, 46 African American (26 females) and 31 Hispanic (11 females), median age 69 years (range 21-101 years) with the diagnosis of IC were identified. Extracted data included: admission and reason for hospitalization clinical information, patient medical conditions, medications, procedures, laboratory results, radiological studies, surgery, pathology and autopsy reports when available. Median follow-up period was 6.5 years (range 2-9 years).

Results: Of 66 patients (60%) had one or more co-morbid conditions (hypertension, con- gestive heart failure diabetes mellitus, ischemic heart disease, cirrhosis, and most common pres- entation of IC was LGB (65%) or bloody diarrhea (30%). Probable cause of IC in 9 younger patients (average age 15 years) was cocaine use in 6 patients and sickle cell disease in 3 patients. Diag- nosis was made by clinical presentation, endoscopic and radiological studies in 60 patients and by surgery in 17 patients. Fifty-eight patients (75%) were treated medically and 19 patients un- derwent surgery. Mortality was 25% in medically treated patients and 0% in the medically treated group (p<0.05) patients who had recurrent episodes of IC over 5- year period. Overall mortality in medically treated group was 18%. Mortality was higher in pa- tients older than 75 years (p=0.001). Medically treated patients predominantly presented as LGB (p<0.05) whereas, surgically treated patients presented as acute abdomen with peritoneal signs (p=0.05).

Conclusion: IC is associated with significant morbidity and mortality in African-American and Hispanic patients. Cocaine abuse and sickle cell disease can cause IC even in younger patients. A high index of suspicion for IC and low threshold for diagnostic work-up and prompt treat- ment of associated conditions may improve clinical outcome.

DYSMOTILITY OF THE CECUM IN PATIENTS WITH SEVERE SLOW-TRANSIT CONSTIPATION: CHARACTERISTIC RADIOLOGIC AND MOTILITY PATTERNS AND CLINICAL RELEVANCE


Purpose: Constipation in patients with severe slow colon transit constipation are often aff- flicted with distressful abdominal discomfort and pain, urinary frequency and urgency, stress urinary incontinence, and pelvic discomfort and dyspareunia. Many of these patients exhibit a radiologically abnormal cecum. We defined radiological characteristic of cecum, investigated cecal motility abnormality and assessed clinical significance.

Methods: Colon transit time was determined with radio-opaque pellets. To examine cecal si- lhouette on erect position, patients ingested a cooked ground beef patty (170 grams) with liquid radiologically abnormal cecum. We defined radiological characteristic of cecum, investigated the etiology and natural history of IC in this population.

Results: Thirty-one subjects were studied, including 21 colon inertia patients with mean colon transit time (±SE) of 225±18 hrs and 10 with normal colon transit time, <72 hrs. Fifteen (Group 1) of 21 had a markedly enlarged, descended (gyrate) cecum reaching right pelvic rim and it was posteriorly bent, whereas cecum in 10 subjects with normal colon transit (Group 3) were found near right iliac crest. Six remaining colon inertia patients (Group 2) showed a mod- erately ptotic cecum. Mean estimated cecal volume, 349±35 cm³ of Group 1 was significantly greater than that, 66±50 cm³ of controls (P<0.01). Cecal emptying of barium-mixed feces was delayed as long as 10 days with a mean±SE of 9±0.6 days in Group 1, whereas in Group 2 and 3, the emptying time was 1±2 day (P<0.01). In cecum, mean contraction number of all 3 groups, 2.9±0.1/hr, was significantly lower than that, 5.8±0±1/hr. of ileum (P<0.01). Mean cecal MI was also significantly lower than that of ileum (P<0.05). (Table). More significantly, mean cecal MI of Group 1 was markedly lower than that of Group 2 and 3 (Table). Within all 13 patients of Group 1, laparoscopic colectomy relieved both severe constipation associated with abdominal discomfort or pain and pelvic symptoms.

Conclusion: A motility abnormality of the cecum was found in female patients with severe slow colon transit constipation. Cecal hypomotility is associated with fecal stasis, causing cecal enlargement which descends to reach the pelvic floor. A markedly ptotic cecum affects bladder function; urinary urgency and stress incontinence, and can cause dyspareunia.

Results: Using histologic criteria for serrated polyps, 91% lesions(combining hyperplastic polyp(serrated polyps),MSI and BRAF mutation may account for 20%. The ‘serrated polyph classification system’ includes polyps into various histological subtypes Emerging evidence suggest that certain subtypes may have neoplastic potential. Our purpose was to re-evaluate the histologi- cal diagnosis in patients previously diagnosed as hyperplastic polyph and ‘adenoma’.

Methods: We randomly selected histology slides of 45 pts with the diagnosis of Hyperplastic polyph and 49 pts with the diagnosis of ‘adenoma’ at the John Dempsey hospital(year 2002- 03).All slides were re-classified based on following new classification. 1)Hyperplastic polyph a)Microvesicular serrated polyp (MVSP) b)Goblet cell serrated polyp (GCSp) c)Mucin poor serrated polyp (MSPS) 2)Sessile serrated adenoma (SSA) 3)Traditional serrated adenoma/ser- rated adenoma (TSA) 4)Conventional adenoma (tubular,villous,TV).

Results: Hyperplastic polyph were reclassified with the GCSP(least deviated from classic hyperplastic definition)to those TSA which have some adenomatous change(table).Importantly,a certain subtypes may have neoplastic potential. Our purpose was to re-evaluate the histologi- cal diagnosis in patients previously diagnosed as hyperplastic polyph and ‘adenoma’.

Conclusion: Using histologic criteria for serrated polyps, 91% lesions(combining MVSP and TSA) are currently recognized as lesions with possible malignant potential. Historically, pa- tients with hyperplastic ‘polyps’ were not recommended for increased colon surveillance but ‘reclassification’ of previous histologic diagnosis may warrant shorter follow up intervals.Larger prospective clinical trials are needed to ascertain the prognosis and outcome of described histology.

In hyperplastic group

<table>
<thead>
<tr>
<th>Total</th>
<th>MVSP</th>
<th>GCSp</th>
<th>Mixed</th>
<th>TSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>29</td>
<td>2</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

In adenoma group

<table>
<thead>
<tr>
<th>Serated (7)</th>
<th>Non-serated/Conventional adenoma (42)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSA(2)</td>
<td>Dysplasia (throughout)(5)</td>
</tr>
</tbody>
</table>
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CLOSTRIDIUM DIFFICILE INFECTION WAS NOT DETECTED IN PATIENTS WHO RECEIVED Rifaximin for Hepatic Encephalopathy in Community and University Practices

G. Seif MD,1 V. Zacharias, MD,2 M. Jones, MD,2 M. Jonas, MD,1 R. Ravinuthala, MD,1


Purpose: Clostridium difficile infection has been associated with several types of antibiotics, including fluoroquinolones. The incidence of C difficile infection related to the nonabsorbed antibiotic rifaximin is unknown. Rifaximin is approved for the treatment of travelers' diarrhea caused by noninvasive strains of Escherichia coli and is being investigated for the treatment of hepatic encephalopathy (HE). This retrospective study evaluated the incidence of C difficile infection in patients with HE who received rifaximin for treatment of HE in community and university settings.

Methods: Medical charts for all patients diagnosed with cirrhosis who received oral rifaximin for the treatment of HE between January 2004 and May 2008 were reviewed. Patients had been treated at 1 university practice and 3 community practices. Patients who developed diarrhea (>6 bowel movements/d) during treatment with rifaximin were included in the analyses. Stool samples had been analyzed by cytotoxin assay testing to determine if diarrheal symptoms (ie, markedly increased stool frequency and decreased stool viscosity) were due to C difficile infection.

Results: Analyses included 212 patients with cirrhosis who received rifaximin for the treatment of HE. The mean dose of rifaximin was 1055 mg/d (range, 600-1600 mg/d) for a mean duration of 250 days (range, 180-385 d). Of the 212 patients who received rifaximin, 155 were treated in a university practice and 57 were treated in community practices; 97% of patients had been diagnosed with grade 2 or 3 HE. Eighteen patients (8%) developed diarrhea during rifaximin treatment; 13 were male and 5 were female (mean age, 52 y). Twelve of the 18 patients (67%) who developed diarrhea had received treatment in the university setting and the remaining 6 (33%) had received treatment in community practices. Stool cytotoxin test results were negative for C difficile in all 18 of these patients. Diarrheal symptoms resolved in all cases with standard therapy administered after stool analyses had excluded infection.

Conclusion: These findings suggest that long-term treatment with rifaximin for HE is not associated with the development of C difficile infection in patients with cirrhosis who received rifaximin for treatment of HE. Therefore, rifaximin does not appear to increase risk of C difficile infection. Further investigations of the incidence of C difficile infection in patients who receive rifaximin are warranted.

This research was supported by an industry grant from Salix Pharmaceuticals

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EFFECT OF ENDOSCOPIC ULTRASOUND’S TECHNOLOGY IN DIAGNOSING VARIOUS STAGES OF RECTAL CANCERS: A META-ANALYSIS AND SYSTEMATIC REVIEW

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Purpose: Prognosis and treatment of patients with rectal cancers depends largely on the T staging of the tumor. The published data on effect of changes in endoscopic ultrasound’s (EUS) technology over accuracy of T staging in rectal cancer patients has been varied. The aim of this meta-analysis was to evaluate the effect of EUS technology over accuracy in T staging of rectal cancer patients.

Methods: Study Selection Criteria: Only EUS studies confirmed by surgery were selected. EUS criteria used for T staging were: T1- the tumor invades the lamina propria or submucosa but does not invade muscularis propria, T2- the tumor invades but does not extend beyond the muscularis propria, T3- the tumor invades the perirectal tissues but does not invade adjacent organs, and T4- the tumor invades adjacent structures. Only studies from which a 2 X 2 table could be constructed for true positive, false positive, false negative, and true negative values were included. Data collection & extraction: Articles were searched in Medline, Pubmed, Ovid journals, CINAHL, International pharmaceutical abstracts, old Medline. Medline nonindexed citations, and Cochrane controlled trials registry. Two reviewers independently searched and extracted data. The differences were resolved by mutual agreement. Statistical Method: Meta-analysis for the accuracy of EUS was analyzed by calculating pooled estimates of sensitivity, specificity, likelihood ratios, and diagnostic odds ratio. EUS studies were grouped into three time periods to standardize the change in EUS technology and also to standardize the change in EUS criteria for tumor staging. These time periods were 1984 to 1994, 1995 to 2000, and 2001 to 2008. Pooling was conducted by both the Mantel-Haenzel method (fixed effects model) and by the DerSimonian Laird method (random effects model). The heterogeneity of studies was tested using Cochran’s Q test based upon inverse variance weights.

Results: Initial search identified 3730 reference articles Of these, 379 relevant articles were selected and reviewed. 42 studies (N=5038) which met the inclusion criteria were included in this analysis. Pooled accuracy data for T staging over last two decades is shown in table 1. The pooled estimated by fixed and random effect models were similar. The p for chi-squared heterogeneity for all the pooled accuracy estimates was > 0.10.

Conclusion: EUS has excellent specificity to accurately diagnose T staging in a patient with rectal cancer. The sensitivity of EUS is higher for advanced disease than early disease. This sensitivity of EUS for early diseases did not improve over the past two decade. Further refinements in EUS criteria and technology are needed to improve the sensitivity to diagnose early disease.

Table 1: Shows the effect of EUS technology to diagnose various T stages of rectal cancers

<table>
<thead>
<tr>
<th>Year</th>
<th>No of Studies</th>
<th>Pooled Sensitivity</th>
<th>Pooled Specificity</th>
<th>Pooled Positive Likelihood Ratio</th>
<th>Pooled Negative Likelihood Ratio</th>
<th>Pooled Diagnostic Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984 to 1994</td>
<td>28</td>
<td>96.0% (94.7 - 97.8)</td>
<td>90.0% (87.2 - 93.1)</td>
<td>8.0 (4.2 - 10.4)</td>
<td>0.03 (0.01 - 0.06)</td>
<td>209.0 (109.1 - 419.7)</td>
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<td>96.2% (95.4 - 97.1)</td>
<td>89.5% (87.2 - 91.4)</td>
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<td>0.03 (0.01 - 0.08)</td>
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**P497**

**PREVALENCE AND SITE DISTRIBUTION OF ADENOMATOUS POLYPS ON SCREENING COLOSCOPIES IN THE AVERAGE-RISK LEBANESE POPULATION: IMPACT OF THE MEDITERRANEAN DIET**

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**Purpose:** Colorectal cancer (CRC) is the 2nd most common malignancy in Western societies and the 2nd leading cause of cancer-related death. Most CRC develop from precancerous adeno- mas. The prevalence of advanced neoplasia (defined as a polyp ≥1 cm, presence of villous histol- ogy, high grade dysplasia or cancer) ranges from 3-10% in multiple large studies that included some individuals with positive family history of CRC. This study aims to investigate the prevalence of adenomas and advanced neoplasia in the average-risk Lebanese population and to ex- aminate possible associated dietary and clinical risk factors for colon polyps.

**Methods:** Consecutive asymptomatic Lebanese patients undergoing screening colonoscopy were included. Exclusion criteria included a family history of CRC or of large colon polyps. Only patients with a good or excellent bowel preparation were included. Videoscopic and dig- tal image documentation of polyps and cecal landmarks were recorded along with the colono- scopical withdrawal time not counting polyectomy time. Information about lifestyle, dietary habits, long-term use of aspirin, NSAIDs; calcium and hormone replacement therapy in fe- males was collected. Polyp size, number, and location were charted on a colon skin for each patient and the histopathology confirmed by a pathologist.

**Results:** To date, 365 average-risk individuals (169 males and 196 females, mean age = 61.7±8.9 for M and 61.2±8.5 for F) underwent screening colonoscopy. Cecal intubation rate was 99% and all preparations were scored as good or excellent. Hyperplastic polyps were identified in 44 cases (12.1%). One or more adenomatous polyp(s) were detected in 129 overall patients (35.3%) with a significantly higher prevalence in males (47.3% vs 25%, p<0.05). The anatomic distribution of adenomas was distal to splenic flexure in 29.6%, proximal in 32.8%, and in both segments in 37.6% of cases. Advanced neoplasia was noted in 21 patients (5.8%) (18M and 3F) including 3 patients who had cancer (0.8%). Mean colorectaloscopic withdrawal time was 13.7±3.4 minutes. There was no correlation between presumed risk factors and presence of adenoma- mas. The prevalence of CRC and adenomas in the current study cohort is similar to that reported in the literature.

**Conclusion:** The prevalence of colorectal adenomas and advanced neoplasia in the average-risk Lebanese population matches that reported in North American and European studies on screening colonoscopy. The study confirms that CRC risk is associated with multiple factors and that these factors are present in larger trials. The role of putative risk factors such as obesity, smoking, and red meat con- sumption, as well as a possible protective effect of a Mediterranean diet, rich in fiber and low in saturated fats, requires further investigation in larger cohorts.

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**P499**

**MULTIPLE SETONS AS TREATMENT OF COMPLEX OR HIGH FISTULA IN ANO**

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**Purpose:** Low Anal fistula is treated by either fistulotomy or fistulocystotomy. However the treat- ment of high and complex fistula is difficult and not well defined. The patient usually under- goes tailor made procedure from fistulotomy, Seton insertion, Colonic diversion, Mucoanal ad- vancement flap procedure to the newer modalities like fibrin glue or fistuloplasty flap. Each procedure has some merits and demerits We describe the use of Multiple Prolene Setons in cases of high or complex fistula.

**Methods:** From January 2001 to December 2007, 20 consecutive patients with high or complex anal fistulae were treated using Multiple Prolene Setons (MPS). All patients had three setons inserted through each fistulous tract under GA or spinal anaesthesia. One seton was loosely tied to work as cutting seton while remaining two were left loose to work as drainage setons. These setons were further tightened sequentially weeks later. After about 6-8 weeks from in- sertion of seton, fistulocystotomy was performed when high complex fistula were converted to simple fistula.

**Results:** Total twenty (n=20) patients had MPS treatment. The median age of the patients was 41 (range: 18-70). Of the twenty (n=20) patients, fourteen (n=14) patients had primary high fistula while six (n=6) had recurrent fistula. All fourteen (n=14) patients with primary high fistula had complete healing of the fistulous tract in 8-12 weeks Of 6 patients with recurrent fistula, four healed completely in 12 weeks. Two patients had recurrence and were successfully treated again by MPS alone in one while other required diversion colostomy with insertion of MPS. No patient developed faecal incontinence. Almost all patients were satisfied with this treatment. Follow up of the patient was 100% with follow up period of 24-156 weeks.

**Conclusion:** The Multiple Prolene Seton (MPS) method is safe, cheap and effective in the treat- ment of high and complex type of fistula in ano. Seton cut not only from above down but also from lateral to medial, thus converting high fistula to simple fistula. It does not cause fecal in- continence, has good cure rate and most patients were satisfied with the treatment.

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**P500**

**PREVALENCE OF ADENOMAS AND COLORECTAL CANCER IN 50-75 YEAR OLD INDIVIDUALS AT AVERAGE RISK FOR COLORECTAL CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS**

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**Purpose:** There is variability in the reported prevalence of adenomas and colorectal cancer (CRC) in the literature. As such, we conducted a systematic review and meta-analysis of observ- ation cohort studies to determine: 1) the overall prevalence of adenomas and CRC and 2) the prevalence of non-advanced and advanced adenomas among average risk North Ameri- cans. We also sought to explore clinical and methodological factors that may account for the variability in the reported prevalence estimates.

**Methods:** Articles were obtained by searching MEDLINE (1950 to present) and EMBASE (1980 to present). Searches were supplemented by scanning conference proceedings and the table of contents of major gastroenterology and radiology journals. The bibliographies of in- cluded articles were also scanned. Two individuals independently screened all identified cita- tions and abstracts were retained if they reported adenoma and CRC prevalence rates based on original data. A total of 354 potentially relevant articles were selected for full-text review and 14 were ultimately deemed eligible for data extraction and analysis. Pooled prevalence es- timates were estimated using fixed and random effects models, and meta-regression was used to assess the association between clinical and methodological factors and the reported preva- lence rates.

**Results:** The reporting of pathology was not uniform across studies. The overall prevalence of adenomas was 32.4% (10 studies; n=6,047) using a random effects model and 0.5% for CRC (10 studies; n=56,114) using a fixed effects model. The prevalence of non-advanced adenomas was 17.5% (5 studies; n=5,519) using a fixed effects model and 6.1% for advanced adenomas (9 studies; n=21,213) using a random effects model. Heterogeneity was observed in the pooled prevalence of advanced adenomas confirms the higher risk of advanced adenomas. This was explained by sample size and a predominance of male subjects for overall adenomas and age for advanced adeno- mas. None of the study quality indicators were found to be significant in our meta-regression. Considerable heterogeneity was observed for adenomas and CRC prevalence rates from this study should be used as quality indicators for CRC screening programs, and as points of reference for studies aimed at reducing the incidence of CRC.

**Conclusion:** This research was supported by an industry grant from Alberta Heritage Foundation for Medical Research.
COMPARISON OF QUALITY OF COLONOSCOPY BOWEL PREPARATION AMONG IN-PATIENTS, OUT-PATIENTS WITH STANDARD BOWEL PREPARATION AND OUT-PATIENTS WHO HAD REINFORCEMENT OF INSTRUCTIONS BY NURSES

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Purpose: The aim of the study was to compare the quality of bowel preparation among in-patients, out-patients who underwent standard preparation and out-patients who had standard preparation along with reinforcement of instructions on bowel preparation by nurses prior to colonoscopy.

Methods: Medical records and colonoscopy reports of patients who underwent a colonoscopy during April-May 2008, at a large tertiary care medical center, as in-patients (group-1) and out-patients (group-2) and as out-patients in an affiliated satellite endoscopy center (group-3) were reviewed. Patients in all 3 Groups received standard bowel preparation whereas in group 3, patients additionally received nurse education on bowel preparation via a phone call one day prior to scheduled colonoscopy. Standard bowel preparation included either one gallon of PEG electrolyte solution (PEG-EL), oral Fleets-phospho soda (Fleets) or half a gallon of PEG-EL along with Bisacodyl (Halallyt). The quality of bowel preparation was graded by endoscopists according to a prespecified criteria, as excellent, good, fair or poor. The primary end point was selected as the percentage of patients with fair or poor bowel preparation, since visualization is compromised in these two categories.

Results: There were a total of 136, 91 and 108 patients in the three groups respectively. Patient demographics such as age, gender and BMI were similar in all three groups. There were significantly higher number of patients who underwent screening colonoscopies in groups 2 and 3 and Fleets was more commonly used in these patients. In group 1, no mention for PEG-EL was more likely to be GI bleeding, abdominal pain and diarrhea, and PEG-EL was the most commonly used agent. The primary end point (fair or poor preparation) was seen in 30% in group 1, 56% in group 2 and 13% in group 3 (p<0.001). Colonoscopy completion rates were 73%, 84% and 97% respectively (p<0.001). On multivariable logistic regression analysis, out-patients who received nurse education on bowel preparation were 68% less likely to have a poor/fair preparation compared with out-patients with standard preparation, while there was no statistically significant difference between in-patients and out-patients with standard preparation (see table).

Conclusion: Reinforcement of instructions on bowel preparation by nurses via phone call one day prior to colonoscopy significantly improves quality of bowel preparation among out-patients. Similar interventions should be considered by other centers to improve quality of colonoscopy. While in-patients had significantly higher rates of poor/fair bowel preparation by uni-variant analysis compared to out-patients, there was no significant difference when adjusted for other confounders.

Fair/Poor Colonsopy Preparation: Multivariable logistic regression analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>OR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatients with nurse intervention vs. Outpatients with standard preparation</td>
<td>0.32 (0.14, 0.71)</td>
<td>0.005</td>
</tr>
<tr>
<td>Inpatients vs. out-patients with standard preparation</td>
<td>1.08 (0.58, 2.0)</td>
<td>0.82</td>
</tr>
<tr>
<td>Gender Male vs. female</td>
<td>1.5 (0.90, 2.5)</td>
<td>0.12</td>
</tr>
<tr>
<td>Use of Naorectics</td>
<td>2.0 (1.1, 3.5)</td>
<td>0.016</td>
</tr>
<tr>
<td>bilo Inflammatory Bowel Disease</td>
<td>2.7 (1.09, 6.7)</td>
<td>0.032</td>
</tr>
<tr>
<td>Fleets vs. PEG-Bisacodyl</td>
<td>1.3 (0.47, 3.7)</td>
<td>0.39</td>
</tr>
<tr>
<td>PEG vs. PEG+Bisacodyl</td>
<td>3.2 (1.5, 6.5)</td>
<td>0.002</td>
</tr>
</tbody>
</table>

PS02

CLINICAL CHARACTERISTICS OF PRIMARY EPIPLOIC APPENDIGITIS

S. Kim, MD, J. Choe, MD, Y. Kim, MD, J. Yoo, MD, E. Lim, MD, Y. Choi, MD, Y. Kang, MD. Division of Gastroenterology, Departments of Internal Medicine, Konyang University College of Medicine, Metropolitan City Daejon, South Korea.

Purpose: Primary epiploic appendagitis(PEA) is an uncommon cause of abdominal pain. PEA is rarely considered in the differential diagnosis of intra-abdominal disease and frequently misdiagnosed.

Methods: We were retrospectively reviewed the clinical records and CT images of 13 consecutive patients of PEA from August 2005 to April 2008.

Results: Their were 6 men and 7 women with a mean age of 51 years. The chief complaint was sudden abdominal pain. 10 cases were left lower, 1 case was right lower and 2 cases were retro-midle quadrant abdominal pain. Except leukocytosis in one patient, remnant patients were no leukocytosis.appendicitis or diverticulitis. It can be diagnosed easily by CT scan or ultrasonography and self-resolution after surgery for the various sites. Respiratory complications were higher for left colon cancer than other sites and anastomotic leak higher for rectal cancer patients when compared with sigmoid cancer. Thirty day postoperative mortality was significantly higher after surgery for left colon cancer. On Kaplan-Meier analysis, curative surgery was associated with lower rate of mortality than palliative procedures at five years (72.2% versus 90.5%, p<0.001) and the differences were also significant for cancers in the right and sigmoid colon, and rectum.

Conclusion: The characteristics and management of metastatic colorectal cancers varied between sites, which leads to different outcomes. Short-term complications should be a consideration for the decision to proceed with surgery.

Comparison of characteristics between sites of primary

<table>
<thead>
<tr>
<th>Site</th>
<th>Variables</th>
<th>Right colon(n=25)</th>
<th>Transverse colon(n=35)</th>
<th>Left colon(n=49)</th>
<th>Sigmoid colon(21)</th>
<th>Rectum(n=74)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td>64.1±12.9</td>
<td>64.8±11.9</td>
<td>61.3±14.3</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td></td>
<td></td>
<td></td>
<td>37(53.9%)</td>
<td>29(82.9%)</td>
<td>36(73.5%)</td>
</tr>
<tr>
<td>ASA (2)</td>
<td></td>
<td></td>
<td></td>
<td>220(41.4%)</td>
<td>61(37.9%)</td>
<td>23(11.3%)</td>
</tr>
<tr>
<td>DVT</td>
<td></td>
<td></td>
<td></td>
<td>59(52.4%)</td>
<td>9(13.0%)</td>
<td>10(11.8%)</td>
</tr>
<tr>
<td>Pulmonary Embolism</td>
<td></td>
<td></td>
<td></td>
<td>5(2.3%)</td>
<td>12(2.3%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Wound Infection</td>
<td></td>
<td></td>
<td></td>
<td>6(2.4%)</td>
<td>3(8.6%)</td>
<td>3(6.1%)</td>
</tr>
<tr>
<td>Wound Dehiscence</td>
<td></td>
<td></td>
<td></td>
<td>10(3.9%)</td>
<td>0(0%)</td>
<td>0(0%)</td>
</tr>
</tbody>
</table>

PS03

INFLUENCE OF SITE OF PRIMARY ON POSTOPERATIVE OUTCOMES FOR PATIENTS WITH METASTATIC COLORECTAL CANCER UNDERGOING SURGERY

L. Lian, MD, R. Kiran, MD, J. Lavery, MD. Digestive Disease Institute, Cleveland Clinic Foundation, Cleveland, OH.

Purpose: Location of the primary in patients with stage IV colorectal cancer may influence the decision as to whether resection of the primary is appropriate. We evaluate whether location of the primary influences the presentation and 30 day postoperative outcomes for stage IV colorectal cancer patients undergoing surgery.

Methods: All patients with stage IV cancer of the colon and rectum were identified from a prospectively maintained colorectal cancer database. Clinical characteristics and outcomes for patients undergoing surgery of the cancer primary at various locations were compared in a pairwise manner.

Results: 929 patients underwent surgery from 1986 to 2007. Details of patients are in table. Right colon cancers were more likely to metastasize to liver than left colon (p=0.03) while rectal cancers were less likely to metastasize to the peritoneal cavity. Carcinoembryonic antigen level was similar between tumor sites (p=0.12). Thirty-day postoperative complications including cardiovascular, DVT, pulmonary embolism, wound infection and dehiscence, obstruction, fistula, intra-abdominal abscess, urinary infection, reoperation and readmission were similar after surgery for the various sites. Respiratory complications were higher for left colon cancer than other sites and anastomotic leak higher for rectal cancer patients when compared with sigmoid cancer. Thirty day postoperative mortality was significantly higher after surgery for left colon cancer. On Kaplan-Meier analysis, curative surgery was associated with lower rate of mortality than palliative procedures at five years (72.2% versus 90.5%, p<0.001) and the differences were also significant for cancers in the right and sigmoid colon, and rectum.

Conclusion: The characteristics and management of metastatic colorectal cancers varied between sites, which leads to different outcomes. Short-term complications should be a consideration for the decision to proceed with surgery.
P504  EFFECT OF GASTRIC ACID SUPPRESSION ON RECURRENCE OF CLOSTRIDIUM DIFFICILE-ASSOCIATED DISEASE
E. Maguire, MD. Gastroenterology/Medicine, Southern Illinois University School of Medicine, Springfield, IL.

Purpose: Use of acid suppressants (proton pump inhibitors and H2 receptor antagonists) has been associated with increased incidence of Clostridium difficile-associated disease (CDAD). We hypothesized that gastric acid suppression may also be associated with increased recurrence of CDAD. The objective of the study was to evaluate the effect of acid suppression on the risk of recurrence in patients with CDAD.

Methods: Study design: Retrospective observational study of patients admitted to a hospital with CDAD. Inclusion criteria: Age more than 18 years; CDAD diagnosed using either the ELISA-based toxin assay or pseudomembranes noted on endoscopy with histological confirmation or both. Two groups of patients were identified - cases and controls. Cases were patients on acid suppressants for any reason and controls were patients not taking any acid suppressant. CDAD was categorized as mild-moderate or severe based on the absence or presence of 2 or more of the following criteria: WBC > 15,000, albumin < 2 g/dL. ICU admission for CDAD, pseudomembranes noted on endoscopy and bowel wall thickening on CT scan. Exclusion criteria: Asymptomatic carriers, testing done on outpatient basis or at outpatient hospitals, and incomplete medical records. Primary outcome: Recurrence rate (two or more episodes) of CDAD. Statistical analysis: Chi-square analysis.

Results: A total of 538 were reviewed and 262 met study criteria. The mean age of the patient population was 68 years (SD = 16) with more females (153/262, 58.4%) than males (109/262, 41.6%). Most of the patients were Caucasians (249/262, 95%). Cases (199/262, 76%) and Controls (63/262, 24%) were matched based on the severity of illness. There was no difference in the recurrence rate of CDAD between mild-moderate cases (16/161, 10.0%) versus controls (7/55, 12.7%) (p = 0.61). Although the recurrence of CDAD in severe cases (12/38, 31.5%) was higher than those in the corresponding controls (13/125, 10.4%), this difference was not statistically significant (p = 0.4). However, using univariate analysis, age (67.2 + 15.7 with single infection and 73.8 + 16 with multiple recurrences) and severity were found to be independently associated with CDAD recurrence (p = 0.039 and 0.003, respectively).

Conclusion: Acid suppressants did not seem to increase the risk of CDAD recurrence in our study. Age and severity of disease were found to be important risk factors for recurrence of CDAD. Larger prospective controlled trials should be undertaken to evaluate the risk of acid suppression on CDAD recurrence.

P505  FAMILY HISTORY AND APPROPRIATE REFERRAL FOR COLORECTAL CANCER SCREENING: A SURVEY OF TRENDS IN AN OPEN ACCESS ENDOSCOPY CENTER
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Purpose: Colorectal cancer (CRC) is the 2nd leading cause of cancer-related deaths in the US. Screening is known to decrease incidence and mortality of CRC. Open access endoscopy (OAE) is advocated as a strategy to increase screening numbers, but introduces the potential for missing high-risk patients due to the lack of a complete family history. Approximately 25% of patients with CRC have a family history of CRC or adenomas. Hereditary Non-Polyposis Colorectal Cancer (HNPCC) is the most frequent cause of hereditary CRC. A detailed family history is essential to allow for risk stratification, syndrome recognition and implementation of appropriate screening intervals in familial CRC. In this study, we assessed the rate of recognition of high-risk patients and determined the timelines of referrals for colonoscopy as well as genetics counseling in an OAE center at a university hospital setting.

Methods: A detailed family history questionnaire was administered to all patients presenting for colonoscopy at an OAE center from May 07 to Feb 08. A total of 288 patients agreed to complete the questionnaire. Each patient’s personal and family history was evaluated using the Amsterdam II criteria. In addition, the desire of patients to be contacted by the genetics counselor if determined to be at increased risk for HNPCC was evaluated. Rate of recognition of high-risk patients by referring physicians and appropriate timing of referrals for colonoscopy and genetic counseling were then assessed.

Results: A total of 132 (45.5%) of these 288 patients met the Amsterdam I (or II or both) criteria for HNPCC and 13.19% (38/288) met Revised Bethesda Criteria. Another 18.4% (53/288) had some high risk features, but failed to meet the criteria by a narrow margin. In about 22% (12/53) of this high risk population, there was a delay in recognition of their heightened risk and subsequent referral for the initial screening colonoscopy. Of the 3 people who met the Amsterdam II criteria, all were informed of their increased risk for CRC but none were referred to a genetics counselor. Interestingly, 29.8% of patients did not wish to be contacted by the genetics counselor if they were determined to be at increased risk for CRC.

Conclusion: Although family history is obtained by referring providers prior to the patient presenting at the OAE center, a significant number of high-risk patients remain unidentified. We propose that a family history form be completed at the time that patients present to the OAE center to uncover high-risk individuals who would benefit from earlier and more aggressive screening.

P506  COLON TUMOR BIOMARKERS-MALDI IMAGING OF TISSUE MICROARRAY
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1. Department of Pharmacology, New York University School of Medicine, New York, NY.
2. Department of Pathology, New York University School of Medicine, New York, NY.
3. Department of Medicine, New York University School of Medicine, New York, NY.
4. Department of Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY.

Purpose: Imaging MALDI(IMS) demonstrated the same colon tumor proteins, gi|119592539 (Homo sapiens) Mass: 57500 and gi|119592490 (Homo sapiens) Mass: 108178, in consecutive patients. The proteins were present in the tumors and normal satellite tissue. The presence of these proteins in the tumor and normal tissue raised several questions. Is this evidence of metastatic disease or spread of tumor to normal satellite tissue? Are these proteins biomarkers of field cancerization or a field defect, e.g., age-related hypermethylation in normal colonic mucosa? Does the use of histopathology alone, underestimate the extent of potential malignant disease? We hypothesized that histopathology, in combination with IMS, may identify metastatic disease beyond the recognized tumor. To test this hypothesis we examined tissue microarrays of multiple colon tumors.

Methods: Tissue microarrays were constructed from colon carcinomas blocks. The tumor microarrays from each patient included three components: the tumor, surrounding satellite tissue, and normal control tissue. Contiguous histologic sections were obtained for IMS, histology, and protein extraction. The paraffin was removed and the paraffin-maleylated induced protein cross-linkers reversed by heating the sections to 90°C for 15 minutes. The histologic sections were stained with hematoxylin and eosin. The respective MALDI matrices: sinapic acid, alpha cyano 4-hydroxy cinnamic acid, and 2, 5-dihydroxybenzoic acids were applied by sublimation to the 3 IMS sections. MALDI images and protein masses were obtained on a Shimadzu Axima TOF2 mass spectrometer. The third section was used for high pressure protein extraction with a Pressure BioSciences Barocycler. The extract was separated with nanoflow Liquid Chromatograph Mass Spectrometry (LCMS) and split into two aliquots. One aliquot was trypsinized, and processed for bottom-up protein identification with a nanoflow LCMS. Hachi NanoFrontier. The second intact protein aliquot was processed directly for top-down protein identification with LCMS.

Results: The high pressure extraction provided novel results. The protein yield was increased. New and larger numbers of proteins were extracted. The trypsin digestion time was increased from 12 hours to 45 minutes, and less trypsin was required for the digest. Tissue microarray IMS displayed the loci of proteins in tumor, tumor satellite tissue, and normal tissue, and allowed separation of the tumors into groups distinguished by the unique proteins from each group. The extraction experiments confirmed the proteins identified on IMS.

Conclusion: Tissue MALDI can separate colon tumors by protein profiles and identify those tumors with concordant proteins in tumor satellite tissue.
ARE PATIENTS WITH CIRRHOSIS AT INCREASED RISK FOR COLORECTAL NEOPLASIA?

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Purpose: Background: Certain factors (alcohol, smoking and obesity) appear to increase the risk for colorectal neoplasia. Data on the prevalence of colorectal neoplasia in patients with cirrhosis are limited. Aim: To evaluate the prevalence of colonic neoplasia in patients with liver cirrhosis.

Methods: Retrospective review of patients with cirrhosis that had undergone first colonoscopy at our institution between 1998 and March 2008. For each cirrhotic patient, a healthy age-matched individual with the same indication, undergoing colonoscopy on the same day or to the closest date served as controls. Exclusion criteria: Poor prep or incomplete exam. Parameters including age, gender, BMI, laboratory data, alcohol and tobacco history, etiology of liver disease, Childs score/class, presence/absence of hepatocellular carcinoma, and total number of polyps with their location, size and histology were recorded. Data are presented as means and standard deviations or as percentages, as appropriate. Independent t tests and chi square tests were used for continuous and categorical data, respectively. A two-tailed p < .05 was considered significant.

Results: 306 patients (153 each with cirrhosis and controls) were analyzed. The results of the study are illustrated in Tables 1 and 2.

Conclusion: Patients with cirrhosis have more polyps per patient than those in a non-cirrhotic control group. However, patients with cirrhosis do not have more adenomas or advanced neoplastic polyps. Patients whose cirrhosis is due to ethanol use have more adenomas than those with other etiologies.

Characteristics of patients with and without adenomatous polyps

<table>
<thead>
<tr>
<th></th>
<th>Cirrhosis group (n=153)</th>
<th>Control group (n=153)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age (SD)</td>
<td>57 (6.7)</td>
<td>57 (7.1)</td>
</tr>
<tr>
<td>Males %</td>
<td>97.9</td>
<td>93.4</td>
</tr>
<tr>
<td>Ethanol use %</td>
<td>67.4</td>
<td>59.8</td>
</tr>
<tr>
<td>Smoking %</td>
<td>58.2</td>
<td>51.2</td>
</tr>
<tr>
<td>BMI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;25 %</td>
<td>19.0</td>
<td>25.1</td>
</tr>
<tr>
<td>25-39.9 %</td>
<td>34.7</td>
<td>26.1</td>
</tr>
<tr>
<td>&gt;40 %</td>
<td>46.3</td>
<td>48.8</td>
</tr>
<tr>
<td>For cirrhosis group only:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethanol vs. other etiology %</td>
<td>38.9</td>
<td>27.0*</td>
</tr>
<tr>
<td>Child class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A %</td>
<td>61.1</td>
<td>58.6</td>
</tr>
<tr>
<td>B %</td>
<td>31.5</td>
<td>33.3</td>
</tr>
<tr>
<td>C %</td>
<td>7.4</td>
<td>8.1</td>
</tr>
<tr>
<td>Reason for colonoscopy (Screening or other) %</td>
<td>31.6</td>
<td>37.6</td>
</tr>
</tbody>
</table>

*p < .05

Total study patients undergoing colonoscopy (N=306)

<table>
<thead>
<tr>
<th></th>
<th>Cirrhosis group (n=153)</th>
<th>Control group (n=153)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age: yrs (SD)</td>
<td>57.2 (6.9)</td>
<td>57.3 (7.1)</td>
</tr>
<tr>
<td>Total Polyps</td>
<td>205</td>
<td>92</td>
</tr>
<tr>
<td>Mean Polypol (±SD)</td>
<td>2.92 (2.78)</td>
<td>1.51 (0.74)</td>
</tr>
<tr>
<td>Size: number (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 10 mm</td>
<td>23 (11.2)</td>
<td>8.8</td>
</tr>
<tr>
<td>6-9 mm</td>
<td>59 (28.8)</td>
<td>25 (27.2)</td>
</tr>
<tr>
<td>1-5 mm</td>
<td>123 (60.0)</td>
<td>59 (64.1)</td>
</tr>
<tr>
<td>Histology: number (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hyperplastic</td>
<td>34 (41)</td>
<td>32 (34.8)</td>
</tr>
<tr>
<td>tubular adenoma/hablotivorous</td>
<td>104 (50.7)</td>
<td>41 (51)</td>
</tr>
<tr>
<td>Dysplastic</td>
<td>1 (0.5)</td>
<td>1 (1.1)</td>
</tr>
<tr>
<td>Cancer</td>
<td>0.0</td>
<td>2 (2.1)</td>
</tr>
<tr>
<td>Other non-neoplastic pathology</td>
<td>16 (7.8)</td>
<td>10 (19.9)</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>32.4</td>
<td>38.0</td>
</tr>
<tr>
<td>L</td>
<td>67.6</td>
<td>62.0</td>
</tr>
<tr>
<td>Advanced Neoplastic number (%)</td>
<td>22 (1.8)</td>
<td>5 (5.9)</td>
</tr>
</tbody>
</table>

Poster Abstracts — Monday, October 6

NITAZOXANIDE TO TREAT COMMUNITY ACQUIRED CLOSTRIDIUM DIFFICILE-ASSOCIATED DISEASE

W P Stuppy, MD, Private Practice, Los Angeles, CA

Purpose: Clostridium difficile-associated disease (CDAD) is a significant problem which is increasing in incidence and severity in hospitalized patients. Concern has started to focus on outpatient as well as community acquired (CA)-CDAD. The ACG treatment guidelines for CDAD (AJG 1997;92:739-50) recommend metronidazole (MTZ) as initial therapy for most patients with CDAD, however recent studies document failure rates up to 50% with MTZ (CID 2005;40:1586-90, CID 2006;43:421-7). In the past, the only other antibiotic available to clinicians was vancomycin (VAN), the only FDA indicated antibiotic for CDAD. VAN remains a very effective agent for CDAD, but concerns of cost, frequent dosing (QID), and the potential to promote VAN resistant Enterococcus has left clinicians to look for different therapies. A new thiazolide antibiotic, nitazoxanide (NTZ), has demonstrated efficacy for CDAD in trials versus MTZ and VAN, as well as in patients who have failed MTZ (JAC 2007;95:705-10, DDW 2008; Presentation W1272). Like VAN, NTZ is highly active against CD, concentrates in the GI tract and has no known in vitro resistance. The purpose of this study is to evaluate the effectiveness of NTZ in patients with CA-CDAD.

Method: Outpatients reporting to the clinic with diarrhea and clinical features consistent with CDAD and a positive stool test for CD toxins A or B (Diagnos-Techs, Inc., Kent, WA) were eligible for evaluation. CA-CDAD was defined as eligible patients with no known previous hospitalizations prior to presentation. All patients were treated with NTZ 1000 mg BID for 14 days and encouraged to take a probiotic. Follow-up evaluations including a repeat stool toxigenic assay were performed in four cases the SO also had a positive stool test for CD. In all four cases the SO also had a positive stool toxigenic assay. These patients and their significant others were retreated with a second course of NTZ 1000 mg BID for 14 days. Upon retreatment each patient and SO was considered a clinical cure. No clinically significant adverse reactions to NTZ were identified.

Conclusion: NTZ is a safe and effective treatment for CA-CDAD. Clinicians should consider testing significant others as a potential CD carrier when patients fail therapy. Further epidemiologic evaluations and clinical studies with NTZ are needed to determine the incidence and severity of CA-CDAD, the relevance of significant contacts, and the efficacy of NTZ in this population.

Disclosure: Dr Stuppy: Grant/Research Support: Romark Labs

SCREENING COLONOSCOPY FOR COLORECTAL NEOPLASIA IN PATIENTS WITH SPORADIC FUNDIC GLAND POLYPS OF STOMACH

B Kim, MD, PhD, Internal Medicine, The Catholic University of Korea, Incheon, South Korea.

Purpose: Sporadic fundic gland polyp (SFGP) of stomach is known to be associated with increased risk of colorectal adenoma/adenocarcinoma (CRA). However, previous data were not analyzed with age and sex due to limited number of the patients. The aim of this study is to investigate a possible relationship between SFGP and CRA according to different age and sex group.

Method: Patients who were confirmed SFGP pathologically and underwent colonoscopy six months within gastroscopy were reviewed retrospectively in Our Lady of Mercy Hospital, The Catholic University of Korea between July, 2001 and August, 2007. Control group included patients who underwent both gastroscopy and colonoscopy for general health examination without SFGP during same period in the same hospital.

Results: SFGP was found in 278 patients and 134 patients were underwent colonoscopy six months within gastroscopy. Control group included 260 patients. SFGP was found in 10.4% (24/134) of SFGP patients and 16.8% (347/2060) of control group. However, 61.5% (8/13) of SFGP male patients 50 and over 50 years old were turned out to have CRA compared to 33.5% (158/4741) of control group (p<0.01).

Conclusion: Screening colonoscopy for CRA in patients with SFGP of stomach should be performed in male patients 50 and over 50 years old.

Incidence of colonic adenoma/carcinoma in sporadic fundic gland polyp and in control group

<table>
<thead>
<tr>
<th></th>
<th>Sporadic fundic gland polyp group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>134</td>
<td>206</td>
</tr>
<tr>
<td>Mean age/years (SD)</td>
<td>48.6 (±13.3)</td>
<td>47.7 (±16.0)</td>
</tr>
<tr>
<td>M/F</td>
<td>24:1:0</td>
<td>1229:831</td>
</tr>
<tr>
<td>Colon cancer/adenoma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;50 years old</td>
<td>4.2% (2/71)</td>
<td>10.8% (33/312)</td>
</tr>
<tr>
<td>M/F</td>
<td>9.1% (10/111)</td>
<td>13.9% (97/715)</td>
</tr>
<tr>
<td>≥50 years old</td>
<td>17.5% (11/63)</td>
<td>25.5% (21/82)</td>
</tr>
<tr>
<td>M/F</td>
<td>61.5% (8/313)</td>
<td>53.5% (158/471)</td>
</tr>
</tbody>
</table>

*p<0.01
P510

EVALUATION OF RISK FACTORS OF CLOSTRIDIUM DIFFICILE ASSOCIATED DIARRHEA (CDAD) IN MEDICINE AND SURGICAL INPATIENTS

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Purpose: Clostridium difficile Associated Disease (CDAD) is a leading cause of nosocomial diarrhea, creating a major economic burden in Health Care. At a major teaching tertiary care center, a preliminary epidemiological survey revealed a striking discrepancy in the distribution of nosocomial CDAD in Medicine (73.8%) and Surgery (8%). Thus, we proposed to compare the distribution of the risk factors for CDAD in Medicine and Surgical Services.

Methods: A retrospective random sampling review of 94 Medicine and 76 Surgery charts of patients discharged between March 2004-July 2006 was conducted. We studied the distribution of various risk factors for CDAD in Medicine and Surgery patients: age, length of stay (LOS), admission source/community skilled nursing facility (SNF), readmission to hospital within 90 days, discharge disposition, prior history of CDAD, albumin level, use of antibiotics and Proton Pump Inhibitors (PPIs), immunosuppression, chemotherapy and hemodialysis.

Results: Patients admitted to Medicine were significantly older than in Surgery (mean age: 79.7 v. 75.1, p<0.001 through their LOS were similar (5.9 ± 5.4 days, p=0.179). There was a remarkable difference between admission sources, with SNF transfers accounting for 15.7% of medical admissions versus only 1.3% of surgical patients (p=0.001). Readmissions within 90 days accounted for 31.5% of Medicine patients, compared with 11.1% of Surgical patients (p=0.002). Serum albumin levels were lower in Medicine (3.7 ± 0.9) than in Surgery (3.9 ± 0.9, p=0.045). Among the top (44.7%) of Medical patients were prescribed PPIs, compared to 37.1% of surgical patients (p=0.022). Finally, antibiotics were prescribed to 47.9% of medical and 60% of surgical patients, most of whom receiving single dose prophylaxis (p=0.001).

Prior history of CDAD, immunosuppression, chemotherapy and hemodialysis were not significant risk factors in either group.

Conclusion: These results support age, low serum albumin and use of PPIs as known risk factors for CDAD. In addition, this study outlines socio-demographic risk factors, namely the role of SNF for both admission and discharge sites, as strong predictors of CDAD.

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MORTALITY DIFFERENCE AMONG INNER CITY MINORITY NEW YORKERS PRESENTING WITH COLO-RECTAL CANCER

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Purpose: Significant disparities associated with Colorectal Cancer (CRC) mortality are encountered among African Americans. We studied differences in patient characteristics and mortality among minority inner city New Yorkers with CRC.

Methods: A retrospective study from 2002 to 2007 on CRC patients, data on demographics, clinical features and outcomes were collected. All deaths and early deaths (within 6 months of diagnosis) were recorded. We compared baseline features of African Americans and Hispanics to study predictors of mortality. Non-parametric statistical methods and stepwise multiple logistic regression analysis were utilized to study the independent effects of the variables on mortality. Odds ratios (OR) and 95% Confidence intervals (CI) are reported. P value of <0.05 was considered significant.

Results: The characteristics of the 210 study patients were: Hispanics 155(73%); African American 55(27%); Women 112(53%); Mean age at diagnosis 65 years; Un-insured 49(23%); History of smoking 151(72%); Family history of CRC 5(2%); Colonoscopy, screening 48(23%) & diagnostic 154(74%); follow-up colonoscopy 8(4%). CRC was diagnosed by colonoscopy in 165(79%) & by surgery in 45(21%) cases. 117(55%) had early stage disease (stage 0-2) & 72(34%) had right colonic lesions. 49 of 210 patients died, of which 25(11.9%) were early deaths related to severity of disease burden on presentation, between study groups. The high mortality despite similar clinical features and outcomes were collected. All deaths and early deaths (within 6 months of diagnosis) were recorded. We compared baseline features of African Americans and Hispanics to study predictors of mortality. Non-parametric statistical methods and stepwise multiple logistic regression analysis were utilized to study the independent effects of the variables on mortality. Odds ratios (OR) and 95% Confidence intervals (CI) are reported. P value of <0.05 was considered significant.

Conclusion: These results support age, low serum albumin and use of PPIs as known risk factors for CDAD. In addition, this study outlines socio-demographic risk factors, namely the role of SNF for both admission and discharge sites, as strong predictors of CDAD.

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SHOULD DIAGNOSTIC COLONOSCOPY BE INDICATED FOR PATIENTS WITH CONSTITUTION?

E. C. Obagh, MS, MD1, R. Lopez, MS2, C. Burke, MD3, B. Shen, MD3. 1. Cleveland Clinic Lerner College of Medicine, Cleveland Clinic Foundation, Cleveland, OH; 2. Digestive Diseases Center, Cleveland Clinic Foundation, Cleveland, OH.

Purpose: Constipation affects approximately 25% of the population in the United States. It is not clear whether chronic constipation is associated with an increased risk for colon cancer (Roberts MC, AJG 2003:98:857; Watanabe T. Eur J Cancer 2004:40:2109; Chan AO Gut, 207:546-51). Whether constipation is indicated for a routine diagnostic colonoscopy is controversial (ASGE Guideline, GIE 2005:206:122).

Methods: This case-control study involved consecutive patients who underwent diagnostic colonoscopy for constipation at Digestive Disease Institute. The control group consisted of consecutive patients with an average risk for colon cancer who underwent routine screening colonoscopy. Demographic, clinical, endoscopic, and histologic data were collected. Both univariable and multivariable analyses were performed.

Results: 458 patients (341 females, 74.5%) in the study group and 981 patients (419 females, 42.7%) in the control group were studied, with the mean age of 56.7 ± 14.0 and 61.3 ± 9.6 years. 22 patients (4.8%) in the study group had prior colon polyps. Polyps were detected via colonoscopy in 27 patients (5.9%) in the study group and 341 patients (34.8%) in the control group (P < 0.001), and adenoma on histology was present in 17 patients (3.7%) in the study group and 195 patients (19.9%) in the control group (P < 0.001). The risk factors associated with adenoma were age (OR 1.55; 95%CI 1.19-2.03), and Hispanic ethnicity (OR 0.64, P < 0.05) and carcinoma in-situ (OR 0.25; 95%CI 0.07-0.86, P < 0.05) were independently associated with lower mortality. Hispanics had lower mortality than African Americans (15.5% versus 45.5%; OR 0.22; 95% CI 0.11-0.43, p < 0.0001). There was no difference in demographic, clinical features, treatment and early death among study groups (p = NS).

Conclusion: These results support age, low serum albumin and use of PPIs as known risk factors for CDAD. In addition, this study outlines socio-demographic risk factors, namely the role of SNF for both admission and discharge sites, as strong predictors of CDAD.

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PREDICTORS OF RECURRENT CLOSTRIDIUM DIFFICILE-ASSOCIATED DIARRHEA AT ROCHESTER GENERAL HOSPITAL

J. Shau, MD, S. Timangday, MD, P. Polashenski, MD. Internal Medicine, Rochester General Hospital, Rochester, NY.

Purpose: Despite the recent understanding of the cause of recurrent Clostridium difficile-associated diarrhea (RCDAD), there is not a clear evidence of the risk factors for recurrence. The purpose of this study was to determine the risk factors for recurrence.

Methods: All in-hospital patients with Clostridium difficile (CD) positive testing by Enzyme Immunosorbent Assay (Premier/Meridian) during the period January 1, 2006 to December 31, 2006 were eligible for the study. Those with a single episode of CDAD were compared to those who had at least 1 recurrent episode over the next 12 months. Demographic, clinical and laboratory data were obtained from electronic records and statistically analysed. A P value of <0.05 was considered significant.

Results: A total of 201 patients had an initial CDAD episode, of whom 40 (20%) experienced a recurrence during the subsequent 12 months. Risk factors for recurrence were nursing home/facility residence (p=0.043) and an elevated platelet count of >300,000 (p=0.027). Colitis manifested by the presence of stool leukocytes was more common in the RCDAD group (p=0.023). Stool cultures demonstrating other organisms than CD were associated with increased RCDAD (p=0.013). There was a trend towards more recurrence if CDAD was acquired during the last 2 quarters of the year (p=0.079). Other laboratory data such as levels of white blood cell count, serum creatinine, and serum albumin were not predictive of recurrence. Among co-morbid conditions, there was a trend towards recurrence among those who had gas troesophageal reflux disease (p=0.089) and hematologic disorders (p=0.082). Patient use of antibiotics (p=0.02) and nonsteroidal agents (p=0.03) were more common among those who had single episode of CDAD. In patient medication utilization, including number and type of antibiotic was not associated with increased recurrence.

Conclusion: Our study identified five factors associated with increased risk factors for RCDAD including: nursing home/facility residence, elevated platelet count, presence of fecal leukocytes, stool culture, positivity for organisms other than CD and combined outpatient use of proton pump inhibitors (PPI) and antibiotics. An increased platelet count as a marker of increased RCDAD risk was an interesting finding in our study. To our knowledge, this has not been described as a known predictor for recurrence. Although its mechanism remains unclear, thrombocytosis greater than 300,000 may signify a brisk inflammatory response with possibly a similar mechanism not unlike that seen with leukocytosis.
A NEW MODALITY FOR DIAGNOSING RUMINATION SYNDROME: 24-HOUR pH-IMP STUDY

W. A. Maitland, DO, T. Ferguson, LPN, J. D. Long, MD. 1. Internal Medicine, Wake Forest University, Winston-Salem, NC. 2. Internal Medicine, Drexel University, Philadelphia, PA.

Purpose: Rumination syndrome is the effortless regurgitation of recently ingested food, which is not preceded by retching. The diagnosis of rumination syndrome is challenging and is based on Rome III criteria which rely on symptoms alone. Objective confirmation of the findings has been shown using ambulatory pH-impedance monitoring, but the sensitivities and availability in clinical practice of these modalities are lacking. We report a case of a patient with rumination syndrome documented by Rome III criteria and confirmed by finding on ambulatory pH-IMP monitoring. Methods: A 23 year old female was referred with complaints of worsening regurgitation for 6 years. The patient indicated that regurgitated material comes up after nearly every meal without retching or nausea. He was episodic in nature, occurring more frequently after or during periods of heartburn, dysphagia, or vomiting and reported minimal weight loss. He had no improvement with several proton pump inhibitors (PPI) or with metoclopramide. An upper endoscopy, upper GI series, and gastric emptying study were all unremarkable. Esophageal manometry revealed a low LES pressure but was negative for a primary motility disorder. The patient was considered to have “refractory” gastroesophageal reflux disease (GERD) and so an ambulatory pH-IMP study was performed. Results: The study performed off PPI therapy on a patient with suspected rumination syndrome showed normal EAE but frequent episodes of symptomatic NAR in the early PP period with transition to AR in the late PP and non-meal periods (see Table). Conclusion: The 24-hour pH-IMP study performed off PPI therapy on a patient with suspected rumination syndrome showed normal EAE but frequent episodes of symptomatic NAR in the early PP period, which gradually became acidic as food is cleared from the stomach by regurgitation or via gastric emptying. This pattern of reflux is characteristic for rumination and is distinct from the pattern expected in GERD. Documentation of this pattern is possible with impedance monitoring which allows detection of NAR. We believe that pH-IMP testing off PPIs can be used to confirm the diagnosis of rumination syndrome.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Postprandial reflux episodes (0-30 min)</th>
<th>Postprandial reflux episodes (31-60 min)</th>
<th>Other Upper gastroesophageal reflux episodes</th>
<th>Supine reflux episodes</th>
<th>Total reflux episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid Reflux</td>
<td>13 (25%)</td>
<td>19 (70%)</td>
<td>29 (91%)</td>
<td>5 (71%)</td>
<td>66</td>
</tr>
<tr>
<td>Nonacid Reflux</td>
<td>39 (75%)</td>
<td>8 (30%)</td>
<td>3 (9%)</td>
<td>2 (29%)</td>
<td>52</td>
</tr>
<tr>
<td>Total Reflux</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>72</td>
</tr>
<tr>
<td>Acid + Symptom</td>
<td>52</td>
<td>27</td>
<td>32</td>
<td></td>
<td>118</td>
</tr>
<tr>
<td>Nonacid + Symptom</td>
<td>10 (22%)</td>
<td>10 (67%)</td>
<td>9 (100%)</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Total + Symptom</td>
<td>65 (78%)</td>
<td>53 (30%)</td>
<td>5 (100%)</td>
<td>0</td>
<td>90</td>
</tr>
</tbody>
</table>

Figure A. Endoscopy showing linear raised mucosal tear in sigmoid

Figure B. Left panel: H&E 20x, histology of granulation tissue with acute inflammation Right panel: H&E 20x, random colon biopsy showing thickened subepithelial collagen layer (arrow)
To increase awareness among physicians of antibiotic-associated hemorrhagic colitis

Purpose: A 71 year old Caucasian female with history of metastatic breast cancer presented to her oncologist’s clinic with rectal bleeding. Her medical history began four years ago when she was diagnosed with stage IIIB estrogen and progesterone receptor positive, HER2-negative breast adenocarcinoma, which was treated with mastectomy and hormonal therapy. Three months prior to this presentation, she was found to have liver and bone metastases, and was started on bevacizumab and paclitaxel therapy. Her past medical history was also significant for a history of paroxysmal atrial fibrillation for which she was on warfarin therapy. At her oncologist’s office, the patient reported several days of mild left lower quadrant abdominal cramping, and then one episode of rectal bleeding that morning. The patient denied any previous episode of rectal bleeding or thrombotic events. On exam, she was found to be hypotensive. Her physical exam was otherwise normal except for tenderness to palpation in the left lower quadrant. The patient was administered IV fluids and admitted to the hospital, where initial laboratory evaluation was notable for a hematoglobin level of 9.5 and INR of 1.9. Colonoscopy revealed focal ischemia within the sigmoid colon spanning approximately 8 cm with surrounding ulceration and edema. Histological examination was consistent with ischemic colitis. Her rectal bleeding was of a self limited nature with no further episodes of bleeding during the hospitalization and stable hematoglobin prior to discharge.

Conclusion: This case illustrates a serious complication of bevacizumab therapy. Although ischemic colitis has been reported in treatment for metastatic cancer in patients who have received prior radiation therapy, to our knowledge, this is the first documented case of ischemic colitis complicating treatment with bevacizumab in the absence of radiation treatment with bevacizumab; however, it is possible that bevacizumab increases the risk of ischemic damage to the bowel. This could possibly be due to its anti-angiogenic properties. However, treatment with bevacizumab has also been shown to increase the risk of arterial thromboembolism which could also potentially lead to bowel ischemia. Other known complications of bevacizumab therapy include abdominal pain, vomiting, gastrointestinal hemorrhage, and perforation. New abdominal symptoms must be taken seriously in patients treated with bevacizumab and caution must be used when prescribing this therapy to patients.

SEBACEOUS CARCINOMA IS A RECOGNIZED RISK FACTOR FOR COLON CANCER THAT INDICATES URGENT SCREENING COLONOSCOPY: THE MUIR-TORRE SYNDROME

M. A. Tiu, MD, T. Kothari, MD, S. Devgun, MD, P. Leve, MD, K. Patel, MD, Internal Medicine, Unity Hospital, Rochester, NY.

Purpose: Muir-Torre syndrome is a rare autosomal dominant condition characterized by the combination of sebaceous gland tumors and at least one visceral cancer especially colon. It has been recognized as a subtype of Lynch Type II hereditary nonpolyposis colon cancer. Early recognition of the syndrome in patients with sebaceous gland tumors should alert clinicians to the potential of subsequent malignancies if the patients and their relatives are entered into appropriate screening programs. Case presentation: A 46 years old asymptomatic male was referred by his primary care physician for screening colonoscopy. He was found to have a right lower quadrant mass. Biopsies were obtained and the pathology revealed sebaceous carcinoma. Histological findings of sebaceous carcinoma raised concerns about the possibility of Muir-Torre Syndrome which involves an increased risk of concomitant visceral malignancy especially colon carcinoma in such patients and indicates regular colonoscopic screening. Based on this clinical concern the patient was referred for screening colonoscopy. Patient had colonoscopy performed which showed an ulcerated circumferential mass at the level of the cecum. Biopsies confirmed the diagnosis of moderately and poorly differentiated adenocarcinoma of the colon. Staging investigations were normal and patient was referred for surgical colon resection. Patient also had an upper endoscopy and chest radiograph which were normal. Conclusion: Patients with Muir-Torre Syndrome are probably more common than is recognized, but sebaceous gland tumors are rare and the diagnosis of such a tumor should suggest the possibility of the syndrome and prompt a search for associated malignancies especially colorectal carcinoma and to investigate for the underlying genetic mutation. Timely diagnosis of colon malignant neoplasm in this subset of patients, before the screening age of 50 can cure the disease and save many lives.

KLEBSIELLA OXYTOCA AND ANTIBIOTIC-ASSOCIATED HEMORRHAGIC COLITIS

K. Kulkarni, MD, D. Weine, MD, C. Maltz, MD, PhD. Department of Gastroenterology and Hepatology, Medical Center, New York, NY.

Purpose: To increase awareness among physicians of antibiotic-associated hemorrhagic colitis caused by Klebsiella oxytoca

Results: Case 1: A 67 year-old man with a history of AML who underwent induction chemotherapy following a routine dental procedure. The patient’s labs were significant for a mildly elevated WBC count and a C3 scan demonstrated wall thickening of the entire colon, sparing the sigmoid colon and rectum. Biopsies were obtained in the right hemi-colon. Multiple stool studies were negative for the presence of Clostridium difficile toxin. However, Klebsiella oxytoca was isolated from stool cultures and the patient’s symptoms resolved with supportive care.

Case 2: A 67 year-old man with a history of CRF who underwent induction chemotherapy following a routine dental procedure. The patient’s labs were significant for a mildly elevated WBC count and a C3 scan demonstrated wall thickening of the entire colon, sparing the sigmoid colon and rectum. Biopsies were obtained in the right hemi-colon. Multiple stool studies were negative for the presence of Clostridium difficile toxin. However, Klebsiella oxytoca was isolated from stool cultures and the patient’s symptoms resolved with supportive care.

Conclusion: biotics following administration of an antibiotic is a well-recognized complication, with Clostridium difficile traditionally implicated as the most common culprit. However, increasingly C. difficile negative antibiotic-associated colitis is being diagnosed and infection with Klebsiella oxytoca is a separate entity from C. difficile colitis and typically occurs in young, healthy patients after administration of penicillins. However, we also report here, for the first time to our knowledge, K. oxytoca infection after linezolid use in a hospitalized patient. The colitis associated with Klebsiella oxytoca usually displays an abrupt onset and involves the right colon. The colitic symptoms are typically self-limited and resolve after discontinuation of the offending antibiotic without the need for additional treatment. Our series of patients emphasize the importance of pursuing specific studies for the diagnosis of K. oxytoca among patients with the classic presentation (case 1) in addition to individuals with C. difficile negative colitis following antibiotics (case 2). Greater awareness of Klebsiella oxytoca associated colitis is needed among gastroenterologists and primary care physicians in order to avoid misdiagnosis and unwarranted therapy.
RAPIDLY GROWING LARGE B-CELL LYMPHOMA OF THE COLON
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1. Gastroenterology, Mount Sinai Hospital Center, New York, NY; 2. Pediatrics, Winthrop University Hospital, Mineola, NY.

**Purpose:** Lymphomas may appear in the colon as primary malignancy or as a part of systemic disease. The incidence of this tumor is increasing, and its presentation in the colon resembles that of other forms of the disease. Knowledge of the forms of presentation is therefore important in order to suspect the disease and reach an early diagnosis. Additionally, colonic lymphoma often requires a multidisciplinary treatment approach. This case illustrates the importance of wide knowledge of the forms of presentation.

**Methods:** A 59 years old male was admitted with a chief complaint of left sided dull, non-radiating abdominal pain associated with 20lbs of weight loss over the last 2 months. On physical examination, his abdomen was soft with normal bowel sounds and mild tenderness in the left lower quadrant without any rebound. A firm mass with an irregular margin, about 10x12 cm in size was palpable in left lower quadrant of the abdomen. Rectal exam was positive for fecal occult blood. All laboratory tests including CBC were normal. He had had an unremarkable screening colonoscopy about 18months prior to this visit. CT scan of abdomen showed an 8x17 cm lobulated irregular soft tissue mass in left lower quadrant arising from the descending colon. A colonoscopy showed a 15cm long circumferential, ulcerated, friable, nearly obstructing lesion in the descending colon 60 cm from the anal verge. The biopsy findings, negative for cytokeratin and CD 117 and equivocal for CD45, were suspicious for lymphoma, although not conclusive. The patient underwent surgical resection of the tumor.

**Results:** Histopathological examination of surgical specimen confirmed the diagnosis of large B cell lymphoma. Margins of the resected colon and adjacent lymph nodes were tumor free. The patient was started on adjuvant chemotherapy with R-CHOP regimen. At six months the patient has not shown any evidence of recurrence of his disease.

**Conclusion:** Primary colonic lymphoma is a rare entity. We found our case unique because of the large size of the tumor, the rapidity of growth and the lack of traditionally described risk factors for the development of lymphoma. Our case illustrates that treatment involving a multidisciplinary approach including surgery and chemotherapy is considered ideal.
neous bowel movement. Abdominal pain and distension resolved, confirmed by an abdominal film. The patient continued to receive tegaserod until discharge 7 days later with no recurrence of obstructive symptoms.

Conclusion: Treatment options for acute colonic pseudo-obstruction have had variable outcomes and include medications (neostigmine and erythromycin), endoscopic decompression, percutaneous tube cecectomy and colostomy. To our knowledge, this is the first case report of acute colonic pseudo-obstruction with a clinical response to treatment with tegaserod, a partial 5-HT4 receptor agonist. 5-HT4 receptor agonists may be a viable option in the treatment of acute colonic pseudo-obstruction.

PS26
GASTROINTESTINAL BLEEDING SECONDARY TO SPLENIC ARTERY PSEUDOANEURYSM FISTULIZING TO THE COLON
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Purpose: A rare case of GI bleeding from a post-splenectomy splenic artery pseudoaneurysm fistulizing to the colon is presented.

Methods: Case Report: A 79 year old male with abdominal pain and rectal bleeding. Past history was notable for a splenectomy 6 yrs ago for immune thrombocytopenic purpura. He denied aspirin or NSAID use. Evaluation revealed a significant drop in hemoglobin (13 g/dL to 6.9 g/dL) and resuscitative measures were undertaken.

Results: An emergent upper endoscopy was performed and was negative. At colonoscopy, a large 3-4 cm pulsatile lesion with ulceration and overlying adherent clot was seen in the proximal descending colon (Fig 1). CT angiogram was performed which revealed a large hemoma in the splenic bed and visualization of the splenic artery coursing into this location with contrast extravasation. The patient declined surgery and subsequently underwent successful angiographic embolization of a large pseudoaneurysm at the distal splenic artery stump (Fig 2). Repeat colonoscopy 6 weeks later revealed complete healing at the site of the eroding pseudoaneurysm.

Conclusion: GI bleeding from splenic artery pseudoaneurysm (SAP) is an uncommon but potentially life-threatening condition. Risk factors for SAP include pancreatitis, posttraumatic, peptic ulcer disease, and iatrogenic. Lower GI bleeding due to erosion or fistulization of SAP to the colon is a very rare event that requires a high index of suspicion and appropriate endoscopic/imaging studies to arrive at a correct diagnosis. This case highlights the fact that SAP should be considered in the differential diagnosis of GI bleeding in individuals who have undergone splenectomy.

PS27
DEATH FROM CLOzapine-INDUCED GASTROINTESTINAL HYPOmotility
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Purpose: Clozapine is an atypical psychotrophic commonly prescribed for treatment-resistant schizophrenia. The adverse effect profile is considerable, including hematologic risks, cardiomyopathy, seizures, weight gain, venous thromboembolism, metabolic syndrome and hypotension. Less well recognized is clozapine’s potential to impair motility throughout the gastrointestinal tract, causing dysphagia, intestinal obstruction, bowel ischemia, and megacolon. There have been eight reported cases in the English literature of death from clozapine-induced gastrointestinal hypomotility (CGIH). We report a case of death from CGIH, accompanied by a brief review of the available literature.

Methods: A systematic review of the medical literature using Medline was performed.

Results: A 48 year old man with schizophrenia treated with clozapine 400 mg daily presented with a one day history of nausea, vomiting and abdominal pain. Physical examination revealed a distended rigid abdomen with pain to palpation in the epigastric region. Laboratory evaluation revealed an anion gap metabolic acidosis with a lactate level of 7.8 mg/dL, creatinine of 2.9, and white blood cell count of 11,100 with 22% bands. Computed tomography (CT) scan of the abdomen and pelvis revealed extensive fecal impaction extending from the rectum to the abdominal and pelvic region. Intravenous fluids along with broad-spectrum antibiotics were administered. Manual disimpaction was performed with removal of numerous hard stools. The patient was transferred to the medical intensive care unit (MICU) for further management. Within hours of arrival at the MICU, the patient developed respiratory distress and underwent rapid sequence intubation for impending respiratory failure. Low systolic blood pressures prompted the institution of vasopressors. A repeat CT scan of the abdomen and pelvis showed increased colonic distension and new ascites, but remained negative for free air. Despite the use of three vasopressors and drotrecogin alfa, the patient remained hypotensive. The family decided to withdraw support and the patient expired within minutes. Post-mortem examination revealed toxic megacolon with bowel ischemia and infarction.

Conclusion: Gastrointestinal hypomotility is a serious side effect of clozapine that may result in bowel obstruction, ischemia and necrosis, perforation, or aspiration pneumonia. The mechanism is likely to be anticholinergic and antiserotonergic. The scarcity of literature on CGIH suggests that the significance of this uncommon but important and frequently fatal side effect has not been recognized. A patient receiving clozapine and presenting with vomiting and abdominal pain should raise immediate concern for the physician.

PS28
COLONOSCOpy POLYpectomy in GLANZMANN’s THROMBASThenIA
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Purpose: Glanzmann’s thrombosthenia (GT) is a rare autosomal recessive bleeding syndrome characterized by absent platelet aggregation secondary to abnormal Glycoprotein IIb/IIIa complex. We report the first case of endoscopic management of large polyps in a patient with GT.

Methods: A 52-year-old African American female with GT underwent four sequential colonoscopies over 9 months as enumerated below.

Results: Colonoscopy 1: Performed for hemato-positive stools, no blood products given. It revealed multiple sessile polyps, the 2 largest (13 and 14 mm) in the right colon. The 13 mm one was removed using saline-assisted technique in combination with Endoloop and standard cautery. Immediate post-polypectomy bleeding was observed and successfully controlled with placement of 2 clips. Further polypectomies were deferred. The polyp was a sessile serrated adenoma. A surgical opinion recommended endoscopic surveillance. Colonoscopy 2: Preprocedure platelets and aminocaproic acid were given. Hot biopsy polypectomies were done to remove ten smaller 4-5 mm polyps in left colon. The 14 mm polyp was left in place to help localize potential post-polypectomy bleeding. No immediate or delayed bleeding occurred. Colonoscopy 3: Procedure platelets and aminocaproic acid were given. The remaining 14 mm polyp was removed by saline-assisted technique. A single Quinck Clip placed at the polypectomy site. Two other smaller polyps (7 and 9 mm) were also removed from the left colon using standard electrocautery, with no clips applied. Three days later patient was admitted with suspected post-polypectomy bleeding. Colonoscopy 4: Hematochezia persisted despite daily replacement of red blood cells, platelets, recombinant factor VIIa, and prothrombin concentrate complex over a period of 10 days prompted the fourth colonoscopy. Acute bleeding was identified in the right colon at the 14 mm polypectomy site. Dual therapy with epinephrine injection and placement of 4 Resolution clips achieved hemostasis. No further episodes of colonic bleeding have been reported to date.

Conclusion: Polypectomy in GT patients is complicated by immediate and delayed bleeding. The single previous GT case report suggested a protective effect of platelet transfusion and aminocaproic acid, to retard fibrinolysis, in preventing post-polypectomy bleeding. However, we conclude that for polyps 10mm or larger the addition of mechanical therapy, with multiple clips, after standard cautery polypectomy, is more effective in preventing immediate and delayed post-polypectomy bleeding in patients with GT. The cost of preemptive multiple clips at the post-polypectomy site may be offset by a reduction in the need for blood products and by averting or shortening potential hospitalizations.

PS29
RARE GASTROINTESTINAL COMPLICATIONS OF A RARE DISEASE: KLIPPEL-TRENAUNay SYNDROME
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Purpose: A 26 year old man presented with 3 day history of severe bright red blood per rectum and diarrhea. He had multiple hospitalizations since age 7 for lower GI bleedings. In addition to orthostatic hypotension and tachycardia, his physical examination findings were remarkable for asymmetry of left shoulder hypertrophied than right, hypertrophy of first 3 digits on left hand and 2nd and 3rd digit on right hand, as well as cutaneous cafe au lait laced spots extending from the right forearm to chest and hemangomas in low extremitities. His laboratory data revealed severe microcytic anemia with hemoglobin of 2.7 g/dl (normal= 12.9-16.1) with mean corpuscular volume of 58.0 fl (79.3-94.8). Others were normal. After successful resuscitation with blood transfusion, patient underwent a colonoscopy that revealed extensive stage IV varices in the rectum. MR/MRA demonstrated large hemangomas in anterior and superior pelvic veins, extensive varices and dilatation of the abdominal IVC that were consistent with multiple vascular malformations. AVMs in the mesentry, the spleen, and the kidneys were identified. Portalogram revealed normal portosystemic gradient of 2 mmHg. Arteriogram was normal. Patient underwent successful embolization of a middle sacral artery AVM with good collateral flow to the distal rectum.

Conclusion: Based on the above finding, the diagnosis was Klippel-Trenaunay Syndrome (KTS). KTS is a congenital disorder characterized by the triad of port wine stains, varicosities and venous malformation and limb hypertrophy (88%, 72%, 67% frequency seen, respectively). Most cases are sporadic and the pathogenesis remains unclear. GI manifestations, found in less than 1% of KTS, include cavernous hemangomas of the distal colon and rectum and rarely of the jejunum, and esophageal and rectal varices secondary to prehepatic portal hypertension from hemangomas or hypoplasia of portal vein. These hemangomas and varices are susceptible to bleed leading to massive hematemesis or hematochezia, which was seen in this patient. Radiological investigations are vital in evaluating the extent and managemt of these bleeding GI manifestations. Management of nonsignificant bleeding is conservative with iron supplementation. In cases of recurrent and/or severe bleeding, management with either liver transplantation or endoscopic ultrasound-guided ablation of the bleeding site or surgical resection. However, resection is not curative due to extensive visceral hemangomas. Endoscopic argon laser and photodynamic therapies have been utilized in a few cases of refractory post-resectional localized bleeds.
ENDOMETRIOSIS: AN UNUSUAL CAUSE OF INVERTED APPENDIX. A CASE

Methods: A 30 year man with a diagnosis of AIDS presented for evaluation of progressive fatigue and weakness for 3 weeks. The patient also complained of abdominal pain and diarrhea for 1 week with one episode of melena. He underwent an EGD and colonoscopy. The colonoscopy showed a 4 millimeter polyp in the transverse colon which was resected with jumbo cold forceps. The pathology of the transverse colon polyp was consistent with a Mycobacterial spindle cell pseudotumor.

Conclusion: The patient was seen in a clinic follow up visit two months after the initial presentation. He developed septic shock and respiratory distress requiring mechanical ventilation. Labs revealed hematocrit of 24% and leukocytosis. A computed tomography scan revealed diffuse pancolitis and pericolonic fat stranding. Surgical intervention was contemplated, however, as a last resort, nitazoxanide 500mg BID per NG tube was started. Over the course of several days, fevers resolved, WBC count improved significantly, she was ex-tubated and continued to improve clinically. Nitazoxanide was continued for 10 days and then vancomycin PO was continued for another 2 weeks. A repeat CT scan revealed resolution of colitis and at 2 months follow up, she was doing well.

Results: The second case involves a 52 year old female with ESRD, Hypertension and Diabetes who presented with severe refractory C. difficile pancolitis and failed standard therapy. She received nitazoxanide for 10 days as add on therapy and had dramatic improvement in clinical and laboratory parameters and remains well at 2 months follow up.

Conclusion: Nitazoxanide should be considered as a rescue therapy for refractory C. difficile colitis as an add on to standard treatment fail. In some patients, colonic polyps can be avoided. Questions remain about the appropriate timing of nitazoxanide treatment in these patients. Also it is unclear whether nitazoxanide is effective as an add on therapy only or if it can work well as monotherapy.

References:

1. J. Hou, MD. Gastroenterology, Baylor College of Medicine, Houston, TX.

Purpose: To present a case of low-pressure cryoablation for treatment of radiation proctitis.

Methods: A 74 year old man who one year earlier was treated with radiotherapy for prostate cancer presented with rectal bleeding. Colonoscopy showed erythema and inflammation in the distal 3 cm of rectum consistent with radiation proctitis. Bleeding persisted despite local therapy with steroid suppositories and hemoglobin progressively dropped from 14.9 g/dL to 9.4 g/dL. Low pressure cryoablation (CSA Medical) was performed using a cryoablation catheter passed through an endoscopic channel. The catheter was directed under direct visualization to three areas of the rectum most involved with proctitis. Liquid nitrogen spray was injected through the catheter in 10 second applications. A total of 4 applications were used for each area of proctitis. During cryoablation, a cryo decompression tube was placed in the rectum to prevent over insufflation.

Results: The patient denied any adverse effects after cryoablation. He reported a decrease in amount and frequency of rectal bleeding. Follow up sigmoidoscopy 6 weeks after cryoablation showed decreased erythema and inflammation with exudative material on treatment areas. Sigmoidoscopy at fifteen weeks follow up showed near normal mucosa throughout the rectum.

Conclusion: Complete endoscopic healing of radiation proctitis with low pressure cryoablation after 10 days of nitazoxanide treatment.
Case Report: An 86 year old gentleman from South Louisiana with multiple chronic, but stable, medical problems presented with altered mental status, fatigue and generalized weakness. CT scan and MRI of the brain showed multiple brainstem lesions that were suggestive of metastatic disease and further imaging revealed hepatic and pulmonary lesions. In addition to having hemocult positive stools and iron deficiency anemia, the patient also had a history of colon polyps found on colonoscopy performed 5 years prior. The patient denied abdominal pain but endorsed constipation. A repeat colonoscopy was performed to attempt to establish a definitive diagnosis. Findings include a large 4-cm exophytic lesion covering about one-third of the circumference of the wall of the rectum, with multiple necrotic satellite lesions noted in the rectosigmoid colon. Initial gross pathologic inspection was primary rectal carcinoma with the satellites representing either nodal metastases or possibly a second primary malignancy. However, separate biopsies of the rectal and satellite lesions were obtained for histological and pathological analysis, and the results were consistent with infection by Histoplasmosis capsulatum.

The patient was started on a long-term course of an antifungal regimen, and had marked clinical improvements of his initial presenting symptoms. Repeat MRI of the brain demonstrated significant improvement of prior lesions. Furthermore, repeat flexible sigmoidoscopy at 6 months showed near resolution of the satellite lesions with marked diminution in the size of the previous rectal lesion. Discussion: In disseminated histoplasmosis, the gastrointestinal tract, predominately the terminal ileum and colon, is involved 50% of the time. Rectal involvement is atypical and reported cases in the literature are largely seen in AIDS patients. Gastrointestinal histoplasmosis can often present as a large obstructing mass suspicious of a carcinoma or as ulcerating lesions suggestive of Crohn’s disease. This case illustrates that histoplasmosis is the great imitator and that the gastroenterologist must have an increased degree of suspicion for this emerging disease, as medical management with antifungal therapy has been shown to significantly decrease the mortality rate by more than 4 fold.

### P536

**HENOCH-SCHONLEIN PURPURA PRESENTING AS BLOODY DIARRHEA IN AN ELDERLY PATIENT**

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**Purpose:** Vasculitides are an uncommon cause of bloody diarrhea and abdominal pain. Henoch-Schonlein Purpura (HSP) is a leukocytoclastic vasculitis of small vessels, and although HSP represents the most common vasculitides in children, it is infrequently described in the geriatric population. We describe a case of HSP with an initial presentation of abdominal pain and bloody diarrhea in a geriatric patient.

**Methods:** Case Report

**Results:** A 65 year-old Asian female was admitted with bloody diarrhea and diffuse abdominal pain. She had no significant past medical history except for a recent upper respiratory tract infection, which was treated with a course of antibiotics. Eight days after starting antibiotics, the patient developed bloody diarrhea and diffuse abdominal pain. Three days into her hospitalization, she developed symptoms of diffuse arthralgias and petechiae in her lower extremities. Her only abnormalities on laboratory analysis were a WBC count of 12.0 K/μm (normal 4.5-11), a hemoglobin of 11.0 g/dL (normal 12-15) and an ESR of 52 mm/hr (normal 0-20). The patient’s urinalysis and renal function remained normal throughout her hospitalization. Colonoscopy demonstrated multiple areas of mucosal petechiae (Fig A). A biopsy of the peptic skin lesions was performed, which demonstrated IgA deposition in the walls of the blood vessels in the dermis (arrow, Fig B). This confirmed the diagnosis of HSP and the patient was treated with a course of oral prednisone, resulting in complete resolution of her symptoms in 2 weeks and no recurrence on 6 month follow-up.

**Conclusion:** HSP typically manifests as a tetrad of clinical symptoms: purpuric skin lesions, arthralgias, abdominal pain, and nephropathy. The diagnosis of HSP can be very difficult because the constellation of symptoms may not be synchronous but appear in succession. The clinical diagnosis is most facilitated by the presence of cutaneous lesions, however when gastrointestinal symptoms precede the skin lesions, which occur in 14% of patients, the diagnosis can often be missed (1). Although most patients progress to complete recovery without therapy, early diagnosis is important because there is some evidence that corticosteroids may enhance the rate of resolution in patients with arthritis and abdominal pain. 1. Chen MJ et al. Endoscopic findings in a patient with Henoch-Schonlein purpura. World J Gastroenterol. 2005 Apr 21;11(5):2354-6.

### P357

**SYMPTOMATIC INTESTINAL SPIROCHETOSIS IN TWO IMMUNOCOMPETENT PATIENTS**


**Purpose:** The purpose of this report is to raise awareness of spirochetosis as a possible but rare cause of diarrhea and/or hematochezia in humans. Case 1: A 60 year old white male was evaluated for the complaints of watery intermittent chronic diarrhea of more than 2 years duration. Stool studies including ova and parasites, fecal leukocytes and stool cultures were negative. Colonoscopy was performed and showed normal appearing mucosa. Random biopsies were obtained and were notable for a continuous layer of spirochetes covering the luminal surface of the epithelium. He received oral metronidazole 500 mg three times per day for 10 days with a complete resolution of his symptoms. Case 2: A 48 year old white male was evaluated for a low grade hematochezia, abdominal bloating and excessive flatulence. Colonoscopy revealed patchy erythema in the transverse and sigmoid colon. Representative biopsies were obtained and showed focal hemorrhage and a layer of spirochetes covering the colonic epithelium. In view of spontaneous resolution of symptoms no therapy was given. Patient remains asymptomatic after 4 months follow-up. Discussion: Intestinal spirochetosis is defined as the colonization of the luminal surface of the colonic epithelial cells with the weakly beta-hemolytic spirochetes: Brachyspira aalborgi and Brachyspira pilosicoli. Spirochetes are well known pathogens in dogs, pigs and birds. Infected humans can present with a variety of symptoms including diarrhea and rectal bleeding. However, some investigators report a lack of association between symptoms and the presence of spirochetes. It is therefore unclear whether the spirochetes colonizing the colon are true pathogens. Diagnosis requires a biopsy specimen from the colon. Based on a very few small case series, the disappearance of the infection with appropriate treatment may herald a clinical sustained recovery. It is important not to minimize the significance of this infection, since invasive spirochetosis has been reported. Intestinal spirochetosis should be considered in the differential diagnosis of chronic diarrhea and/or rectal bleeding. Further studies and case series reports are warranted.
Two cases of crohn's disease in the setting of past necrotizing enterocolitis

Purpose: Two 23-year-old women with histories of necrotizing enterocolitis (NEC) subsequently developed Crohn disease (CD). We first had significant ileal and colonic fetus treated with enema and drainage and later a fibrin plug. Past medical therapy for CD included 5-ASA's and antibiotics; 6-mercaptopurine was recently initiated to treat mild active ileal disease and a small rectovaginal fistula. The second patient underwent extensive small bowel resection and an ileostomy and jejunostomy feeding. She was well until age 19, when she developed diarrhea, nausea and weight loss, and eventually diagnosed with ileal CD: 5-ASA and steroids were not helpful. Adalimumab was initiated with good effect for several months, but was stopped after miscommunication with her doctor. One month later, the patient presented with clinical and radiographic small bowel obstruction: surgical exploration revealed ~ 130 cm of intact small bowel with two distal ileal strictures and an inflammatory mass; ~ 10 cm was resected and a primary ileocolonic anastomosis performed. Post-operatively, she has been in clinical remission for 7 months; adalimumab was reinstituted given her previous response and the serious potential consequence of short-gut ileal stenosis and a future flare.

Conclusion: Both Crohn's disease and NEC have been associated with many systemic complications. We present a case of UC with systemic vasculitis involvement of skin, lungs, and central nervous system.

P541

A CASE OF FOCAL GLANDULAR VESSELS

Purpose: A 26 year old man presented after a few hours of vomiting, diarrhoea and severe left anterolateral thigh pain. His background history included asthma and Crohn's disease, diagnosed by colonoscopy two weeks prior to his presentation due to 'ineffective' relief of symptoms. He was tachycardic (126  b.p.m.) and a right middle lobe consolidation on CXR. CT of the chest demonstrated an intrapulmonary mass consistent of Solafalk-induced pulmonary and skin complications was raised; therefore, Solafalk was discontinued. A muscle biopsy revealed necrotizing small vessel vasculopathy with eosinophilia. After more than one month off Solafalk, the skin lesions, myalgias and arthralgias recurred. The patient remained asymptomatic from intestinal symptoms. Treatment with oral prednisone 40mg/day was commenced with resultant improvement of the arthritis, skin lesions and peripheral neutropenias. Over the next year, the patient tapered prednisone slowly, with recurrence of rectal bleeding and diarrhea at prednisone dose of 20mg/day Solafalk was slowly re-introduced; however, in view of corticosteroid dependence, Azathioprine was introduced. Corroborative Vasculitis affecting multiple organ systems in patients with UC suggests that IBD may be part of a larger inflammatory systemic illness as manifested by the extra-intestinal symptoms. The distinction between disease-related and drug-induced systemic symptoms in patients with UC is essential to a diagnostic challenge and complicates medical management. Early awareness of vasculitis as an extra-intestinal manifestation should be made, so that prompt treatment with a course of corticosteroid therapy may be initiated to prevent serious complications.

P542

CLOSTRIDIUM SEPTICUM INFECTION SECONDARY TO IMMUNOSUPPRESSION BY SULFASALAZINE IN CROHN'S DISEASE

Purpose: Crohn's disease has included 5-ASAs and antibiotics; 6-mercaptopurine was recently initiated to treat the above two cases of CD post-NEC are compelling arguments for further study to delineate the commonalities between these two diseases.

Disclosure: Patricia Kozich: consultant, Abbott pharmaceuticals

134, AST 50, ALT 38, Alk Phos 291, albumin 2.0, WBC 11 with 91% neutrophils, hemoglobin 11, platelets 70, INR 1.5, CMV PCR negative. Pt initially placed on bowel rest and started TPN. Intravenous antibiotics, steroids and oral mesalazine were continued. Stool cultures were negative, and pt refused for endoscopic evaluation. The colon was diffusely erythematous, friable, and ulcerated with purulent exudate. CT scan showed diffuse contigious bowel wall thickening extending from cecum ascending colon. Biopsy showed ulcerated mucosa with fibrous necrosis. Herpes simplex viral inclusions, confirmed by immunostaining, were noted within the surface epithelium and within the ulcer bed. CMV and adenoviral immunostaining were negative. Colonic tissue virual culture was positive for HSV-2. Steroids were discontinued, and pt treated with antiviral therapy with cessation of abdominal pain and bloody stools. However, he developed progressive hepatic decompensation and sub- sequent hepatic failure. Treatment of Crohn's disease with exclusion of acute infection and atypical etiologies should be considered in those patients who fail to respond to therapy, especially those who are immunosuppressed. Diffuse colonic involvement with HSV is very rare and has been reported once in a Crohn's pt, and has not been reported in a patient with HIV/HDV cirrhosis. This case demonstrates the need to consider HSV in the diagnosis of refractory colitis in order to reduce the morbidity and mortality of this disease entity.

P538

TWO CASES OF CROHN'S DISEASE IN THE SETTING OF PAST NECROTIZING ENTEROCOLITIS

P539

HIDRADENITIS SUPURATIVA, ACNE CONGLOBATA ASSOCIATED WITH SPONDYLOARTHROPATHY AND PYODERMA GANGRENEOUS: RESPONSE TO INFLIXIMAB

Purpose: Our patient is a 44-year-old African American male who has a 30-year history of hidradenitis suppurativa (HS) and acne conglobata (AC). HS and AC are part of the folliculodermatitis syndrome and are characterized by chronic, recurrent painful nodulocystic inflammatory lesions, often with sinus tracts. Our patient was treated with a retinoid and antibiotics as needed for his AC and HS. Our patient was treated with a retinoid and antibiotics as needed for his AC and HS. An NSAID has been prescribed for his arthritis as well as sulfasalazine for the spondyloarthropathy. Therapy for his spondyloarthropathy. Therapy for his spondyloarthropathy was continued with infliximab in a dose of 5mg/kg IV (three doses at 0, 2 and 6 weeks) was started when he presented with the severe bilateral PG on both legs.

Results: Clinical improvement was seen after treatment with infliximab for pyoderma as well as the HS and AC. The pyoderma lesions on both lower extremities improved significantly. Six months later, the patient is in remission from the skin lesions and his spondyloarthropathy is much improved. He continues treatment with infliximab and Sulfasalazine.

Conclusion: A trial of HS, AC and spondyloarthropathy is a rare syndrome described only in a few case reports in the literature. PG has been associated with Acne conglobata in rare cases and has been described extensively in Crohn's disease, which the patient developed one year prior to admission. The exact role of anti-tumor necrosis-factor antibodies in this syndrome is unclear. Further evaluation is needed to assess the role of anti-TNF as a therapeutic choice for this rare syndrome.

P540

HERPES SIMPLEX VIRUS COLITIS IN A PATIENT WITH CROHN'S DISEASE AND ENTEROCOLITIS

Purpose: A 26 year old man presented after a few hours of vomiting, diarrhoea and severe left anterolateral thigh pain. His background history included asthma and Crohn's disease, diagnosed by colonoscopy two weeks prior to his presentation due to 'ineffective' relief of symptoms. He was tachycardic (126  b.p.m.) and a right middle lobe consolidation on CXR. CT of the chest demonstrated an intrapulmonary mass consistent of Solafalk-induced pulmonary and skin complications was raised; therefore, Solafalk was discontinued. A muscle biopsy revealed necrotizing small vessel vasculopathy with eosinophilia. After more than one month off Solafalk, the skin lesions, myalgias and arthralgias recurred. The patient remained asymptomatic from intestinal symptoms. Treatment with oral prednisone 40mg/day was commenced with resultant improvement of the arthritis, skin lesions and peripheral neutropenias. Over the next year, the patient tapered prednisone slowly, with recurrence of rectal bleeding and diarrhea at prednisone dose of 20mg/day Solafalk was slowly re-introduced; however, in view of corticosteroid dependence, Azathioprine was introduced. Corroborative Vasculitis affecting multiple organ systems in patients with UC suggests that IBD may be part of a larger inflammatory systemic illness as manifested by the extra-intestinal symptoms. The distinction between disease-related and drug-induced systemic symptoms in patients with UC is essential to a diagnostic challenge and complicates medical management. Early awareness of vasculitis as an extra-intestinal manifestation should be made, so that prompt treatment with a course of corticosteroid therapy may be initiated to prevent serious complications.

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P542

CLOSTRIDIUM SEPTICUM INFECTION SECONDARY TO IMMUNOSUPPRESSION BY SULFASALAZINE IN CROHN'S DISEASE
tory bowel disease, less so in Crohn’s disease, and not infrequently causes agranulocytosis in the first weeks. This case highlights the need for physicians to be aware of the potentially life-threatening adverse effects of sulfasalazine and the need for careful laboratory monitoring and emergent management if signs of sepsis manifest in the neutropenic state.

**Purpose:** Case 1 was a 26-yr-old female who presented with a 4-mo history of chronic abdominal pain, diarrhea, and weight loss. Biopsy during colonoscopy and small bowel capsule endoscopy (SBCE) suggested CD diagnosis. Colonic biopsy showed noncaseating granuloma with eosinophilic and active inlets; SBCE identified multiple aphthous ulcerations, cobblestoning, and denudation in the mucosa. The patient’s baseline CD activity index (CDAI) score was 260. Approximately 5 wk after initiating treatment with rifaximin 800 mg/d, the patient had complete relief of gastrointestinal symptoms and SBCE revealed >75% healing of the small bowel mucosa. After 13 mo of continued treatment with rifaximin 800 mg/d, SBCE revealed 90% healing of the small bowel mucosa and the patient’s CDAI score of 122 was within normal range. The patient has not required any additional CD therapy during rifaximin treatment. Case 2 was a 45-yr-old male who presented with painful bowel movements and a history of painful, nonhealing anal fissures. Biopsy during colonoscopy, SBCE, computed tomographic enterography, and serologic panel results indicated CD diagnosis. Ileal biopsy showed follicular lymphoid hyperplasia, and SBCE revealed nodular hyperplasia, fissuring, edema, erythema, and aphthous ulcerations. Baseline CDAI score was 175 and serum CRP level was 0.78 mg/L. The patient’s PPD, HIV test, and chest X-ray were all negative. The patient was started on rifampin, ethambutol, pyrazinamide, and levofloxacin. He showed an improvement in symptoms within 6 wk. This case highlights the need for a high index of suspicion for tuberculous enteritis when evaluating patients with possible CD, especially HIV patients and immigrants from areas where TB is endemic. Tuberculous enteritis rarely causes a small bowel obstruction. However, in cases where it causes strictures, obstruction is a common complication. Tuberculous enteritis is the most common extra-pulmonary manifestation occurring in 25% of patients with pulmonary TB. Although our patient presented with proximal small bowel involvement, the majority of patients (75%) have distal small bowel and ileocolic involvement. As highlighted in this case, diagnosis is often difficult because common screening methods and microbiological diagnostics often fail to detect gastrentestinal TB. However, a prompt diagnosis can help prevent the development of serious complications such as intestinal fistulas, obstruction, and perforations.

**Results:** Case 2 was a 42-yr-old male who presented with painful bowel movements and a history of painful, nonhealing anal fissures. Biopsy during colonoscopy, SBCE, computed tomographic enterography, and serologic panel results indicated CD diagnosis. Ileal biopsy showed follicular lymphoid hyperplasia, and SBCE revealed nodular hyperplasia, fissuring, edema, erythema, and aphthous ulcerations. Baseline CDAI score was 175 and serum CRP level was 0.78 mg/L. The patient’s PPD, HIV test, and chest X-ray were all negative. The patient was started on rifampin, ethambutol, pyrazinamide, and levofloxacin. He showed an improvement in symptoms within 6 wk. This case highlights the need for a high index of suspicion for tuberculous enteritis when evaluating patients with possible CD, especially HIV patients and immigrants from areas where TB is endemic. Tuberculous enteritis rarely causes a small bowel obstruction. However, in cases where it causes strictures, obstruction is a common complication. Tuberculous enteritis is the most common extra-pulmonary manifestation occurring in 25% of patients with pulmonary TB. Although our patient presented with proximal small bowel involvement, the majority of patients (75%) have distal small bowel and ileocolic involvement. As highlighted in this case, diagnosis is often difficult because common screening methods and microbiological diagnostics often fail to detect gastrentestinal TB. However, a prompt diagnosis can help prevent the development of serious complications such as intestinal fistulas, obstruction, and perforations.
TERMINAL ILEAL CARCINOID TUMOR IN ACTIVE CROHN’S DISEASE: DIAGNOSTIC AND MANAGEMENT UNCERTAINTIES

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Purpose: Crohn’s disease (CD) and carcinoid tumors commonly affect the terminal ileum (TI). Clinical, radiographic, and pathologic findings in these conditions may be difficult to distinguish, and patients often undergo surgery for bowel obstruction before a diagnosis is confirmed. We report a case of coexisting CD and TI carcinoid tumor which highlights some of the diagnostic difficulties in these patients.

Methods: Case Report: A 38 year old woman with a 10 year history of CD ileocolitis presented for routine follow-up. She had been maintained in asymptomatic remission on 2.4g/dl Asacol for 4 years. Diarrhea, crampy abdominal pain, and nocturnal vomiting led to an ultrasound imaging and a 1cm liver lesion. CT enterography showed a liver FNH, along with a focal nodular area of enhancement in the TI. Concern was raised for a carcinoid tumor, but ileocolonoscopy showed only TI ulceration. Biopsies showed mild active chronic ileitis. She returned for reimaging after 4 months of budesonide. While TI mucosal hyperenhancement improved, a 0.9cm nodular area remained. A 24 hr urine collection for 5-HIAA was normal. Octreoscan showed activity at the 24-hr images in the anterior ileal wall, but 48-h images showed resolution of this uptake. This was thought to represent physiologic excretion of the tracer, and not be consistent with a carcinoid tumor with invasion into the surrounding adipose tissue, along with 3 ulcerated TI lesions. Biopsies showed mild active chronic ileitis. She returned for reimaging after 6 months of budesonide therapy, surgery was recommended for definitive diagnosis. She underwent a right hemicolecystectomy showing ileal stricturing disease, which was not appreciated on CT enterography. Due to symptomatic, radiographic, and even histologic similarities between CD and carcinoid, accurate diagnosis remains challenging. Clinical suspicion for these diagnoses should remain high when the clinical picture remains unclear.

Results: Based on continued presence of the nodular mass with resolved TI inflammation following budesonide therapy, surgery was recommended for definitive diagnosis. She underwent laparoscopic-assisted right hemicolectomy with en-bloc lymphadenectomy. Histology showed a carcinoid tumor with invasion into the surrounding adipose tissue, along with 3 ulcerated strictures (min. diameter 3mm), not present on radiographic imaging. Sixty regional lymph nodes were negative for tumor.

Conclusion: Despite careful endoscopy with biopsy, CT scans, and nuclear imaging, the diagnosis of a carcinoid tumor in the background of CD was not made until surgical excision. CD and carcinoid can both coexist and mimic each other, with up to 2.3% of TI carcinoids being initially misdiagnosed as CD. Furthermore, an incidental carcinoid diagnosis is made in 3.6% of CD resections. Most of these carcinoids are diagnosed, as in our case, by an unexpected finding was significant ileal strictureing disease, which was not appreciated on CT enterography. Due to symptomatic, radiographic, and even histologic similarities between CD and carcinoid, accurate diagnosis remains challenging. Clinical suspicion for these diagnoses should remain high when the clinical picture remains unclear.

NEW ONSET CROHN’S DISEASE IN THE POSTPARTUM PERIOD: A CASE REPORT AND REVIEW OF THE LITERATURE

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Purpose: Crohn’s disease is a chronic, idiopathic, inflammatory bowel disease (IBD) that can present as an acute illness following the postpartum period. It is important to recognize this entity as it can significantly impact the postpartum period and necessitate changes in management. We present a case of postpartum onset of IBD as well as a review of the literature.

Methods: In this case report, we describe the clinical presentation of a 32 year-old woman who developed an acute inflammatory bowel disease postpartum. A detailed literature review was performed for reports of postpartum IBD. We then present a review of the pathophysiology, diagnosis and treatment as well as current management strategies.

Results: A 32 year-old woman presented to the emergency department with abdominal pain, fever, nausea, and vomiting after a normal uncomplicated delivery. She was found to have ileocolonic Crohn’s disease with a history of perianal fistulas. She was initiated on a tapering dose of prednisolone and discharged with plans for outpatient follow-up. She returned to the hospital with recurrence of symptoms. Colonoscopy revealed pancolitis with severe bleeding. Endoscopic biopsies revealed ulcerated patches with chronic active colitis consistent with Crohn’s disease. She was initiated on 6-mercaptopurine and azathioprine after an adequate effort at medical therapy. She subsequently delivered a healthy baby at term with an uncomplicated course. She has remained in remission on a 6-mercaptopurine/azathioprine regimen with periodic monitoring of adenosine deaminase levels.

Conclusion: The postpartum period is associated with an increased incidence of IBD. It is important for clinicians to be aware of this entity as it can impact postpartum outcomes. In addition, it is important to provide appropriate counseling and support for affected women to ensure a successful delivery.

ABDOMINAL AORTITIS, AN EXTREMELY UNUSUAL EXTRA-INTESTINAL MANIFESTATION OF CROHN’S DISEASE

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Purpose: To report a unique case of abdominal aortitis associated with Crohn’s disease. Case: A 47 year old African Caribbean female with a history of colonic Crohn’s disease and uveitis (diagnosed 3 years earlier) was admitted for increased bowel movements (up to 10 stools/day), abdominal pain, and fever (39°C). Physical examination was normal except for fever. Leukocyte count was normal (10,700 x 10^9/L) and ESR was elevated (74 mm/1st hr). The remaining hematologic parameters were normal. Empirical antibiotic treatment was initially started while awaiting for blood, urine, and stool cultures results, which were all negative. An abdominal CT scan showed a normal TI. CT angiography showed an increased wall thickness of the abdomino-aorta up to 1 cm in the thickest region (fig 1). This thickness extended inferior to the celiac axis to the superrenal aorta. ANA, anti DS-DNA, AMA, and ASMA were negative. Serology for syphilis was also negative. IV Methylprednisolone was started for suspected autoimmune aortitis. Patient improved clinically and was discharged on escalating doses of azathioprine and prednisone tapering doses. A control CT scan confirmed the normalization of the aorta wall thickness. Discussion: Crohn’s disease is considered to be a systemic disease since it is often associated with extra intestinal manifestations. Takayasu Arteritis is an extremely unusual extra-intestinal manifestation of Crohn’s disease. In the literature only 21 cases of this unusual association have been reported. The diagnosis of aortitis is based on the occurrence of compatible clinical manifestations together with an imaging study demonstrating vascular wall abnormalities or compatible histologic changes in biopsies. When histology is not available, blood cultures and serology for syphilis must be performed in order to exclude bacterial and fungal infections. The development of granulomas and granulomatous vasculitis seen in both Crohn’s disease and Takayasu arteritis may suggest a common pathophysiologic mechanism.
clear, it is thought to be an acquired disorder usually associated with abnormal esophageal motility, strictures, or mucosal inflammation. The most common presenting symptom is dysphagia; however, EIP may be an incidental finding in asymptomatic patients. Diagnosis can be made using a combination of endoscopy and radiologic imaging. Treatment should focus on the underlying disorder. The disease typically follows a benign course, but severe complications such as esophageal perforation or fistula resulting in mediastinitis have been reported. Only one other case report exists of upper gastrointestinal bleeding in a patient with EIP, although such complications as esophageal perforation or fistula resulting in mediastinitis have been reported. Proper recognition of an incomplete myotomy is poorly described in the literature and the best approach to therapy is unclear.

Methods: Evaluation with esophagogram and endoscopy showed a focal distal stenosis lacking the appearance of a peptic or fibrotic stricture (see Figure). Repeat manometry showed an isolated high-pressure zone (HPZ) with failure of relaxation within the proximal margin of the LES. Thus HPZ was consistent with intact residual LES fibers from an incomplete myotomy. Thus, pneumatic dilation (PD) was chosen as the therapeutic approach instead of a repeat surgery.

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Conclusion: This case nicely illustrates what might be observed in a patient with achalasia and recurrent symptoms due to an incomplete myotomy. A focal residual HPZ at the proximal end of the LES was observed on endoscopy, radiology, and manometry. Our case is interesting in that the residual HPZ was located at the proximal rather than distal margin of the LES. The use of PD following incomplete myotomy has been reported in the literature with success rates as high as 80 percent. More studies are needed to improve recognition of an incomplete myotomy and to develop criteria for the selection of patients who would benefit most from PD after failed myotomy.

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ENDOSCOPIC, RADIOLOGIC, AND MANOMETRIC FEATURES OF AN INCOMPLETE HELLER MYOTOMY FOR ACHALASIA: SUCCESSFUL TREATMENT BY PNEUMATIC DILATION

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Purpose: Laparoscopic Heller myotomy is an effective surgical therapy for idiopathic achalasia. Unfortunately 5-10% of patients develop recurrent dysphagia or chest pain in the early postoperative period. The most common cause for recurrence is an incomplete myotomy, in which the muscle fibers at the distal end of the myotomy are not completely released. Proper recognition of an incomplete myotomy is poorly described in the literature and the best approach to therapy is unclear.

Methods: A 63 yo female with diabetes and hypertension who presented with dysphagia to solids and liquids and a 40 pound weight loss was diagnosed with achalasia on barium esophagram and manometry. The manometry showed a hypertensive lower esophageal sphincter (LES) with complete LES relaxation, and apneustics with low-amplitude, simultaneous contractions after all wet swallows. She underwent a laparoscopic Heller myotomy with Dor fundoplication which was initially successful. However, she returned one year later with recurrent dysphagia, chest pain and weight loss.

Results: Evaluation with esophagogram and endoscopy showed a focal distal stenosis lacking the appearance of a peptic or fibrotic stricture (see Figure). Repeat manometry showed an isolated high-pressure zone (HPZ) with failure of relaxation within the proximal margin of the LES. Thus HPZ was consistent with intact residual LES fibers from an incomplete myotomy. Thus, pneumatic dilation (PD) was chosen as the therapeutic approach instead of a repeat surgery.

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THE BLACK ESOPHAGUS: A CASE OF NECROTIZING ESOPHAGITIS

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Purpose: To demonstrate the diagnosis and management of necrotizing esophagitis including esophageal structure

Methods: A 50 year-old woman presented to the emergency room with abdominal pain, nausea, and coffee ground emesis. She was admitted to the hospital with symptomatic blood pressures greater than 200/110 mmHg and upper gastrointestinal bleeding. Her past medical history was significant for cocaine abuse, stroke, diabetes mellitus, poorly-controlled hypertension, and gastroesophageal reflux disease. An esophagastroduodenoscopy (EGD) (Figure 1—top left) showed a black esophagus and a diagnosis of necrotizing esophagitis was made. The patient was empirically started on broad-spectrum antibiotics and fluconazole, placed on strict NPO status, and started on total parenteral nutrition (TPN). Repeat upper endoscopy two weeks later showed healing necrotizing esophagitis and a severe distal esophageal structure that was unable to be passed with the endoscope (Figure 1—top right). Multiple endoscopic therapy sessions including dilation and temporary metal stent placement (Alimaxx Stent) were required to clear the obstruction. One year later, the patient was noted to have significant symptoms of recurrent dysphagia; however, EIP may be an incidental finding in asymptomatic patients. Diagnosis can be made using a combination of endoscopy and radiologic imaging. Treatment should focus on the underlying disorder. The disease typically follows a benign course, but severe complications such as esophageal perforation or fistula resulting in mediastinitis have been reported. Only one other case report exists of upper gastrointestinal bleeding in a patient with EIP, although the authors attributed the bleeding to an esophageal web. The case described here is unique in that the presenting symptom was severe hemorrhage due to EIP. In addition, no other associated esophageal abnormalities were present.

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THE GRAPE OBSTRUCTION

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Purpose: Eosinophilic esophagitis (EE) is an esophageal disorder characterized by upper GI symptoms and associated with dense eosinophilic infiltration of the esophagus. The exact pathophysiology is unknown, but there is an association with food allergies suggesting an aberrant immune response is responsible. EE is increasing in prevalence, most likely due to increased recognition. Clinically, EE usually presents with dysphagia and food-bolus impaction is common. Endoscopically, linear furrows or mucosal rings are often observed in the esophagus. Histologically, greater than 15 eosinophils per high power field are present. A transient appearance of a ringed esophagus and persistent longitudinal furrows were observed as well.

Results: An attempt was made with a Roth net to retrieve the grape but was unsuccessful. Rat tooth forceps were then used to excise multiple pieces of the grape, however the grape maintained its integrity and we were unable to push the grape through the GE junction. The bands were then removed from the plastic barrel of a vartical ligation device. This cap was utilized to provide a larger area of forceful suction enabling us to remove the grape from its impacted location. Multiple biopsies were then taken along the length of the esophagus which revealed degranulated eosinophils and greater than 15 eosinophils per high power field confirming the diagnosis of eosinophilic esophagitis.

Conclusion: Eosinophilic esophagitis is chronic inflammatory disease of the esophagus and while there are many effective treatments, the optimal therapy has yet to be fully defined. As it is being recognized more frequently, different presentations and findings are being documented. This case is the first, to our knowledge, of eosinophilic esophagitis presenting with a grape as a food-bolus impaction. Another case of a grape causing esophageal obstruction has been described, but the primary pathology was a stricture. This case also demonstrates an alternative use for the barrell on banding devices, which may prove useful with foreign bodies such as in this case.
Hypertensive esophageal varices

Purpose: An 83 year old female presented with one episode of hematemesis. She denied prior episodes of hematemesis, abdominal pain and melena. She c/o acute onset solid food dysphagia but denied odynophagia, recent trauma and retching. She was on no medications, did not smoke or drink alcohol and had no family history of GI malignancies. An EGD revealed a large mass in the proximal esophagus that was thought to be composed of blood vessels. The endoscopists were concerned for the presence of esophageal varices, but were unsure and transferred her to our tertiary care center. We repeated the upper endoscopy on her arrival; at 20cm within the proximal esophagus we encountered a large submucous mass that extended continuously to 40cm. The lesion was on the posterior wall of the esophagus, was 2cm wide and 20 cm long. It appeared beefy red in color with multiple areas of purple discoloration and ulceration. CT scan of the thorax revealed a large submucous mass within the esophagus which was concerning for malignancy, however a definitive diagnosis could not be made. Conservative management was undertaken with plans for repeat endoscopy as we entertained a diagnosis of esophageal apoplexy. Repeat endoscopy was performed two weeks later with near resolution of the findings thus confirming our suspicion. Esophageal apoplexy, also known as esophageal intramural hematoma is a rare cause of hematemesis. Patients usually present with retrosternal chest pain, dysphagia and hematemesis. Frequently the patient is an older female on anticoagulants. Precipitating events include food bolus impactions, vomiting with recurrent retching, recurrent chest pain, dysphagia and hematemesis. Frequently the patient is an older female on anticoagulants. An EGD was performed with near resolution of all symptoms within a few weeks.

Results: Esophageal apoplexy was confirmed on EGD with a large intramural hematoma within the submucosal layer of the esophagus. The patient was treated conservatively with bowel rest, high dose PPI therapy, and optimization of cardiac perfusion. Despite supportive care, mortality rates approach 32%.

Methods: A 62 year old male with a medical history of ESRD, DM, and PVD requiring femoral-popliteal bypass surgery was admitted with bilateral lower extremity claudication. The diagnostic work-up revealed failure of the bypass grafts; the patient subsequently required bilateral above the knee amputations. His operative course was remarkable for sustained periods of hypotension. On post-op day 3, the patient had multiple episodes of melena with an acute drop in hematocrit of 2g without abdominal pain. An upper endoscopy was performed. Esophageal necrosis was present circumferentially immediately below the cipharyngeal region. The GEJ (photographs 1 and 2). The remainder of the endoscopy was normal; acute esophageal necrosis was presumed to be the etiology of the bleed. Biopsies revealed necrotic debris with acute inflammatory leukocytic infiltration. The patient was treated conservatively with high dose proton-pump inhibitor therapy and maximization of cardiac output. He recovered without complication. Acute esophageal necrosis, or black esophagus, is a rare endoscopic finding, with only a handful of cases described in the world literature. The incidence has been estimated to be up to 1 in 1000 cases. It is important to consider black esophagus in patients presenting with high risk factors, including recent upper quadriplegia or prolonged intubation. The management of black esophagus should be supportive with bowel rest, high dose PPI therapy, and optimization of cardiac perfusion. Despite supportive care, mortality rates approach 32%.

Conclusion: Esophageal necrosis is a rare cause of gastrointestinal bleeding. The diagnostic work-up revealed failure of the bypass grafts; the patient subsequently required bilateral above the knee amputations. His operative course was remarkable for sustained periods of hypotension. On post-op day 3, the patient had multiple episodes of melena with an acute drop in hematocrit of 2g without abdominal pain. An upper endoscopy was performed. Esophageal necrosis was present circumferentially immediately below the cipharyngeal region. The GEJ (photographs 1 and 2). The remainder of the endoscopy was normal; acute esophageal necrosis was presumed to be the etiology of the bleed. Biopsies revealed necrotic debris with acute inflammatory leukocytic infiltration. The patient was treated conservatively with high dose proton-pump inhibitor therapy and maximization of cardiac output. He recovered without complication. Acute esophageal necrosis, or black esophagus, is a rare endoscopic finding, with only a handful of cases described in the world literature. The incidence has been estimated to be up to 1 in 1000 cases. It is important to consider black esophagus in patients presenting with high risk factors, including recent upper quadriplegia or prolonged intubation. The management of black esophagus should be supportive with bowel rest, high dose PPI therapy, and optimization of cardiac perfusion. Despite supportive care, mortality rates approach 32%.
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FAMILIAL BARRETT’S ESOPHAGUS
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Purpose: Barrett’s esophagus is seen in 3-12% of patients with chronic reflux symptoms. This is a study of three family members (father, son, and daughter) all of whom had long-segment Barrett’s esophagus that rapidly progressed from low grade dysplasia (LGD) to high grade dysplasia (HGD) within a year. This study demonstrates that there is a genetic component to this disease, and that, in familial cases, there can be rapid histological progression suggesting that the biological behavior is distinct from that seen in sporadic cases of Barrett’s esophagus.

Methods: A 77 year old male with chronic acid reflux was found to have long segment Barrett’s esophagus with LGD that progressed to HGD within a year. A laparoscopic esophagogastrectomy was performed with the finding of HGD. The patient’s son and daughter were both subsequently diagnosed with long segment Barrett’s esophagus that rapidly progressed from LGD to HGD within a year. Both son and daughter had laparoscopic esophagogastrectomy with finding of HGD. The patient’s grandson was found to have short segment Barrett’s esophagus without dysplasia. The patient’s wife has erosive esophagitis as does a granddaughter. Results: A 77 year old male, his daughter and son all were found to have long-segment Barrett’s esophagus that rapidly progressed from LGD to HGD within a year. The patient’s grandson was found to have short segment Barrett’s esophagus without dysplasia and is under close surveillance.

Conclusion: Barrett’s esophagus is felt to be an acquired condition resulting from chronic acid reflux. This report suggests that there is a genetic component to this disease, and, where there are familial clusters, the biological behavior can be more aggressive with rapid progression to HGD emphasizing the need to consider some modification of endoscopic screening strategies for this group of patients.

Early intervention with ablation of Barrett’s tissue might be considered in patients with a strong family history of Barrett’s esophagus.

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HEPATOID ESOPHAGEAL CANCER: A RARE CAUSE OF ELEVATED ALFA-FETOPROTEIN
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Purpose: To recognize esophageal cancer in a possible explanation for high Alfa fetoprotein (AFP)

Methods: Case review and review of literature

Results: Five patients (H. E. the alpha-fetoprotein (AFP) producing esophageal tumors are extremely rare. AFP producing tumors with liver metastasis pose significant diagnostic dilemma with regards to delineating the primary. A 56 years old gentleman with no significant past history presented for evaluation of fatigue and weight loss. He did not complain of dysphagia, hematemesis or melena. Initial evaluation revealed iron deficiency anemia. A CT scan showed multiple liver lesions. Alfa-fetoprotein was elevated at >3000ng/ml. Fine Needle Aspiration of liver was positive for malignant cells. Gastrscopy revealed a large fungating mass in lower esophagus, with yellowish colored debris. The biopsy material showed a malignant tumor with extensive necrosis. The tumor cells were large, had large nuclei and occasional prominent nucleoli. They were arranged in clumps, columns and vague acinar configuration interrupted by thin vascular channels. Many mitotic figures were present. By immunohistochemical stains, the tumor was suggestive of hepatoid origin.

Conclusion: Primary tumors of the upper gastrointestinal tract showing hepatoid differentiation are very infrequent. Most have been reported as arising in the stomach. To our knowledge, this is the first case of hepatoid esophageal cancer to be reported from the United States.

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UNCOMMON PRESENTATION OF PANCREATIC MICROCYSTIC ADENOMA IN A PATIENT WITH VON HIPPEL-LINDAU SYNDROME
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Purpose: INTRODUCTION: Von Hippel-Lindau disease (VHL) is a rare, genetic multi-system disorder, characterized by a propensity for developing retinal, cerebral and spinal hemangioendotheliomas, pancreatic cysts, renal cell carcinomas, and pheochromocytomas. We report a case of a patient with spinal hemangioendotheliomas due to Von Hippel Lindau syndrome who was found to have numerous pancreatic cysts on abdominal imaging. Biopsy revealed a diffuse variant of microcystic adenoma of the pancreas which, according to literature review, is extremely rare. CASE: A 43 year-old Haitian female with two year history of back pain was seen in the Neurology Clinic for recent episodes of left arm numbness. MRI of the cervical spine showed no significant findings. MRI of the left shoulder showed hemangioendotheliomas in the 4th ventricle as well as the upper and lower cervical cord. The patient was referred to neurosurgery for resection of the cervical hemangioendotheliomas. Oncogenetic testing proved VHL. Abdominal CT revealed numerous pancreatic cysts ranging in size from 5-10mm, along with multiple diminutive cysts in the liver and kidneys. EUS revealed multiple pancreatic cysts, FNA biopsy of these cysts showed elevated CE. The patient subsequently underwent distal pancreatectomy and splenectomy. Histopathologic examination of the surgical specimen was significant for diffuse microcystic adenoma of the pancreas. No other coexisting malignancy was identified. The patient has been followed without evidence of recurrence (condition: DISCUSSION: Von Hippel-Lindau (VHL) is caused by mutations of the VHL tumor suppressor gene on the short arm of chromosome 3. The disease is inherited in an autosomal dominant pattern. The presenting features in VHL disease are variable and depend on the tissue type affected. In the gastrointestinal tract, multiple pancreatic cysts are frequently seen. Multiple cysts may also occur in the liver and kidneys. The most common pancreatic lesion is a simple cyst, though other cystic tumors such as serous hepatic cysts and hemangioendotheliomas may also be seen. The differential diagnosis includes reactive cysts, parasitic cysts, lymphangiomas, and mucinous cysts. Pancreatic cysts are characterized by their size, shape, and location. Simple cysts are non-compressible, unilocular, and have thin walls. Reactive cysts are located near the pancreas and are usually small. Serous cysts are usually larger and may be found in the tail of the pancreas. Hemangioendotheliomas are rare and typically found in the tail of the pancreas. The majority of cases are sporadic, but a small subset of cases are associated with von Hippel-Lindau syndrome (VHL). VHL is an autosomal dominant disorder caused by mutations in the VHL gene located on chromosome 3p26. Mutations in the VHL gene result in the loss of function of the VHL protein, which is a tumor suppressor. The VHL protein plays a role in the regulation of the hypoxia-inducible factor (HIF) pathway, which is involved in the regulation of gene expression in response to hypoxia. The loss of VHL function leads to increased expression of HIF target genes, which may contribute to the development of tumors in various organs, including the pancreas. The presence of multiple pancreatic cysts in a patient with VHL syndrome is highly suggestive of a pancreatic cystic neoplasm. The differential diagnosis includes reactive cysts, serous cystic neoplasms, and mucinous cystic neoplasms. Reactive cysts are typically small, unilocular, and have thin walls. Serous cystic neoplasms are typically larger, multilocular, and have thick walls. Mucinous cystic neoplasms are typically larger, multilocular, and have thick walls. Mucinous cystic neoplasms are associated with an increased risk of malignant degeneration. The presence of multiple pancreatic cysts in a patient with VHL syndrome should prompt further evaluation, including imaging studies and potentially a biopsy, to determine the cause of the cysts and to rule out the possibility of a pancreatic neoplasm. The diagnosis of multiple pancreatic cysts in a patient with VHL syndrome should be considered in the differential diagnosis of patients presenting with abdominal pain, weight loss, and/or change in bowel habits. The management of multiple pancreatic cysts in a patient with VHL syndrome should be individualized and may include no intervention, observation, or surgical intervention. The presence of multiple pancreatic cysts in a patient with VHL syndrome should prompt further evaluation, including imaging studies and potentially a biopsy, to determine the cause of the cysts and to rule out the possibility of a pancreatic neoplasm.
Lemmel's Syndrome: Abdominal Pain in a Middle-Aged Female
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Purpose: Small bowel diverticula are more common than intuition would suggest. As described, a case that was increasingly suggestive of serious pancreatic or biliary disease was the result of bezoar impaction of a juxta-ampullary duodenal diverticulum, also referred to as Lemmel's Syndrome.

Methods: A 50-year-old Caucasian female is referred to Gastroenterology for evaluation of 3 months of intermittent abdominal pain associated with nausea, vomiting, and acholic stools. Laboratory studies revealed abnormal transaminases and an elevated alkaline phosphatase, convincingly suggestive of biliary disease. Synthetic liver function appeared to be intact and abdominal ultrasonography revealed a dilated common bile duct to 1.2 cm without visualization of gallstones or sludge. Intrahepatic ducts were within normal limits and thus ultrasound was suggested possibly of an obstructive lesion. HIDA Scan was negative.

Results: Direct visualization with upper endoscopy and endoscopic ultrasonography was initially planned. Endoscopically, a very large, smooth rimmed juxta-ampullary diverticulum was visualized, measuring 3.0x3.0x2.6 cm, with what appeared to be a large food bezoar bulging from the aperture. Using careful dissection and an endoscopic irrigation device the bezoar was broken up and dislodged from the diverticulum. Proteinaceous material was snared and removed to the lumen and the diverticulum was cleared. Follow-up clinical assessment revealed complete resolution of all abdominal symptoms including the intense pain and nausea with vomiting. Laboratory parameters subsequently normalized briefly thereafter.

Conclusion: This case illustrates an unusual etiology for a commonly encountered clinical scenario. Direct endoscopy proved to be the most effective means to evaluate this patient and simultaneously provided the modality for treatment. Small bowel diverticula are not vastly prevalent in our population. As in this case, these lesions have an unexpected ability to mimic many other physiologic, pathologic and/or anatomic conditions. The rarity of juxta-ampullary diverticulum may very well contribute to an expensive and at often times, unfocused workup.

Bilio-Pleural Fistula Following Trans-Arterial ChemoeMBOLization in a Patient with Hepatocellular Carcinoma
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Purpose: Transarterial chemoembolization (TACE) is used as a bridge to liver transplantation in patients with hepatocellular carcinoma (HCC). Adverse events following TACE including infection and bleeding have been well documented in the literature. However, bilio-pleural fistula (BPF) following TACE has not been reported. We present a case of BPF in a patient with HCC following TACE. The patient is a 66-year-old male with cryptogenic cirrhosis complicated by a 3.5 x 2.7 cm HCC who was listed for liver transplantation. He underwent successful preoperative TACE in August and November of 2007. However, in March 2008, he presented with a productive cough and pleuritic, right-sided chest pain. A chest x-ray revealed a large, right-sided pleural effusion and a thoracentesis revealed bilious, exudative fluid with a neutrophil predominance. The pleural fluid biliurin level was 18.4mg/dL with a pH of 6.8. These findings were suggestive of BPF and required chest tube placement. A subsequent MRCP revealed a significant dilatation of the right biliary duct without visualization of the liver capsule in segments VI and VII. These findings further confirmed BPF, suggesting tracking of biliary fluid from the liver into the pleural space. He underwent an ERCP-guided sphincterotomy with biliary stent placement and a thoracotomy with debridement which resulted in improvement of BPF. It appears that BPF in this case resulted from TACE-related rupture of HCC into the pleural space. A potential mechanism for the development of BPF is tumor necrosis and capsular destruction following TACE leading to a communication between the biliary system and pleural space through pre-existing diaphragmatic defects. Furthermore, tumor encasement of biliary structures and subsequent increases in retrograde biliary flow may serve to maintain flow into the pleural space.

Paralyzing Diarrhea
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Purpose: When patients present with several symptoms including extraintestinal problems, a unitary diagnosis is occasionally possible. A 28-year-old white female reported one year of diarrhea, more than 10 watery bowel movements a day during the preceding two months. She denied dysentery, hematochezia, fever, chills or laxative use. She had been receiving potassium supplements for chronic hypokalemia and had several
episodes of generalized weakness, followed by “paralyzis” that had required hospitalization for the
treatment of profound hypokalemia. The evaluation included negative results for stool cul-
tures, stool Clonorchium difficile toxin, amoxa scolocy, sedimtation rate. C reactive peptide
level, thyroid stimulating hormone level, serum gastrin level, calcitonin level, tissue transgluta-
minase IgA, serum protein electrophoresis with qualitative immunoglobulins, urine laxative
screen, and a normal blood count. Metabolic panel was remarkable for serum potassium
level of 1.8 and a serum bicarbonate level of 20 in the face of a non-anion gap metabolic acido-
sis. Colonoscopy with terminal ileum intubation showed no mucosal lesions and random biop-
sies were all normal. CT scan with thin cuts through the pancreas revealed a 7.3 X 6.9 cm
mass in the tail of the pancreas. Vasoactive intestinal peptide level was elevated at 1055 pg/mL.
Diabetes and hypokalemia-associated symptoms abated on octreotide. She underwent a la-
aparoscopic subtotal pancreatectomy, splenectomy and lymph node resection. Light microscopy
of the pancreatic mass demonstrated a well-differentiated pancreatic endocrine neoplasm with
no extension through the tumor capsule. Associated lymph nodes were negative for malign-
y. Immunohistochemical analysis had positive staining for anti-cytokeratin (CAM 5.2),
nocuron-specific enolase (NSE), and synaptophysin (SYP) in the tumor cells, consistent with a
neuroendocrine tumor of the pancreas. This case demonstrates the importance of considering
neuroendocrine tumors in patients presenting with watery diarrhea and periodic hy-
okalemia-associated paralysis.

**P569**

**ACUTE PANCREATITIS SECONDARY TO PERCUTANEOUS LIVER BIOPSY-ASSOCIATED HEMOBILIA: A CASE REPORT AND LITERATURE REVIEW**

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Jersey, New Jersey Medical School, Newark, NJ.

**Purpose:** Background: Percutaneous liver biopsy (PLB)-associated hemobilia is a rare compli-
cation, with an incidence rate of 0.06%. It results from a needle tract connection of the hepatic
artery portal vein or both to the biliary tree. 90% of cases of hemobilia present with upper gas-
trointestinal bleeding. Only 30-40% of cases have the Sandblom trial of bilateral colic, gastroin-
testinal bleeding and jaundice. Hemobilia usually occurs 5 days post PLB. With a rapid rate of
bleeding, acute upper gastrointestinal bleeding such as melena or hematemesis can be seen.
When the rate of bleeding is slow, a clot can be formed in the biliary tree causing obstruction,
cutile cholecystitis or cholangitis. It is extremely rare for acute pancreatitis to occur in this set-
ing. We report the case of a patient with pancreatitis secondary to a clot produced from a liver
biopsy. Case: 43 year-old Caucasian female initially presented with abnormal liver function tests
consistent with cholestatic pattern for several months. Pathology from liver biopsy revealed
primary biliary cirrhosis. One week later, patient presented with severe abdominal pain, vomit-
ing, jaundice and melena. Physical exam was remarkable for scleral icterus and right upper
quadrant tenderness. Admission labs were significant for hemoglobin of 11.7, direct bilirubin
5.6, amylase 815 and lipase 3162. Abdominal ultrasound revealed a 4.5 cm complex right hep-
atic lesion with dopplers demonstrating no flow within the lesion, suggestive of a hemobilia.
The common bile duct was dilated to 15 mm and the gallbladder contained a large amount of
blood clot without wall thickening. Angiogram showed a pseudocyst in a branch of the English lan-
guage literature reveals ten documented cases. We examined the diagnostic tests, mechanisms and
treatment options for this disease process. There were a wide range of modalities used for
diagnosis. These modalities include pseudocystern and arteriobiliary fistula. It seems
PLB with or without ultrasound guidance made no difference in the occurrence of these
malformations. Super selective catheter arterial embolization led to better outcomes than
those patients who underwent sphincterotomy. In those patients who underwent ERCP with sphinc-
terotony, half of those cases were subsequently complicated by cholecystitis requiring chole-
cystectomy.

**P570**

**PRIMARY B CELL LYMPHOMA OF THE PANCREAS**

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**Purpose:** Introduction: Primary B cell lymphomas may be found in a host of tissues outside of
the lymphatic system, including the stomach, heart, thyroid, oral cavity, mediastinum, and liver.
One organ that in general appears to be spared is the pancreas, although this case report
demonstrates that this is not always the case.

**Methods:** None.

**Results:** Case Report: A 64 year old man with hypertension, diabetes mellitus type II, and
interstitial lung disease secondary to asbestos exposure was seen for hematuria and complaints
of increasing abdominal pain. The patient had known history of bilateral renal cysts seen on CT
imaging in the past. He was sent for repeat imaging of his abdomen and a 5.0 x3x4cm homoge-
nous solid mass in the body of the pancreas was found. (Figure 1) Three weeks later the patient
was admitted for abdominal pain. Endoscopic exam was within normal limits, without evidence
of external compression of the stomach. On the endoscopic ultrasound examination, a 3.5cm
round, homogenous mass was seen in the body of the pancreas, and fine needle aspiration
was performed. The cytological specimen collected contained small cells with irregular nuclear
tours, (Figure 2) suggestive of a lymphoproliferative disorder, of which B and T cell lymphoma,
and neuroendocrine tumor were included in the differential. Immunostaining showed the cells
to be positive for CD20 and negative for CD3 and neuroendocrine markers and chromogranin,
making the findings support the diagnosis of B cell lymphoma.

**Conclusion:** Summary: Although the pancreas is an atypical primary site for B Cell lymphoma,
the should be included in the differential diagnosis when a mass is discovered in the pancreas.

**P571**

**A RARE CASE OF MULTIFOCAL NON-FUNCTIONING NEURO-ENDOCRINE TUMOR OF THE PANCREAS PRESENTING AS CHRONIC AUTOIMMUNE PANCREATITIS**

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**Purpose:** Pancreatic neuro-endocrine tumors (PNET) are rare malignancies which present
with either symptoms from excess hormone production or are detected incidentally. Autoim-
mune pancreatitis (AIP) is associated with markedly elevated serum IgG4 levels.

**Results:** A 64 year old woman presented with a 1 year history of steatorrhea, a 50 pound weight
loss and diabetes. This was preceded by 4 attacks of pancreatitis over 3 years. Steatorrhea was
confirmed by a 24 hour stool study showing 84 grams of excreted fat/day. Contrasted CT scan
showed evidence of chronic pancreatitis with atrophy of the body and tail, non dilated pancre-
atic duct and mildly dilated common bile duct to the level of the pancreas. She had been started
on pancreatic enzyme replacement and noted an improvement in diarrhea with slow weight
gain. At our institution, baseline labs showed mildly elevated transaminases, normal amylase
and lipase and highly elevated serum IgG4 464 mg/dl (normal 8-140). Endoscopic ultrasound
(EUS) showed changes consistent with AIP with diffusely hypoechoic gland interspersed with
marked lobularity and hyperchoic bands, and a thickened bile duct wall; no masses were seen.
Yet, Trucut biopsies of the gland were suggestive of NET with mildly positive staining for
synaptophysin. IgG4 stains were negative. Repeat pancreas protocol CT did not show a focal
mass and an Octreotide scan did not show any evidence of NET. With surgical consultation, we
decided to reassess her after treatment with 4 weeks of oral prednisone for presumed AIP. On
follow-up, her serum IgG4 had decreased to 314 mg/dl. Repeat pancreas protocol CT was un-
changed, and EUS showed features consistent with chronic AIP though an infiltrating carci-
noma could not be ruled out. Trucut biopsies again showed stage 2 of 3 neuro-endocrine
primary and underwent an extended total pancreatectomy, splenectomy and hepatico-jejunostomy.

**Conclusion:** We report a sporadic case of multifocal non-functioning neuro-endocrine tumors
with many unusual features. Imaging studies failed to show any evidence of PNET and her
presentation was highly suggestive of chronic pancreatitis with some features of AIP. This un-
usual presentation led to treatment with steroids which caused a sedative response but not a
radiologic response. The possibility that AIP predisposed to multifocal PNET was not con-
firmed on pancreatic histology. Differentiating AIP from other pancreatic disease can be diffi-
cult. Elevated serum IgG4 and serologic “response” to steroids are not diagnostic of AIP.
RESULTS: A 68 year old Caucasian male was evaluated due to a two month history of intermittent nausea, abdominal discomfort, elevated transaminases and hyperbilirubinemia. Medical history was significant for recurrent melanomatous skin cancer resections. He had consumed 2 alcohol drinks per day for 25 years but had no risk factors for viral hepatitides. On initial assessment, serologic studies for viral hepatitis and autoimmune hepatitis were negative. Initial abdominal ultrasonography showed cholelithiasis but was otherwise unrevealing. Upon recurrence of symptoms, cholelithiasis without cholecdocholithiasis or dilated ducts was seen on repeat ultrasonography. A liver biopsy was performed which revealed portal inflammation, bile ductular proliferation and periporal fibrosis. MRI of the liver with MRCP showed intrahepatic ductal dilation, an extrinsic-appearing structure of the proximal hepatic duct and irregular enhancement of the gallbladder wall concerning for malignancy. ERC confirmed the structure at the proximal hepatic duct with a thin irregular wall. Brushings obtained were negative for malignant cytology, FISH was positive, and a scar CA19-9 was mildly elevated. The patient then underwent open cholecystectomy. Examination of the gallbladder was negative for malignancy, but instead revealed acute and chronic cholecystitis with cholelithiasis, peri-gallbladder inflammation, fibrosis and abscess formation with xanthogranulomatous inflammation. CONCLUSION: We present a case of recurrent cholestatic hepatits secondary to Mirizzi syndrome associated with xanthogranulomatous cholecystitis. While Mirizzi syndrome is seen in approximately 1% of all cholecystectomies, to our knowledge, only 4 cases associated with XGC have been reported previously in the literature. Because gallbladder carcinoma is a more common cause of Mirizzi syndrome, and XGC can be diagnosed only on pathologic examination of the resected gallbladder, cholecystectomy remains the treatment of choice if this association is suspected.

P574

PANCREATIC PLASMACYTOMA PRESENTING AS VARICEAL HEMORRHAGE: LIFE THREATENING COMPLICATION OF A RARE ENTITY

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PURPOSE: Diaphragmatic hernia is a rare cause of biliary obstruction. We report a patient who presented with obstructive jaundice and was diagnosed by endoscopic retrograde cholangiopancreatography (ERCP) to have compression of the common bile duct (CBD) by the rim of a diaphragmatic defect.

METHODS: A 64 year old female with history of breast cancer presented with jaundice, acholic stools, and weight loss. She denied any trauma, alcohol or drug use, tattoos, or blood transfusions. In addition to jaundice, exam demonstrated right upper quadrant and epigastric tenderness, and hepatomegaly. Laboratory data showed AST of 218 U/L, ALI of 167 U/L, alkaline phosphatase of 433 U/L, total bilirubin of 9.8mg/dl. CT scan of abdomen and pelvis revealed a large right-sided diaphragmatic hernia with a portion of stomach, duodenum, pancreatic head, multiple loops of small bowel and the transverse colon in the thoracic cavity. There was hepatomegaly, dilated intrahepatic and pancreatic ducts. An ERC was performed. Papilla was identified to be in a tangential position. Selective cannulation revealed normal CBD with a smooth concentric narrowing at the level of the crura with proximal dilatation and a biliary stent was placed. She subsequently underwent exploratory laparotomy with repair of the hernia defect and resection of the hernia sac. Several weeks later another ERC was performed for stent removal. Papilla was identified in the usual position and CBD injection revealed resolution of the obstruction.

RESULTS: Review of the literature revealed reports of patients with diaphragmatic hernias presenting with obstructive jaundice due to compression of the biliary system by the rim of a diaphragmatic defect. The etiology of the obstruction in those cases were diagnosed with CT scan, percutaneous transhepatic cholangiogram, or intraoperatively. To our knowledge, this is the first report where diagnosis was made utilizing ERCP.

CONCLUSION: ERC can be utilized to facilitate diagnosis as well as provide temporary relief of obstructive jaundice secondary to diaphragmatic hernia.

P575

FASCiola HEPATICA CAUSING ACUTE PANCREATITIS COMPLICATED BY BILARY SEPSIS

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PURPOSE: Although gallstones and alcohol are the most common causes of acute pancreatitis (AP) world-wide, parasites such as Fasciola have been shown to be an important cause in other parts of the world.

METHODS: We present a case of a patient recently emigrating from Asia found to have a rare parasitic infection causing biliary sepsis in a patient with AP.

RESULTS: A 33 year old gentleman presented with a 2 day history of nausea, vomiting, fever, and epigastric pain which was described as burning and radiating to the RUQ. The patient denied any medical or surgical history, or history of alcohol use. The patient was born and raised in Uzbekistan (former USSR), and moved to the US 2 months prior. Vital signs at admission were significant for a fever of 38 C, and heart rate of 115 beats per minute. Significant findings on physical exam were splenomegaly, and RUQ tenderness. Laboratory findings on admission included a WBC of 16,000/mm3 with a differential including eosinophilia of 11%. Liver enzymes (LFT) were elevated with AST of 282 u/l (range 1-37), ALT of 319 u/l (range 1-40), total bilirb of 5.4mg/dl (range 0-1.0), direct bilirb of 3.8 mg/dl (range 0.3-0.8) and alkaline phosphatase of 319 u/l (range 39-120). Serum amylase and lipase were elevated at 636 u/l (range 0-131) and 155 u/l (range 1-52), respectively. Serum calcium and triglycerides levels were normal. Ultrasound findings included thickened gallbladder wall, normal common bile duct (CBD) and no gallstones or sludge was appreciated. As the patient remained febrile with persistently abnormal LFT’s, ERC was performed. ERC revealed mild intra and extra hepatic biliary dilation with filling defects in the mid CBD. Sphincterotomy was performed followed by balloon sweep of the CBD. A motile, flat, brown, leaf like parasite was retrieved and sent for pathology. Fasciola hepatica was identified. Trichinella was ruled out, and the patient rapidly improved and remains well.

CONCLUSION: Manifestations of human fascioliasis depends upon the stage and intensity of the infection. Fasciola hepatica has rarely been shown to cause AP. This case demonstrates the classic presentation of biliary sepsis complicating AP. Clinicians must consider fasciola in the differential diagnosis of AP in patients emigrating from endemic countries, especially Central Asia.
ERCP image showing smooth concentric narrowing of the CBD at the level of the crura with proximal dilatation and a biliary ductal dilation, an extrinsic-appearing stricture of the proximal hepatic duct and irregular ductular proliferation and periportal fibrosis. MRI of the liver with MRCP showed intrahepatic ducts with an echogenic focus, compatible with a choledocholith. The patient was referred for a SGJ procedure and a surgical cholecystectomy. At surgery, a large stone was found in the common bile duct. The patient made an uneventful recovery and was discharged on post-operative day 1.

Results: Laparoscopic SGJ was performed and a common bile duct stone was extracted. The patient tolerated the procedure well and was discharged on post-operative day 1. There were no complications.

Conclusion: Laparoscopic SGJ is a safe and effective method for the extraction of biliary ductal stones. This case highlights the importance of early recognition and prompt intervention for biliary obstruction.

P577
POST-EMR SURVEILLANCE OF GE-JUNCTION MUCOSAL LESIONS WITH EUS
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Purpose: Endoscopic mucosal resection (EMR) has become the standard of care for the endoscopic management of early neoplastic lesions of the GE-Junction. Lesions that are effectively removed with clear resection margins are uniformly felt to be endoscopic cures and are followed with surveillance endoscopies. The exact surveillance guidelines for following post-resection lesions are not well established. Case Report: A 52 y/o man with dyspepsia was found to have a GE-Junction nodule with high grade dysplasia. EUS demonstrated that it was confined to the mucosa (T1 N0) EMR was done and the resected specimen showed carcinoma in situ with clear margins. Follow up endoscopies and biopsies were done at 2 and 5 months, and were normal without residual dysplasia. At that point, the patient was followed annually with surveillance EUS. At the 5 year surveillance EUS, the GE-Junction again appeared normal endoscopically with normal biopsies. EUS, however, revealed new local adenopathy, with a 1.3 cm perigastric L.N. found to be adenocarcinoma by FNA. An oncologic evaluation showed no evidence of metastatic disease, or of a second primary. The patient underwent adjuvant chemotherapy, followed by an esophagectomy, with the pathology showing 8 of 23 LN’s positive for disease, as well as a focus of adenocarcinoma in the peri-esophageal fat. Conclusion: The exact guidelines for following early GE-Junction neoplastic lesions which have been resected endoscopically are not well established. This case demonstrates that resected superficial T1 lesions can present with delayed local nodal spread in the absence of mucosal recurrence. This case suggests that resected neoplastic GE-Junction lesions should be followed for at least five years after endoscopic resection, and that EUS should be part of the surveillance to detect extraluminal recurrence.

P578
PROPOFOL FACILITATES FOREIGN BODY EXTRACTION
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Purpose: Airway obstruction is a well known complication of propofol. The mechanism of action is related to laryngopharyngeal musculature relaxation. We report a case of large meal impaction in the distal esophagus that could not be extracted until a single dose of propofol was administered, which facilitated temporary laryngopharyngeal muscle relaxation.

Methods: Case Summary A 50-year-old man was evaluated in the emergency room with a symptomatic foreign body impaction making it difficult for him to manage his secretions. He reported eating steak prior to the onset of symptoms. Upper endoscopy with standard monitoring was employed, performed after administering midazolam 5 mg and mepivacaine 50 mg. A collection of food debris was found in the mid-esophagus and a large piece of meat was impacted in the distal esophagus. The endoscope could not be advanced beyond the impaction. The size of the meat precluded the use of an over the scope.) The meat was firmly held by a snare wire but despite adequate sedation could not be extracted beyond the proximal oesopharynx without significant resistance. Multiple attempts at extraction had failed. A bolus dose 50 mg of propofol was administered to allow for relaxation of the laryngopharynx and to provide short-term deep sedation. The meat was then easily withdrawn in one attempt without resistance. The foreign body was a solid piece of meat that measured 6 cm in length and 2 cm in width. The patient maintained his respiratory status throughout the procedure and recovered consciousness within thirty seconds.

Results: NONE

Conclusion: Propofol may offer better laryngeal relaxation than midazolam and meperidine and should be considered an important agent that can allow for the safe extraction of a large foreign body. Further research to evaluate its safety profile and the efficacy in an emergency situation for foreign body removal should be studied.

P579
CASE REPORT OF ENDOSONOGRAPHIC DOPPLER INTERROGATION OF BLUE RUBBER BLEB NEVUS SYNDROME
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Purpose: Description of endosonographic doppler interrogation of blue rubber bleb syndrome.

Methods: Case report

Results: Blue rubber bleb nevus syndrome is an uncommon, but well documented cause of GI blood loss in children. Low flow vascular lesions may occur throughout the GI tract, most commonly in small bowel. There are currently no reports documenting the endosonographic Doppler interrogation of these lesions. We report the case of an eight year old with increasing fatigue and pallor found to have a microcytic anemia (Hgb 8.0 g/dL, MCV 61). The patient reported daily soft brown stools. The patient had a similar episode 18 months prior to this presentation. Hgb was 5.1 with MCV of 54. At that time the child was noted to drink approximately forty ounces of milk a day. The patient was transfused and begun on iron therapy. The child remained completely asymptomatic and was documented to have a hemoglobin of 11.8 g/dL three months prior to this presentation. On evaluation at this presentation stools were guaiac positive. Endoscopy was performed. On upper endoscopy the patient was noted to have two vascular lesions: a ten millimeter lesion on the greater curvature of the stomach and a larger, fifteen millimeter vascular lesion in the second portion of the duodenum. Wireless capsule endoscopy demonstrated six additional lesions throughout the jejunum and ileum. Endoscopic ultrasonography was performed to further delineate the nature of the lesions prior to intervention. The gastric lesion was noted to be an intramural vascular lesion in the second layer. Doppler interrogation revealed arterial flow to the vascular lesion: an arterial vessel arising in the muscularis (fourth layer) was documented to pass through the third layer and into the intramural vascular lesion. After multidisciplinary evaluation, the patient continues on iron. Balloon enteroscopy with endoscopically assisted laparoscopic amlation will be considered if anemia becomes intractable.

Conclusion: This is the first report of documentation of flow in blue rubber bleb nevus syndrome.

P580
CHILADITI SYNDROME & DOUBLE BALLOON COLONOSCOPY
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Purpose: A 76-year-old African American man presented with a 10 year history of constipation. He also had described numerous evaluations for multiple episodes of partial bowel obstruction, with symptoms consistent with obstruction. His only surgical history was a right nephrectomy for renal cell carcinoma. Colonoscopy was extremely technically difficult due to severe tortuosity of the colon. Advancement in the area of the hepatic flexure was difficult and the Olympus OPD positioning detecting unit was inserted, the scope tip appeared to be in the area of the right nipple. The procedure was aborted out of concern for a diaphragmatic hernia, and a virtual colonography was performed to evaluate the remainder of the colon for pathology and to define the anatomic layout of the colon. Virtual colonography demonstrated the hepatic flexure colon segment passing lateral, then superior and finally anterior to the liver. In addition, there was 12 x 5mm pedunculated polyph in the ascending colon. There was no evidence for a diaphragmatic hernia. A double balloon colonoscopy was successfully negotiated into the right colon.

Conclusion: An intramural vascular lesion seen in layer 2 on endoscopic ultrasound.
CAVERNOUS MALFORMATION MASQUERADING AS A NEOPLASM ON ROUTINE IMAGING ACCURATELY DIAGNOSED USING EUS
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Conclusion: A 35 year old male presents with hematemesis and abdominal pain. His prior history is significant for idiopathic pancreatitis diagnosed 10 years prior complicated by portal vein thrombosis requiring placement of a spleno-renal shunt. He had a known history of low grade varices identified on recent EGD and a large mass in the porta-hepatis noted on enhanced CT imaging, and what was described as extensive tumor surrounding the distal gastric body wall. His past medical history included a prior resection with extension around the lower esophagus to the GE junction. EUS was performed to obtain a tissue diagnosis, however; the lesion appeared to be more suggestive of a congregation of varices with further varices visualized around the esophagus and porta-hepatis MRI previously ordered as a follow-up to the CT again described a large non-enhancing soft tissue mass within the upper abdomen surrounding the porta-hepatis with extension towards the stomach was again seen and speculated to represent malignancy or fibrotic tissue. Given these conflicting impressions, a biopsy of the mass was recommended for further evaluation which returned to be non-specific for malignancy or any pathology. With EUS findings being consistent with a vascular structure and CT: MRI findings showing a mass, along with negative biopsy results, angiography was then performed for further evaluation. The findings on angiography confirmed that the identified mass was massive cavernous transformation of numerous collaterals, consistent with the EUS findings of a vascular structure. While EUS has been routinely used for assessment of gastrointestinal tumor staging along with differentiation of submucosal lesions, there is limited data comparing CT, MRI, and EUS in abdominal mass evaluation. CT has been shown to be inferior to EUS in assessing extraluminal compression and evaluating local and regional tumor extension. To date, this is the first case in the literature where an abdominal mass concerning for malignancy on radiographic studies was found to be massive cavernous transformation of vessels by EUS. In this instance, EUS was more accurate than CT and MRI for diagnosis of this unusual structure. The contrast load on CT was notable enough to visualize all of the collaterals. For a large volume of collaterals, the MRI was not likely delayed enough to capture the numerous collaterals, but EUS afforded not only tissue visualization, but dynamic vascular evaluation and tissue sampling if necessary.

FUNGAL ENDOCARDITIS: A CASE FOR FUNGAL PROPHYLAXIS BEFORE GASTROINTESTINAL PROCEDURES
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Conclusion: This case illustrates the need for fungal prophylaxis during invasive gastrointestinal procedures in patients at high risk for endocarditis. A 53 year old man with two previous episodes of bacterial endocarditis resulting in aortic valve replacement and repair was admitted for evaluation of hematemesis. Several days after endoscopy, he developed shortness of breath and a progressive palpable purpuric rash. Studies revealed hypocomplementemia, anemia, thrombocytopenia, elevated creatinine and pleural effusions. Blood cultures revealed Candida parapsilosis. Echocardiography showed vegetations on the native mitral valve and prosthetic aortic valve. Due to the patient’s previous valve replacement, he was a poor surgical candidate. Despite aggressive antifungal treatment, the patient’s infection continued leading to valvular destruction and subsequent death. Fungal endocarditis is a rare, serious disease that often requires cardiac surgery and carries a poor prognosis. The updated American Heart Association guidelines do not address fungal prophylaxis and they no longer recommend routine bacterial prophylaxis for gastrointestinal procedures except in high risk patients. Recent reports show an association between Candida parapsilosis, nosocomial infections, invasive procedures and prosthetic devices. As Candida is normal flora in the upper gastrointestinal tract, endoscopy may lead to a transient fungemia which could seed the cardiac valves. In our high risk patients, prophylaxis for fungal infections during endoscopy may be beneficial. Animal models demonstrated that two doses of flucanazone prevented experimental endocarditis caused by Candida. Amphotericin B has also shown to be successful in preventing fungal endocarditis in animal models. Newer generation echinocandins may be able to achieve the same result with lower doses. Amphotericin B has also shown to be successful in preventing fungal endocarditis in animal models. Newer generation echinocandins may be able to achieve the same result with lower doses.
demonstrated that two doses of fluconazole prevented experimental endocarditis caused by patients, prophylaxis for fungal infections during endoscopy may be beneficial. Animal models candidate. Despite aggressive antifungal treatment, the patient's fungemia continued leading Candida parapsilosis. Echocardiography showed vegetations on the native mitral valve and This case illustrates the need for fungal prophylaxis during invasive gastrointesti-

was not likely delayed enough to capture the numerous collaterals, but EUS afforded not only likely not enough to visualize all of the vessels given the large volume of collaterals, the MRI ature where an abdominal mass concerning for malignancy on radiographic studies was found mass evaluation. CT has been shown to be inferior to EUS in assessing extraluminal compres-
further evaluation which returned negative for malignancy or any pathology. With EUS find-
more suggestive of a congregation of varices with further varices visualized around the esoph-
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of progressive diffuse abdominal pain. Her past medical history included eosinophilia diag-
pain,eosinophilia and elevated IgE. Case:A 68 year old female presented with a 2 week history

Purpose: Although iatrogenic colon perforation is uncommon, it is a feared and possibly life

x-ray on day 3 prompted a computed tomographic (CT) scan with oral contrast to rule out a

sultation was obtained. The patient was made NPO and started on intravenous fluids and an-
signs or fever. Urgent abdominal X-ray revealed free air under the diaphragm. A surgical con-
Results:

prepped without any residual stool, and 4 right sided colon polyps (less then 1cm each) were
amination revealed a focally dilated segment of sigmoid colon extending 20-45 cm which
moid volvulus; however the patient refused surgery and thus was scheduled for proctosigmoi-

is responsible for 8% of all intestinal obstructions. Sigmoid volvulus is particularly common in

PS86
NEUROENDOCRINE TUMOR OF THE JEUERNUM IN A PATIENT WITH CELIAC DISEASE
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PS87
SOLIDITUD COLONEL POLYP: A RARE PRESENTATION OF PRIMARY AMYLOIDOSIS
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J. Gastroenterologist, Walter Reed Army Medical Center, Washington, DC; 2. Pathology, Walter Reed Army Medical Center, Washington, DC; 3. Hematology and Oncology, Walter Reed Army Medical Center, Washington, DC.

Purpose: INTRODUCTION: We describe the unusual case of an isolated duodenal polyp formed by submucosal globular amyloid deposition in an asymptomatic 79 year old patient with chronic hepatitis C. The patient had no specific gastrointestinal complaints or signs/symptoms of malabsorption. ENDOSCOPIC FINDINGS: During endoscopic screening for varices, a solitary polyp was found in the duodenal bulb. The consistency was soft when probed, resulting in a positive pillow sign but not completely consistent with a lipoma as the overlying mu-
cosa was a shiny pink hue. Utilizing a 12 MHz endoscopic ultrasound probe, the polyp was found to be a 8.2 x 7.3 mm hypoechoic lesion arising within the submucosa and deep mu-
cosa. With bite on bite biopsies a pearly opaque gelatinous material was visualized. Push en-
teroscopy of the jejunum revealed no further findings.

Purpose: A 29 year old woman presented with a six month history of diffuse abdominal cramping, jaundice, worsening appetite, and significant weight loss. An ex-
haustive work-up, including EGD, colonoscopy, bone marrow biopsy, rheumatologic and au-
terolog ation revealed no new findings. Capsule endoscopy revealed a circumferential and peri-
pancreatic inflammation as well as portal vein thrombus. Samples obtained from exploratory laparotomy revealed nonspecific inflammatory and fibrotic changes. The patient was eventu-
ally discharged to a tertiary care facility for further management. Results: After a careful re-
view of her outside records, radiological studies and biopsy specimens, a presumptive diagnosis of sclerosing mesenteritis was made. The patient was initiated on oral steroid treatment with no clear improvement in symptomatology. During the course of hospitalization, the patient devel-
oped bacteremia requiring cessation of steroid treatments. Her symptoms progressed rather acutely with fibrotic compression of her vasculature and resultant lactic acidosis and respira-
tory failure, ultimately leading to death. Autopsy revealed multiple intra-abdominal adhesions involving the visceral organs and peritoneum. A remarkable amount of fibrotic tissue encased the first part of the duodenum as it entered the retroperitoneum, the pancreas, portal vein, and bile duct. Additionally, there was also peri-aortic fibrosis extending from the level of the renal arteries to the bifurcation of the iliac vessels, causing obstruction of bilateral renal vessels, ureters, superior and inferior mesenteric arteries, and inferior vena cava. This extensive fibrosis was eventually identified as secondary to anaplastic lymphoma. Conclusions: This report graphically illustrates that intra-abdominal lymphoma can present in a manner that is clinically identical to sclerosing mesenteritis. Our case suffered a rapidly progressive course with a fatal outcome. These observations emphasize the importance of clinician’s awareness of this unusual association.

CONCLUSION: Primary amyloid is usually diagnosed with rectal, skin, bone marrow, tongue or subcutaneous fat biopsies that may reveal amyloid deposition within blood vessel walls, muscle layers and the muscularis mucosa. A single biopsy of any organ at any site may demonstrate amyloid. This case is consistent with AL or primary amyloidosis in the setting of a monoclonal gammopathy.
P590
WHIPPLE’S DISEASE: A RARE CAUSE FOR COMMON COMPLAINTS
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Purpose: A 52-year-old healthy Caucasian female presented with two weeks of abdominal pain, vomiting, and fevers. She had lost 40 pounds over eight months. She denied diarrhea or family history of gastrointestinal disorders. Physical examination revealed a temperature of 38.2 degrees Celsius. Upper abdomen was tender to palpation. There was no peripheral lymphadenopathy. White blood cell count was 24.7 thousand/mL. Hemoglobin was 9.3 g/dL, with MCV 78. Albumin was 2.7 g/dL. Computed tomography of the abdomen and pelvis revealed retroperitoneal and mesenteric lymphadenopathy as well as osteal thickening. Excisional omental lymph node resection was performed, yielding architectural effacement, histiocytes infiltrating the fat, and fungiform cysts. On flow cytometry, an aberrant B-cell population was identified, but cytogenetic and molecular testing were normal, as was bone marrow biopsy. Upper endoscopy revealed thickened, boggy folds and white plaques in the duodenum. Distal duodenal biopsies showed thickening, clubbed villi with histiocytic infiltration with a positive periodic acid-schiff (PAS) stain. Electron microscopy was performed, allowing the identification of bacillary organisms with a triamellar wall. Whipple’s disease is a systemic disease caused by Tropheryma whippelii, a gram-positive bacillus closely related to Actinobacter. It is more common in men than women. While any system may be affected, it classically presents with weight loss, intermittent diarrhea, and migratory arthralgias. Fever, anemia and lymphadenopathy are also common, which may initially lead to efforts toward diagnosing lymphoma. Neurologic involvement may be isolated from other symptoms and can be irreversable, causing higher morbidity and mortality despite treatment. Diagnosis is secured by distal duodenal biopsy, which reveals thickening or clubbing of the villous architecture and histiocytic infiltration. PAS stain is positive, and electron microscopy reveals the bacillus with the typical triamellar wall. Polymerase chain reaction is confirmatory but not routinely performed. Treatment with antibiotics is imperative, although the ideal regimen and duration has not been clearly established. A two week course of a third-generation cephalosporin followed by one to two years of trimethoprim/sulfamethoxazole has been generally recommended. This case illustrates both classic and unusual features of Whipple’s disease and highlights the necessity of having a high index of suspicion for this rare disease, even when faced with common symptoms.

P591
CHYLOUS MESENTERIC CYST IN ASYMPTOMATIC 60 YEAR-OLD WOMAN
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Purpose: 60-year-old female presented for further evaluation of a large mesenteric cyst noted incidentally on routine abdominal CT scanning performed during a preoperative evaluation for elective kidney donation. Clinically, she denied gastrointestinal symptoms. Past medical history was significant for recurrent episodes of diverticulitis, and hyperlipidemia. No prior history of malignancy or significant family history of malignancy was noted. Past surgical history included a trans-abdominal hysterectomy and three caesarean sections, all greater than twenty years prior to the current presentation. She reported two motor vehicle accidents in the remote past associated with unspecified abdominal trauma, managed conservatively. Labs showed normal hemoglobin, electrolytes, TSH, and liver function tests. Abdominal CT scan showed a 6.7 x 2.6 multi-lobulated, septated cystic lesion at the mesenteric root, inferior to the third portion of the duodenum, interpreted as a mesenteric cyst or potentially enteric cyst. The patient underwent endoscopic ultrasound guided biopsy of the mesenteric cyst. Cytology from multiple fine-needle aspirates was negative for malignancy, but showed abundant histiocytes and chronic inflammatory cells were present. Approximately 10 cc of milky yellow fluid was aspirated from the cyst. CEA and CA 19-9 levels from the cyst fluid were unremarkable, but revealed elevated cholesterol and triglycerides, 256 mg/dL and 1131 mg/dL, respectively, consistent with mesenteric chylous cyst.bowel aspirates was negative for malignancy, but showed abundant histiocytes and chronic inflammation. No epithelial cells were present. Approximately 10 cc of milky yellow fluid was aspirated from the cyst. CEA and CA 19-9 levels from the cyst fluid were unremarkable, but revealed elevated cholesterol and triglycerides, 256 mg/dL and 1131 mg/dL, respectively, consistent with mesenteric chylous cyst. Discussion Mesenteric cysts are rare, and frequently cause abdominal pain, distension, or intestinal obstruction due to the mass effect. Chylous mesenteric cysts, notably, are exceedingly rare with few case reports in the literature. Constitutional symptoms such as fatigue, fever, and weight loss may develop though are infrequent. Mesenteric cysts are often large in size, cause acute or chronic symptoms, though have a very low malignant potential and associated morbidity. Underlying etiologies include congenital malformations and the mesenteric lymphatics due to chronic inflammatory states e.g. mesenteric panniculitis. Cysts are generally unilocular though may present with multiple loculations and, most importantly, lack solid components. Surgical excision is the recommended therapy in clinically symptomatic patients. Cyst drainage alone is not recommended, due to the high frequency of recurrence. Given the absence of clinical symptoms in this case, a conservative approach with observation was recommended.

P592
ANGIOTENSIN CONVERTING ENZYME INHIBITOR (ACEI) INDUCED ANGIOEDEMA OF SMALL INTESTINE IN A TRANSPLANT PATIENT
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Purpose: A 65 year old white male with a history of a heart transplant and tricuspid valve replacement presented with an acute onset of abdominal pain and distention a few hours after these symptoms with the use of lisinopril, a diagnosis of ACEI induced intestinal angioedema was considered. Physical examination revealed a temperature of 38.2 degrees Celsius. Upper abdomen was tender to palpation. There was no peripheral lymphadenopathy. White blood cell count was 24.7 thousand/mL. Hemoglobin was 9.3 g/dL, with MCV 78. Albumin was 2.7 g/dL. Computed tomography of the abdomen and pelvis revealed retroperitoneal and mesenteric lymphadenopathy as well as osteal thickening. Excisional omental lymph node resection was performed, yielding architectural effacement, histiocytes infiltrating the fat, and fungiform cysts. On flow cytometry, an aberrant B-cell population was identified, but cytogenetic and molecular testing were normal, as was bone marrow biopsy. Upper endoscopy revealed thickened, boggy folds and white plaques in the duodenum. Distal duodenal biopsies showed thickening, clubbed villi and histiocytic infiltration with a positive periodic acid-schiff (PAS) stain. Electron microscopy was performed, allowing the identification of bacillary organisms with a triamellar wall. Whipple’s disease is a systemic disease caused by Tropheryma whippelii, a gram-positive bacillus closely related to Actinobacter. It is more common in men than women. While any system may be affected, it classically presents with weight loss, intermittent diarrhea, and migratory arthralgias. Fever, anemia and lymphadenopathy are also common, which may initially lead to efforts toward diagnosing lymphoma. Neurologic involvement may be isolated from other symptoms and can be irreversable, causing higher morbidity and mortality despite treatment. Diagnosis is secured by distal duodenal biopsy, which reveals thickening or clubbing of the villous architecture and histiocytic infiltration. PAS stain is positive, and electron microscopy reveals the bacillus with the typical triamellar wall. Polymerase chain reaction is confirmatory but not routinely performed. Treatment with antibiotics is imperative, although the ideal regimen and duration has not been clearly established. A two week course of a third-generation cephalosporin followed by one to two years of trimethoprim/sulfamethoxazole has been generally recommended. This case illustrates both classic and unusual features of Whipple’s disease and highlights the necessity of having a high index of suspicion for this rare disease, even when faced with common symptoms.

P593
GIANT LIPOSARCOMA PRESENTED AS INGUINAL HERNIA. UNUSUAL SIZE, PRESENTATION
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Purpose: First described by Rudolf Virchow in 1857, retroperitoneal liposarcoma is the most common retroperitoneal sarcoma and accounts for about 0.1% of all cancers. It is a slow occupying space tumor, that presents after involvement of adjacent organs, or incidentally during PE. We are presenting a patient with an unusual size mass presenting as inguinal hernia.

Methods: The patient is a 64 year old male who noticed an increase and fullness in the right scrotum. He first had this complaint 10 years prior to presentation. At that time he had hipomalous tissue surgically removed as part of inguinal hernia repair. Three years later, the fullness returned and has been progressively worsening. PMH is significant for hepatitis B surface antigen positive, mild hypertension, cervical disc fusion, and colon polyps. Medications are Benicar plus hydrochlorothiazide 1/2 pack/day for 20 years. On PE the right scrotum had a non-reducible mass. Blood count and chemistry panel, including tumor markers, were normal. CT showed a large 25 cm x 15 cm fatty mass with two solid components in the right abdomen displacing the colon and small bowel to the left abdomen. The mass extended into the right scrotum. No lymphadenopathy was present. The CT results were suspicious for a large liposarcoma. Surgery was performed and a 52 lb mass was removed. Pathology confirmed the mass as a well differentiated liposarcoma. CT imaging at 6 months did not show any tumor recurrence.

Results: Although a total of 4 similar cases of liposarcoma presented as inguinal hernia have been reported on OVID between 1950-2008, this is the only case that has this tumor size and bulk on presentation.

Conclusion: This is a unique case because of the size of the tumor and the unusual presentation as an inguinal hernia.

Figure 1: CT and gross pathology correlation.
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DOES EATING BLACK LICORICE MIMIC MELENA OR CAUSE IT?
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Purpose: We describe a patient with black tarry stools & an elevated INR after eating a pound of Black Licorice. Although literature describes the effects of Licorice root on the cardiovascular & renal systems, there is a paucity of data on interactions between Black Licorice & warfarin. Furthermore, eating Black Licorice colors stools black & may be mistaken for melena in the absence of true bleeding. V Raises the INR, the patient with true melena may be falsely reassured that the stools are black because of the Licorice.

Methods: An 80-year-old woman with atrial fibrillation anti-coagulated with warfarin ate a pound of Black Licorice 4 days prior to presentation. She then noted black tarry stools but did not seek medical attention because she attributed this to the Licorice. Eventually she developed dizziness, subsequently collapsed & was brought into the Emergency department. There was no hematemesis or abdominal pain. Warfarin had been dosed at 1 mg daily. She had maintained a therapeutic INR, checked weekly for a long time. She was hypertensive & tachycardic. Hematocrit was 14 (baseline 34) & INR 5.5 (baseline 12 days prior was 2.1). The patient had a similar episode related to Black Licorice ingestion in 2004, when she was admitted with black stools & weakness. INR was 9.1 & hematocrit was 16 at that time. She received fresh frozen plasma & packed red blood cells & underwent upper endoscopy. A prepyloric gastric ulcer with a visible vessel at the base was seen & 2 clips were placed. She had an uneventful hospital course & was discharged with a stable hematocrit & therapeutic INR & instructions to avoid Black Licorice.

Results: Black Licorice is derived from the root of the plant, Glycyrrhiza glabra & is known for its anti-inflammatory & mineralocorticoid inducing properties. Licorice has also been implicated for interacting with a number of medicines, e.g. digoxin, thiazides & spironolactone. Gliburide present in Licorice inhibits the P450 system which metabolizes Warfarin. Glycyrrhizin, also present in licorice, is a thrombin inhibitor & prolongs fibrinogen clotting times. Hence, the anti-thrombotic activity & inhibition of warfarin metabolism may synergistically amplify anti-coagulation.

Conclusion: Black licorice is a commonly available food product. This case report illustrates how Black licorice may potentiate or cause GI bleeding especially in patients on warfarin. The presence of Black Licorice in stool can obviously mimic melena & confound its clinical presentation. Therefore, till more data is available, health care providers should caution patients who are at risk for bleeding or on warfarin to avoid black licorice.

P595

AN UNUSUAL CASE OF NAUSEA, VOMITING, DIARRHEA AND URINARY RETENTION IN A HEALTHY FEMALE
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Purpose: Hollow visceral myopathy (HVM) is a form of chronic idiopathic intestinal pseudo obstruction (CIP). It rarely involves other systems including the urinary tract.

Methods: A 45 year old female was transferred to our hospital with 3 months of nausea, vomiting and watery diarrhea. She had a tender, distended abdomen on physical exam. CT enterography demonstrated thickening and distension of the large and small intestines without a stricture. Bilateral hydrocele/neurophrosis was noted.

Results: EGD and colonoscopy were grossly and histologically normal. Ureteral stents were placed without resolution of her hydromephrosis. Laparotomy did not reveal a mechanical obstruction. A full thickness rectal biopsy showed vacuolar smooth muscle degeneration with loss of a majority of muscle fibers c/w HVM. A PET scan and testing for amyloid, scleroderma and HIV were negative. A venting gastrostomy was placed and TPN started with resolution of symptoms. She was discharged to a rehabilitation facility.

Conclusion: Secondary chronic intestinal pseudo obstruction (CIP) is usually due to a paraneoplastic syndrome, scleroderma, amyloidosis or HIV. In contrast, CIP is due to either a HVM or hollow visceral neuropathy. Involvement of other visceral smooth muscle including the urinary tract and gallbladder has been reported. Although CHP is usually seen as a familial syndrome, rare sporadic cases have been reported. Treatment of CHP is primarily supportive with venting, surgical resection and TPN as needed. Chronic nausea, vomiting and diarrhea with small intestinal dilation and hydrorrhoeter should prompt consideration of CHP.

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A RARE CAUSE OF SEVERE ANEMIA AND GASTRO-INTESTINAL BLEEDING: KLIPPEL TRENAUNA SYNDROME WITH EXTENSIVE VISCERAL INVOLVEMENT
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Purpose: To diagnose and manage Klippel Trenaunay Syndrome (KTS)

Methods: Case: A 27 year old white male presented with fatigue, pallor, and black stools for 4 months. Past medical history revealed varicosities of right lower extremity since childhood, urinary bladder hemangioma and hemorrhoids. Physical examination was mostly benign except for severe pallor and bluish-purple hemangiomas along with varicose veins of right lower limb. The stool test for occult blood was positive. HB was 2.8 g/dL and Hct 10.1%. Following transfusion therapy, he underwent upper GI and small bowel follow-through. Multiple phlebothrombi were noted suggesting residual recurrent hemangiomas. Capilloscopy revealed large dilated veins in the rectosigmoid with hyperemic, edematous and friable mucosa that bled easily on manipulation of the scope. Rectal prolapse with wide rectal dilation was also noted. The procedure was aborted due to risk of precipitating further bleeding and causing perforation. An emergent CT scan revealed hepatosplenomegaly with prominent hepatic veins. The inferior vena cava and common iliac veins were markedly dilated. Walls of the recto-sigmoid and urinary bladder were tremendously thickened and had multiple calcified phleboliths. Scattered varicosities were also seen throughout the fatty tissue of the retroperitoneum. X-ray showed soft tissue hypertrophy on the lateral aspect of the femur and proximal portion of the lower leg. The constellation of findings including port wine stain, venous abnormalities, and unilateral limb hypertrophy were consistent with the diagnosis of KTS.

Results: Bleeding subsided spontaneously and was accompanied by a gradual rise in HB to 9.4g/dL.

Conclusion: KTS is a nonhereditary congenital disorder in which GI involvement may lead to life threatening bleeding. It can often be misinterpreted as internal hemorrhoids, as in our patient. The associated hemangiomas may sequestrate platelets leading to consumptive coagulopathy further worsening the bleeding. Melena with heptosplenoemgaly in our patient may indicate elevated portal venous pressure and gastric varices due to underlying vascular abnormalities. Conservative management and iron supplementation may be sufficient in those having occasional non-life threatening bleeding. Transfusion dependency and life threatening bleeding episodes necessitate definitive surgical therapy. Debilitating disease localized to the colon can be treated by resection of the involved segment and either a colo-anal anastomosis or permanent colostomy. Endoscopic laser therapy using argon and Nd:YAG lasers may be useful in localized hemangiomas and post-operative residual disease. Vascular embolization can be considered if a distinct bleeding site is encountered with visceral angiography.
A RARE CASE OF THYMOID ASSOCIATED AUTOIMMUNE ENTEROPATHY

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Purpose: A 61-year-old female with history of bronchiectasis and resection of benign thymoma presented to The Mount Sinai Hospital with severe weight loss and malnutrition. The evaluation of obscure GI bleeding can be a challenging task for the gastroenterologist. The majority of cases arise from the small bowel. Its free intraperitoneal location, extensive length, and vigorous contractility make the diagnosis of bleeding difficult. The etiology of obscure bleeding is dependent on the patient’s age. In patients under the age of 40, the most common cause is tumors. While intraluminal extension of small bowel tumors may cause symptoms of obstruction, such tumors may also extend extraluminally into the peritoneum and be missed on VCE. Magnetic resonance imaging provides many unique advantages and properties over other imaging modalities to include enhanced visualization of soft tissues without superimposition of surrounding structures. The ability to screen for mural and extramural involvement and the lack of exposure to ionizing radiation.

Conclusion: MRE may have a role in the evaluation of patients with obscure GI bleeding and should be considered as an alternative option, especially in those under the age of 40 in whom no source can be clearly identified.

A CASE OF OBSCURE GASTROINTESTINAL BLEEDING SECONDARY TO A SMALL BOWEL TUMOR DETECTED BY MAGNETIC RESONANCE ENTEROGRAPHY


Purpose: Observe gastrointestinal (GI) bleeding creates a diagnostic challenge for gastroenterologists. Modern imaging techniques improve the detection and characterization of small bowel tumors and provide important guidance for treatment options.

Methods: A 28 year-old woman presented with symptomatic anemia. She denied abdominal pain, melena or hematemesis. Physical examination revealed a remarkable and showed no signs of NSAID's. Her admission was normal except for a positive FOBT. Initial laboratory values indicated a hemoglobin level of 3.8 g/dl (normal 12-16 g/dl). Upper and lower endoscopy with ileal intubation failed to reveal a bleeding source. Video capsule endoscopy (VCE) demonstrated red blood in the small intestinal lumen 5 hours after swallowing the pill without an apparent source. She subsequently underwent a Meckel’s scan and RBC scintigraphy; both were negative studies. A Magnetic Resonance Enterography (MRE) was performed which revealed a 2.9 cm x 2.3 cm distal ileal mass. While Meckel’s scan was consistent with a true diverticulum, the mass was predominantly extramural. She underwent successful laparoscopic resection of the tumor, which stained strongly for C117 (c-kit) consistent with a diagnosis of gastrointestinal stromal tumor.

Results: The evaluation of obscure GI bleeding can be a challenging task for the gastroenterologist. The majority of cases arise from the small bowel. Its free intraperitoneal location, extensive length, and vigorous contractility make the diagnosis of bleeding difficult. The etiology of obscure bleeding is dependent on the patient’s age. In patients under the age of 40, the most common cause is tumors. While intraluminal extension of small bowel tumors may cause symptoms of obstruction, such tumors may also extend extraluminally into the peritoneum and be missed on VCE. Magnetic resonance imaging provides many unique advantages and properties over other imaging modalities to include enhanced visualization of soft tissues without superimposition of surrounding structures. The ability to screen for mural and extramural involvement and the lack of exposure to ionizing radiation.

Conclusion: MRE may have a role in the evaluation of patients with obscure GI bleeding and should be considered as a diagnostic option, especially in those under the age of 40 in whom no source can be clearly identified.

HYPOCUPREMIA: A RARE CAUSE OF GASTROJEJUNAL BYPASS-ASSOCIATED MYELOPERNEUROPATHY

2008 ACG/AstraZeneca Clinical Vignette Award

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Purpose: While the mounting number of gastric bypass surgeries for the treatment of morbid obesity is increasing, very few cases of nutritional deficiencies must be recognized. A 45 year old white female underwent a Roux-en-Y gastric bypass for morbid obesity six years prior to presentation and complained of 15 months of progressive symptoms of lower extremity paresthesias, dysesthesias, and weakness. She had no other significant past medical or surgical history. On neurologic examination, the patient demonstrated a wide-based gait and a decreased tandem walk. Examination of her lower extremities demonstrated a bilateral absence of vibratory perception, decreased pin-prick to her ankles, strength of 4+ to 5 and spastic quadriiceps, and moderate stretch reflexes. A serum copper of 24 ug/dl (normal 80-150), ceruloplasmin of 9 mg/dl (normal 22-58) were demonstrated. Concurrent with her neurologic deficits, the patient had episodes of anemia and neutropenia, which at their nadirs, were 9.2 g/dl (normal 12-16), 16.1 x 10^6 (normal 30-80) and 4.1 K/cumm (normal 4.5-11), respectively. Homocysteine, vitamin B12, ferritin and methemalbumin levels were normal. Upper endoscopy identified no abnormalities and biopsies of the small intestine were negative for celiac sprue. A thoracic spine MRI demonstrated a minimally increased T2 signal intensity in the cervical spinal canal from T4 to T7. The patient was treated through an oral preparation of elemental copper at 2 mg/day, which halted the progression of the patient’s neurologic symptoms and resulted in the complete resolution of her anemia and neutropenia within 2 months. She remains stable after follow up.

Conclusion: Copper is absorbed in the stomach and proximal small intestine; as a result, gastrointestinal bypass predisposes patients to copper deficiency. Since the recognition of hypocupremia after gastric bypass as a cause of myeloneuropathy, 15 cases have been reported in the literature with a further smaller proportion of patients demonstrating concomitant hematologic disturbances. The aim of this report is to raise the index of suspicion for hypocupremia in post gastric bypass patients, who present with either neurologic or hematologic abnormalities related to copper deficiency.

P501

SMALL BOWEL MRI DIAGNOSIS OF MECKEL’S DIVERTICULUM


Purpose: Meckel’s diverticulum(MD), occurring in 2% of the population, is the most common congenital abnormality of the GI tract. Small bowel MRI(SMBRI) is an emerging imaging modality that allows for transmural evaluation without ionizing radiation. We present a case of MD diagnosed by SMBRI.

Methods: Case: 17 year old man admitted with lower abdominal pain and maroon stools for the past evening. The patient reported a history of anemia but denied any previous bleeding. Physical examination revealed orthostatic hypotension, benign abdomen and red blood in rectal vault without hemorhoids or fissures. Hemoglobin was 5.1 Gm/dl with iron deficiency, MCV-62FL and MCHC-26. Following vomiting episode, blood transfusion revealed maroon stools. Cecal intubation revealed a 6.7 cm diverticulum from the ileocecal valve consistent with the distal small bowel(Figure).
Conclusion: MD, a remnant of the omphalomesenteric duct, is typically diagnosed before age ten due to complications. Hemorrhage is the most common presentation of MD in children. Adults typically present with obstruction or diverticulitis. The lifetime risk of developing complications from MD is cited as 6%, and controversy exists whether this risk decreases with advancing age. Giant MD are greater than 6cm in diameter. MD are composed of all layers of the ileal wall and heterotopic tissue is present in half of resected specimens. Gastric mucosa(GM) is found in 50% and pancreatic tissue (PT) in 5-16% of resected specimens. Acidic secretions from heterotopic GM and alkaline secretions from heterotopic PT result in mucosal ulcera- tion. EC-96m pertectinuate scan with a sensitivity of 75% is the best imaging modality for diag- nosis. SBMRI has been advocated for evaluation of submucosal and serosal-mesenteric in- volvement of CD. Interestingly, a higher prevalence of MD in CD patients has been shown. SBMRI is a valuable addition in the diagnostic armamentarium for MD.

Stent Migration Into Pulmonary Artery After TIPS

P062

COMPLICATION OF TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT PLACEMENT: STENT MIGRATION INTO PULMONARY ARTERY


Purpose: Transjugular intrahepatic portosystemic shunt (TIPS) is an accepted treatment for complications of cirrhosis. Common complications of TIPS include stenosis of the stent and he- patic encephalopathy. An infrequent complication is stent migration into the portal vein or right atrium. Reported in 2.9% of cases in the literature. We report a rare case of stent migration into the pulmonary artery after TIPS.

Methods: A 50 year-old man with Child-Pugh class C, MELD score of 19, alcoholic cirrhosis presented to an outside hospital with ascites and esophageal variceal bleeding refractory to band ligation. He underwent a successful TIPS placement with a nitinol (Zilver) stent. Six weeks later, the patient presented with recurrent ascites. Evaluation of the TIPS revealed a portosystemic gradient of 22 mm Hg and narrowing in the hepatic venous end of the stent. An- gioplasty of the stent was performed followed by placement of a second nitinol (Zilver) stent, resulting in a lowering of the gradient to 12 mm Hg. One week later, the patient was trans- ferred to our center for liver transplant evaluation.

Results: A routine chest x-ray demonstrated the stent projecting over the pulmonary hilum. Pulmonary angiogram confirmed the stent to be in the pulmonary artery. Based on the orien- tation of the stent in the pulmonary artery, removal was not attempted due to the high risk of pulmonary artery perforation. Subsequent chest x-rays showed stable stent position. The pa- tient continued to remain asymptomatic.

Conclusion: An infrequent complication of TIPS is stent migration. Our case of pulmonary ar- tery involvement has been rarely described. Technical aspects of stent placement, such as inap- propriate size or type, or inadequate overlap, may contribute to the likelihood of stent migra- tion.

Graft Versus Host Disease After Liver Transplant

P063

GRAFT VERSUS HOST DISEASE AFTER LIVER TRANSPLANTATION

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Purpose: Graft versus host disease (GVHD) is most commonly seen after allogeneic bone mar- row transplantation. We present a rare case of GVHD occurring after liver transplantation.

Methods: A 66-year-old man with non-alcoholic fatty liver disease presented with fever and dy- suria one month after undergoing an orthotopic liver transplant (OLT). He was treated with levofloxacin for a presumed urinary tract infection, but continued to have fevers. Subsequently, the patient developed pancytopenia, with a WBC of 1.24 x 10^3/mL, hemoglobin of 8.3 g/dL, and platelet count of 19 x 10^3/mL. Two days after admission, he developed a generalized ery- thematic rash with violaceous macular skin eruption on his back and lower extremities. Punch biopsy of the skin lesions demonstrated lymphocytic infiltrates and basal epidermal cell vac- uolization consistent with GVHD. He received high-dose steroids followed by three doses of basiliximab (20 mg) and one dose of daclizumab (16.5 mg). Antimicrobial prophylaxis was ini- tiated with voriconazole, acyclovir, aztreonam, and daptomycin. G-CSF was administered for neutropenia.

Results: The patient’s fever, rash, and diarrhea transiently improved, though he remained pan- cytopenic. Despite antimicrobial prophylaxis, the patient developed an influenza pneumonia requiring intubation. Oseltamivir was initiated but he subsequently suffered a cardiopul- monary arrest and expired.

Conclusion: The incidence of GVHD after OLT is estimated to be 1-2% based on case series, but the mortality is quite high at 85%. GVHD in this population is thought to occur when \( T_{10}^{+} \) donor lymphocytes within the liver graft successfully mount an attack before the recipi- ent is able to reject the organ. Diagnosis of GVHD can often be made on biopsy of affected or- gans (skin, GI tract, bone marrow), but if biopsy is non-specific, HLA typing can be performed for confirmation. Risk factors for the development of GVHD after OLT are not well eluci- dated but may include closely matched HLA status, older age of the recipient, and relative im- munodeficiency of the recipient. Treatment protocols have not been standardized, but have in- cluded modification of immunosuppression, corticosteroids, anti-lymphocyte agents, and interleukin-2 antibodies. As most patients succumb to death from sepsis, prevention of infec- tion with antimicrobial prophylaxis is of the utmost importance. Clinicians should be aware that GVHD is a rare but serious complication of OLT. Every attempt should be made to diag- nose and treat promptly when symptoms arise.
A 20-year-old previously healthy fisherman presented with one week of asymptomatic jaundice. He denied any past medical or family history, and denied use of medications, alcohol, drugs, or supplements. He consumed fresh fish up to three times per week for years and mentioned that he was exposed to permanent marker ink. Vital signs and physical exam were unremarkable except for jaundice. Labs revealed normal CBC and BMP. LFT’s were AST 2306, ALT 288, TP 5.2, Albumin 2.6, TB 31.3, DB 24.3. INR was 1.3 with PT of 13.8. Urine drug screen, drug screen of the liver, and liver enzymes were normal.

Methods: Other labs were normal including infection (Hepatitis A, B, and C, HIV, EBV, CMV, HSV), iron and TIBC, autoimmune markers (ANA, AMA, anti-smooth muscle antibody, and anti-centromere antibody). STS and liver biopsies were negative.

Conclusion: This case presents the dilemma of idiopathic fulminating hepatic failure in identifying the cause and deciding when transplant is warranted. FHF carries a high mortality rate and affects up to 2,000 person per year. 20% of cases are attributed to idopathic causes, likely unknown environmental or infectious etiologies. Despite extensive workup, no cause was found. Elevated urine copper levels are found in Wilson disease but also in any disease with extensive hepatic cellular necrosis. Other hepatotoxins include mercury in fish, microcytin found in blue green algae, toluene or xylene found in permanent marker, or drugs such as MDMA (ecstasy). The patient later admitted he may have been exposed to MDMA. This drug is not included in standard urine drug screening. This case also demonstrates that clinical judgment is important in determining candidacy for transplant. Although King’s College criteria were not fulfilled, liver biopsy confirmed extensive necrosis. The advent of orthotopic liver transplantation has reduced mortality of FHF, but survival at 1 year is still less than 80%. Our patient’s worsening coagulopathy and associated high mortality rate warranted emergent transplant which most likely saved this fisherman’s life.

A RARE CASE OF SPONTANEOUS CRYPTOCOCCAL PERITONITIS

A. Thun, MD, K. Ransbrahimakul, MD, D. Do, MD, V. Medi, MD, C. L. Brown, MD, MD

Purpose: A 63 y/o HIV-negative Latino male with decompensated cirrhosis due to HCV, underwent allogeneic stem cell transplantation after failing chemotherapy. We present a rare case of an adult with a mitochondrial enzyme disorder and concurrent hepatitis C, with subsequent rapid acceleration to cirrhosis. Case Report: A 35 year old male was referred to us after work up of a 5 year history of persistent nausea and vomiting revealed elevated transaminases and hepatitis C genotype 2. Other symptoms included severe myalgias, episodic confusion, and fasting hypoglycemia. Laboratory studies revealed the following: Total bilirubin 10.8 mg/dl, alkaline phosphatase 184 U/L, AST 529 U/L, ALT 906 U/L, INR 0.9, glucose 6 mg/dl, albumin 3.4 g/dL and LK 132 IU/L. Serologic studies for additional liver disorders were unremarkable. Liver biopsy revealed chronic hepatitis C, grade 2, stage 2, and steatohepatitis. Additional work-up for his symptoms including EGD, colonoscopy, and ultrasound were unremarkable. Metabolic testing revealed reduced carnitine palmitoyl transferase II (CPT II) in cultured skin fibroblasts, consistent with homozgyous CPT II deficiency. He was placed on a low-fat, high carbohydrate diet with some clinical improvement. Interferon therapy for hepatitis C was unsuccessful. He rapidly progressed from stage II fibrosis to cirrhosis within 2 years, subsequently requiring liver transplantation.

Conclusion: We present a patient with a rare deficiency of the mitochondrial enzyme CPT II and concurrent hepatitis C, genotype 2, with subclinical mitochondrial enzyme deficiency. In the context of hepatitis C, this patient presented with subclinical mitochondrial enzyme deficiency which was likely the cause of his emesis and may have contributed to the steatosis and rapid progression to cirrhosis. Subclinical mitochondrial enzyme deficiencies should remain in the differential diagnosis for steatosis and for recurrent nausea and vomiting.

SUBMAXISSIVE HEPATIC NECROSIS CAUSED BY COXSACKIE A9 VIRUS IN A STEM CELL TRANSPLANT RECIPIENT

D. Vigne, MD, J. Feagans, MD, S. Haque, MD, H. Safiul, MD, S. Joshi, MD

Purpose: Background: Liver diseases are common after bone marrow transplant, the most common being graft versus host disease (GVHD) and hepatotoxicity due to drugs. Viral hepatitis are less common, usually caused by reactivation of or new infection with hepatitis A, B, C or herpesviruses. There are few descriptions of Coxsackie hepatitis in the literature. We report a patient who developed submassive Coxsackie hepatitis eight months following allo-genic stem cell transplantation. Case Report: A 54 year-old male with non-Hodgkin’s lymphoma underwent allogeneic stem cell transplantation after failing chemotherapy. Immunosuppressive drugs and prophylactic antimiobiotics and antivirals, including acyclovir, had been discontinued for two months when the developed flu like symptoms, loose stools, painful oral apthous ulcers, jaundice, a macrouloparous rash on the chest and abdomen, and nondiabetic hyperglycemia. Serum alanine (ALT) and aspartate (AST) aminotransferases were elevated to 1108 U/L and 1160 U/L, respectively, total bilirubin was 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus- trated cirrhosis and massive ascites. Ascites fluid contained only 67 WBC/mm3 with only 2% neutrophils. On hospital day 4, blood exam showed: WBC 18.8 x 10^9/L, platelets 108 x 10^9/L, total bilirubin of 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus- trated cirrhosis and massive ascites. Ascites fluid contained only 67 WBC/mm3 with only 2% neutrophils. On hospital day 4, blood exam showed: WBC 18.8 x 10^9/L, platelets 108 x 10^9/L, total bilirubin of 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus- trated cirrhosis and massive ascites. Ascites fluid contained only 67 WBC/mm3 with only 2% neutrophils. On hospital day 4, blood exam showed: WBC 18.8 x 10^9/L, platelets 108 x 10^9/L, total bilirubin of 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus- trated cirrhosis and massive ascites. Ascites fluid contained only 67 WBC/mm3 with only 2% neutrophils. On hospital day 4, blood exam showed: WBC 18.8 x 10^9/L, platelets 108 x 10^9/L, total bilirubin of 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus- trated cirrhosis and massive ascites. Ascites fluid contained only 67 WBC/mm3 with only 2% neutrophils. On hospital day 4, blood exam showed: WBC 18.8 x 10^9/L, platelets 108 x 10^9/L, total bilirubin of 11.3, AST 111, and ALT 46. Urine drug screen was negative. A CT abdomen illus-
in patients undergoing bone marrow transplantation vary in severity from mild viral enteritis to severe fatal myocarditis. Hepatic involvement with Coxsackie infection has been reported, however, as massive liver failure increases in frequency documented in a stem cell transplant recipient. This case illustrates the importance of considering Coxsackie viruses as etiologic agents when evaluating a patient with hepatitis after a bone marrow transplant. Treatment remains largely supportive but acyclovir can be used to prevent fulminant transformation of the disease.

P610
GIANT FOCAL NODULAR HYPERPLASIA PRESENTING AS PSEUDO-MIRIZZI SYNDROME
K. Berman, MD, R. Vagapalanchi, MD. Medicine - Gastroenterology, Indiana University, Indianapolis, IN.

Purpose: Focal nodular hyperplasia (FNH) is a relatively rare benign tumor of the liver typically seen in young to middle aged women. It is usually an incidental finding, with most patients being asymptomatic. We describe a previously unreported presentation of a FNH causing a Mirizzi like syndrome.

Methods: An 18 year-old white female presented with two days of right upper quadrant and epigastric pain associated with nausea, vomiting and chills. She had no prior medical history other than eczema and asthma. She denied taking any prescription or over the counter medications including oral contraceptives. Liver biochemistries revealed elevated total bilirubin 2.9 gm/dL, alkaline phosphatase 270 U/L, AST 104 U/L, ALT 171 U/L and a normal alpha fetoprotein. CT with contrast showed gallbladder thickening and a 9.0 x 7.4 cm mass in segment 4 of the liver demonstrating hyper enhancement on arterial phase with a central hypodense stellate focus (Figure 1). An MRI revealed a 9.2 x 7.8 cm mass with a T2 hyperintense central scar with enlarged gallbladder with wall thickening. Finally, a hepatobiliary scan demonstrated radiotracer throughout the liver, prompt gallbladder visualization and a 0% gallbladder ejection fraction. Given the typical radiographic features of FNH seen with the above studies her mass was felt to be FNH presenting with a Mirizzi like syndrome.

Results: Due to the large size of FNH potentially leading to technical difficulty in performing a cholecystectomy, a cholecystectomy tube was placed to allow for gallbladder decompensation. Subsequently, a right sided portal vein embolization was performed to allow left lobe hypertrophy of liver prior to successfully performing a right trisegmentectomy. The resected specimen revealed a 10.4 x 9.5 x 7.6 cm tan, heterogeneous, firm, diffusely nodular, well delineated mass with a central scar abutting the capsule and histology confirmed the presence of FNH. Gallbladder specimen did not reveal choleliths. Her post operative course was uncomplicated.

Conclusion: This is the first case reported of a giant FNH presenting with Pseudo-Mirizzi syndrome.

Figure 1. CT arterial phase showing giant FNH with central stellate scar

P611
GONE (FROM THE PDR) BUT NOT FORGOTTEN: PROPYLTHIOURACIL (PTU)-ASSOCIATED HEPATIC FAILURE (ALF): A CALL FOR LFT MONITORING
J. Primegga, MD, J. H. Lewis, MD. Internal Medicine, Georgetown University, Washington, DC.

Purpose: While no longer listed in the Physicians’ Desk Reference, PTU is still commonly used in the management of hyperthyroidism around the world. Serious complications of PTU include agranulocytosis, vasculitis, and hepatotoxicity. We report a case of PTU-associated ALF in a patient whose liver tests were not monitored while on therapy, reflecting US guidelines written in 1995.

Results: A 19 year old female was diagnosed with Graves’ disease in August 2007 and treated with PTU. Pre-Tx CBC and LFTs were normal, but no further LFTs were obtained. Three months later she presented with nausea, vomiting, abdominal pain and jaundice. LFTs now revealed a total bilirubin 6.5 mg/dL, AST 1747 IU/L and ALT 1589 IU/L. After 6 days at the outside hospital, she was transferred in acute liver failure with coagulopathy and stage II encephalopathy. Liver transplant evaluation was promptly initiated and she was listed as status 1. PTU was the only medication she had taken and all serologic, autoimmune, and metabolic studies were negative. She demonstrated rapid clinical deterioration while awaiting transplant, requiring intubation and CNS pressure monitoring. On our hospital day 7, she underwent orthotopic liver transplant, but succumbed to tonsillar herniation immediately after surgery. Pathology from her explanted liver revealed masked necrosis and fibrosis, consistent with drug induced liver injury (DILI) (Figure 1). ALF from non-acetaminophen DILI often has a poor prognosis with a mortality rate as high as 75%. PTU-associated hepatotoxicity has been a well-recognized phenomenon in the clinical literature for >50 years. However, as deaths related to PTU DILI are rare, routine monitoring of LFTs was considered unnecessary in national thyroid society guidelines, although monitoring WBC levels was advised (JAMA 1995;273:908).

Conclusion: Given the wide spectrum of PTU related DILI ranging from asymptomatic elevations in ALT to fatal ALF, we agree with the advice to obtain baseline and surveillance LFTs to prevent irreversible liver injury as is being recommended by several non-US groups (Am J Gastro 2001:96:165), and call for a reappraisal of LFT monitoring guidelines in the US.

P612
HEPATIC MANIFESTATIONS OF OVARIAN HYPERSTIMULATION SYNDROME
A. A. Khan, MD, V. Mudanuri, MD, M. G. Mutchnick, MD, E. Pauchec, MD.
Gastroenterology, Wayne State University, Detroit, MI.

Purpose: Ovarian hyperstimulation syndrome (OHSS) is a rare but serious complication of in-vitro fertilization and iatrogenic ovarian stimulation. Although OHSS has been reported widely in the literature, there is scant data about the hepatic manifestations of OHSS. Awareness of liver functions tests first reported in 1988 and may be seen in 30-40 % of patients. Our case is unique because it is the second reported case with very high aminotransferase levels and a favorable outcome.

Methods: Case Report: We report a 39-year-old woman who presented with dehydration, decreased urine output, nausea, vomiting, abdominal distension, pedal edema and weight gain 10 days after ovulation induction (using gonadotroph and ménopause). She had a history of recurrent miscarriages in alcoholic fatty liver disease (NAFLD) with normal liver enzymes and no pharmacology. CT scan showed pelvic masses and a history of polycystic ovary syndrome (PCOS). Physical exam revealed massive ascites and right sided pleural effusion. Patient's liver enzymes have always been within the normal range.

Results: In 23 day hospital stay a gradual rise in liver enzymes was noted. AST showed an increase from 48 to 1132 units/L and ALT increased from 40 to 1064 units/L. Alkaline phosphatase, bilirubin and prothrombin time was normal. Albumin decreased from 2.7 gm/dl to 1.4 gm/dl. All other causes of hepatic dysfunction were ruled out and treatment was directed to major manifestations of OHSS including ascites, hypoalbuminemia and hypoproteinemia. The liver enzymes started trending down and patient showed significant clinical improvement. The patient was discharged in stable condition with viable pregnancy with outpatient follow up.

Conclusion: Conclusion Increased awareness of the hepatic manifestations of ovarian hyperstimulation syndrome is important as very few cases of this entity have been described thus far. All patients undergoing in-vitro fertilization should have close monitoring of liver functions to prevent such complications.

P613
RESOLUTION OF PORTAL HYPERTENSION FOLLOWING STEROID THERAPY FOR HEPATIC SARCOIDOSIS
A. Goel, MD, J. Prabhakar, MBBS, P. S. Kanth, MD. Gastroenterology, Mayo Clinic Rochester, Rochester, MN.

Purpose: Granulomatous diseases including sarcoidosis are an unusual cause of pre-sinusoidal portal hypertension. We present a case of a patient with both Hepatitis C and sarcoidosis who had significant improvement in portal hypertension following steroid therapy.

Methods: A 51 year old Caucasian woman was diagnosed in 2001 with chronic Hepatitis C during a workup for elevated liver enzymes. She was offered treatment with interferon and Ribavirin but she refused. In 2002, she developed peripheral edema, severe anemia, grade 2 esophageal varices and significant splenomegaly. A liver biopsy showed grade 2 hepatitis with stage 3 fibrosis. In 2004, she developed jaundice for the first time and had worsened splenomegaly with secondary pancytopenia. She had gastric varices and grade 3 esophageal varices which required banding. She had never developed encephalopathy. She was offered a TIPS procedure and splenectomy but she came to our institution in 2005 for a second opinion. Laboratory studies showed pancytopenia, mildly elevated liver enzymes, normal albumin and INR. Contrast CT scan showed extensive abnormal lymphadenopathy in the abdomen, massive splenomegaly, extensive portosystemic varices, mild ascites, normal appearing liver and a spontaneous spleno-renal shunt. Her previous biopsy was reviewed at our institution and showed multiple large granulomas consistent with sarcoidosis along with stage 3 fibrosis. Transthoracic echocardiography was repeated and confirmed the findings. Hepatic venogram showed a hepatic venous pressure gradient (HVPG) of 19 mm Hg. Serum angiotensin converting enzyme level was normal. Bone marrow biopsy showed hypocellularity with no evidence of lymphoma. A diagnosis of portal hypertension secondary to sarcoidosis of the liver was made because the fibrosis in the liver was not considered advanced enough to explain the severity of portal hypertension.

Results: Prednisone 60 mg a day was started to treat the sarcoidosis and was slowly tapered. Six months later, a repeat hepatic homodynamic study showed HVPG of 7 mm Hg, while still on Prednisone 20 mg a day. CT showed resolution of ascites and repeat endoscopy showed no esophageal or gastric varices. In one year, HVPG decreased further to 5 mm Hg. Currently, she is on Prednisone 2.5 mg a day without any further worsening of her portal hypertension.

Conclusion: This is a patient with non cirrhotic stage Hepatitis C who had portal hypertension out of proportion to her chronic viral liver disease. She was found to have extensive sarcoidosis in the liver which ultimately was treated with steroids and the portal hypertension resolved. This report supports the use of steroid therapy in patients with sarcoidosis who have portal hypertension.
Intrahepatic portosystemic venous shunts are rare and not well recognized. We report the case of a patient with a spontaneous intrahepatic portosystemic venous shunt.

Methods: A 48 year old Hispanic woman was referred for a 1.6 cm enhancing lesion of unclear etiology in the right lobe of the liver identified on a CT scan that was performed by her primary care physician for evaluation of her abdominal pain. At her initial office visit she reported mild abdominal discomfort. Physical exam was revealed tenderness in her right upper quadrant. Laboratory evaluation was unremarkable, including normal LFTs, a normal Alpha-fetoprotein, and negative viral hepatitis serologies. MRI of the liver was performed and demonstrated a vascular malformation in the right lobe of the liver being fed by a branch of the portal vein and drained by a tributary of the hepatic vein. This lesion is compatible with a rare spontaneous intrahepatic portosystemic venous shunt.

Results: Spontaneous intrahepatic portosystemic venous shunts are rare, described mostly in small series or case reports. More commonly these shunts are acquired in the setting of trauma or developed in chronic liver disease, and are generally due to an abnormal communication between the portal circulation and an extraportal systemic vein. The clinical significance and treatment of these shunts remains controversial. Instances of intrahepatic portosystemic venous shunts causing encephalopathy and large foci of fatitura adversely affecting systemic hemodynamics as well as causing liver fibrosis from longstanding diversion of portal flow have been reported. Treatment options include conservative management, surgery, or transcatheter embolization in symptomatic patients.

Conclusion: We report a case of an asymptomatic spontaneous intrahepatic portosystemic venous shunt. The long term sequelae of this anatomic abnormality are not well described.

SPONTANEOUS INTRAHEPATIC PORTOSYSTEMIC VENOUS SHUNT

Poster Abstracts – Monday, October 6

P614

Hepatic sarcoidosis covers a broad spectrum from asymptomatic hepatic granulomatous disease to liver failure. Extraportal involvement occurs in 50% of cases and can be the major manifestation of the disease.

Methods: Case report.

Results: A 40-year-old black man presented with malaise, abdominal pain, jaundice, dark urine, and pruritis of 3 weeks duration. The patient lost 25 lbs and reported intermittent melena. A gastric emptying scan was normal. Gastroparesis is a chronic disorder of delayed gastric emptying and has a wide differential diagnosis, including gastroenteritis, diabetes, Parkinson’s disease, amyloidosis, and cancer.

Conclusion: Hepatic sarcoidosis is a rare cause of abdominal pain and gastroparesis. High index of suspicion is necessary for diagnosis which requires multiple gastrointestinal biopsies, particularly for patients that present with multi-systemic symptoms.

Lyme disease presenting with gastroparesis and cranial nerve palsy

Poster Abstracts – Monday, October 6

P617

Purpose: We report a case of an asymptomatic spontaneous intrahepatic portosystemic vascular malformation. The long term sequelae of this anatomic abnormality are not well described.

Methods: Case report.

Results: A previously healthy 62-year-old male from Eastern Pennsylvania was admitted to the hospital with 10 weeks of “hand-like” upper abdominal pain associated with nausea, constipation, post-prandial bloating, early satiety and a 30-lb weight loss. These symptoms were preceded by an ovoid, non-pruritic, non-vesicular rash on his right gluteus maximus that spontaneously resolved in 2 weeks. A prior extensive workup including upper and lower endoscopy, abdominal pelvic CT and MRIMRA, small bowel series, and abdominal ultrasound was unrevealing. Supportive medications included tramadol, hydroxyzine, colace, polyethylene glycol, and psyllium. Physical exam on admission was significant for mild right upper quadrant tenderness.

Laboratory testing revealed an elevated ALT of 53 IU/L (normal < 40) and CRP of 1.4 mg/dL (normal < 0.80). A gastric emptying scan was performed with an emptying half time of 90 minutes. It significantly delayed his bowel transit, but his symptoms improved with decreased faecal droop. Brain MRI was normal. Lumbar puncture revealed a lymphocytic, elevated protein, and elevated Lyme IgG titers. Elevated Serum Lyme antibody was confirmed by Western blot. The patient was diagnosed with early disseminated Lyme disease, complicated by cranial nerve palsy and gastroparesis.

Conclusion: Lyme disease is the most common tick-borne disease in the US and is caused by the spirochete Borrelia burgdorferi, which can elicit a multisystem inflammatory response and is often accompanied by the hallmark rash, erythema migrans. The most common gastrointestinal symptom of Lyme disease is subclinical hepatitis, although dysmotility syndromes including gastroparesis and intestinal pseudo-obstruction have been reported. While the pathogenesis is not completely understood, gastroparesis secondary to Lyme disease may result from an inflammatory neuropathy of the enteric nervous system by direct invasion of B.burgdorferi or an indirect, cell-mediated inflammatory response. This case highlights an unusual presentation of a relatively common (regional) disease.

AN UNCOMMON CAUSE OF ABDOMINAL PAIN

Poster Abstracts – Monday, October 6

P616

Purpose: A 48 year old Hispanic woman was referred for a 1.6 cm enhancing lesion of unclear etiology in the right lobe of the liver identified on a CT scan that was performed by her primary care physician for evaluation of her abdominal pain. At her initial office visit she reported mild abdominal discomfort. Physical exam was revealed tenderness in her right upper quadrant. Laboratory evaluation was unremarkable, including normal LFTs, a normal Alpha-fetoprotein, and negative viral hepatitis serologies. MRI of the liver was performed and demonstrated a vascular malformation in the right lobe of the liver being fed by a branch of the portal vein and drained by a tributary of the hepatic vein. This lesion is compatible with a rare spontaneous intrahepatic portosystemic venous shunt.

Results: Spontaneous intrahepatic portosystemic venous shunts are rare, described mostly in small series or case reports. More commonly these shunts are acquired in the setting of trauma or developed in chronic liver disease, and are generally due to an abnormal communication between the portal circulation and an extraportal systemic vein. The clinical significance and treatment of these shunts remains controversial. Instances of intrahepatic portosystemic venous shunts causing encephalopathy and large foci of fatitura adversely affecting systemic hemodynamics as well as causing liver fibrosis from longstanding diversion of portal flow have been reported. Treatment options include conservative management, surgery, or transcatheter embolization in symptomatic patients.

Conclusion: We report a case of an asymptomatic spontaneous intrahepatic portosystemic venous shunt. The long term sequelae of this anatomic abnormality are not well described.

Hepatic sarcoidosis mimicking metastatic cancer

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P615

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Poster Abstracts – Monday, October 6

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Conclusion: Hepatic sarcoidosis is a rare cause of abdominal pain and gastroparesis. High index of suspicion is necessary for diagnosis which requires multiple gastrointestinal biopsies, particularly for patients that present with multi-systemic symptoms.

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Conclusion: Lyme disease is the most common tick-borne disease in the US and is caused by the spirochete Borrelia burgdorferi, which can elicit a multisystem inflammatory response and is often accompanied by the hallmark rash, erythema migrans. The most common gastrointestinal symptom of Lyme disease is subclinical hepatitis, although dysmotility syndromes including gastroparesis and intestinal pseudo-obstruction have been reported. While the pathogenesis is not completely understood, gastroparesis secondary to Lyme disease may result from an inflammatory neuropathy of the enteric nervous system by direct invasion of B.burgdorferi or an indirect, cell-mediated inflammatory response. This case highlights an unusual presentation of a relatively common (regional) disease.

New onset ascites: a rare presentation of gastrointestinal stromal tumor (GIST)

Poster Abstracts – Monday, October 6

P618

Purpose: Gastrointestinal Stomal Tumors (GIST) originate from mesenchymal stem cells and have mutation in c-kit tyrosin kinase proto-oncogene. The majority of GIST’s (60% to 70%) arise in the stomach, while 20% to 30% originate in the small intestine and less than 10% in the esophagus, colon, and rectum. GIST’s can rarely occur in extraintestinal sites in the abdomen or pelvis such as the omentum, mesentry, or retroperitoneum.

Methods: A 39 year-old Macedonian male, without significant past medical history, presented to our institution with complaints of increased abdominal girth for 2 months. The patient de-
nied alcohol abuse. Physical examination was unremarkable except for large ascites without stigmata of cirrhosis.

Results: CT scan of abdomen revealed ascites without any other abnormalities. Abdominal paracentesis was performed. Ascitic fluid was grossly hemorrhagic. Analysis of fluid revealed: RBC=42450, WBC=1400 with 5% PMNs, 49% Monocytes, Glucose=68, Protein=3.9 g/dL, albumin=2.3 g/dL, LDH=22 units/L. Liver function tests were normal. A finding of pleural effusion was noted. The ascites profile were within normal limits. A PPD test was positive, but CXR did not show any evidence of TB. Abdominal ultrasound, doppler studies of hepatic and portal veins, EGD and colonoscopy were normal. Imaging of the small bowel by two procedures separated by a septum. Endoscopic findings of HP was more consistent for a gynecologist. His abdomen was soft, tender over the RUQ. There was no obvious organomely or discrete mass. Labs revealed a WBC count 8.3 K/uL, Hgb 12.9 g/dL and platelets 361 K/uL. Amylase, lipase and complete metabolic panel were unremarkable except for albumin 2.8 g/dL and globulin 4.1 g/dL. CT abdomen without contrast showed a 2.8 cm mural mass near the anterior gastric body. Esophagogastroduodenoscopy (EGD) revealed a 3 cm submucosal mass with two small centrally located ulcers in the distal gastric body. Biopsies revealed atypical lymphoid infiltrate suspicious for a lymphoproliferative disorder. Repeat EGD with biopsies was unremarkable for flow cytometry; histology revealed gastric glomus tumor and chronic active H pylori gastritis. Endoscopic ultrasound revealed an oval intramural (subepithelial) heterogenous lesion originating from the muscularis propria (Layer 4) with well defined outer borders and an intact interface between the mass and adjacent structures. Suggesting lack of invasion. Transgastric fine needle aspiration revealed a lesion infiltrated by fluid cells with moderate amounts of cytoplasm amid numerous large vessels. Immunostains were positive for muscle specific actin and vimentin and negative for leukocyte common antigen and chromogranin. Cytopathology and flow cytometry were unremarkable. A diagnosis of gastric glomus tumor and chronic active H pylori gastritis was made. Laparoscopic excision of the 2.5 x 2.3 x 1.9 cm tumor was performed with free margins, three (0/3) negative perigastric lymph nodes and no evidence of vascular invasion. Pathology interpreted as glomus tumor of the stomach. Discussion: Although they may be located anywhere in the body, glomus tumors are most commonly found in the distal peripheral soft tissues of the fingers and toes. Gastric glomus tumors are rare, and generally considered benign solitary neoplasms. However, cases of multiple glomus tumors of the stomach and gastric glomus tumor with liver metastasis have been described and therefore, surgical resection is generally recommended.

Conclusion: The case illustrates a rare presentation of GIST. Extensive work up to date did not reveal any primary tumor in the gastrointestinal tract. The prognosis of this type of presenta- tion remains to be determined. The expression of estrogen receptor may be a promising biomarker for the diagnosis and management of this entity. Further studies are needed to confirm the feasibility of this approach. Gastric Siderosis (Gleeva)® has shown promising results in treating metastatic disease. Based on current evidence, lifelong treatment with this agent is required.
AN UNUSUAL CASE OF AMYLOIDOSIS MASQUERADING AS GASTRIC CANCER

P623

A. Reddy, MD, MPH; J. Alwan, MD; F. Antaki, MD. 1. Gastroenterology, Wayne State University, Detroit, MI; 2. Medicine, Wayne State University, Detroit, MI.

Purpose: Gastrointestinal involvement in amyloidosis is well recognized and involves infiltra-
tion of the muscularis propria with amyloid leading to dysmotility. While the oral cavity, small bowel and rectum are most commonly affected, gastric involvement is rare, more likely to be of lambda subtype, and usually presents with symptoms of gastroparesis. We present a 59 year old male with a recent diagnosis of end-stage renal disease who was evaluated for progressive nausea, vomiting and weight loss. Endoscopy revealed a fungating circumferential mass in the antrum with near complete gastric outlet obstruction, very suspicious for malignancy. Forceps biopsies taken on 2 separate occasions showed an inflammatory process with granulation tissue formation and focal eosinophilic deposition. Congo red staining suggested amyloid material in the deep parts of the biopsies. CT scan showed antral mucosal thickening with luminal narrow-
ing. Due to persistent suspicion for malignancy, the patient was referred for surgery. An antral mass was palpated and antrectomy with Billroth-II gastrojejunostomy were performed. Pathol-
ogy showed infiltration of the muscularis propria with amyloid material. Workup revealed in-
creased kappa light chains in the urine and a monoclonal spike on serum protein electrophore-
sis. Bone marrow analysis confirmed multiple myeloma.

Conclusion: Although gastrointestinal amyloidosis is well known, gastric involvement is un-
common. So far, only two other cases of gastric outlet obstruction from amyloidosis have been
reported. This case illustrates an unusual presentation with gastric outlet obstruction and a mass lesion mimicking malignancy in association with multiple myeloma.

SWEET’S SYNDROME: A CLUE TO GASTRIC CANCER

P625

N. Anand, MD. D. Greenwald, MD. Gastroenterology, Montefiore Medical Center, Bronx, NY.

Purpose: A case of a patient with gastric cancer presenting with Sweet’s syndrome.

Methods: case report; review

Results: A 52 yr old Dominican man, with a history of HTN and PUD, presented to our institu-
tion complaining of nausea, vomiting, abdominal pain and a rash for 3 months. The rash was a
characteristic erythematous rash that had appeared at the base of his neck. The patient underwent an EGD with endoscopic ultrasound, which demonstrated gastric cancer, stage T1N1. A biopsy was done and the pathology was consistent with poorly-differentiated adenocarcinoma. An ex-
ploratory laparotomy revealed diffuse cancer with extension to the peritoneal cavity. In addi-
tion, dermatology was consulted and a biopsy of the rash present on the upper chest revealed Sweet’s syndrome or acute febrile neutrophilic dermatosis. The patient was treated with topical steroids with resolution of the rash. He had a lengthy hospital stay, but ultimately was discharged to follow-up for palliative chemotherapy.

Conclusion: Sweet’s syndrome was originally described in 1964. It now is commonly divided
into classic Sweet’s syndrome and a malignancy-associated form. It appears that about 10-20%
of patients with Sweet’s syndrome have an associated malignancy. Of these, about 85% are as-
sociated with hematologic malignancies and 15% are associated with solid tumors. Sweet’s syn-
drome is characterized by fever, neutrophilic leukocytosis, painful erythematous cutaneous
plaques, neutrophilic infiltration of the dermis, and a rapid therapeutic response to steroids.
The skin lesions typically are tender, gradually enlarge and are located on the upper extremi-
ties, head and neck. The treatment of choice is corticosteroids.

MAKING A STRONG CASE FOR DELAYED GASTRIC EMPTYING

P624

A B. Cummins, MD, MS; L. Nguyen, MD. Gastroenterology, California Pacific Med. Center, San Francisco, CA.

Purpose: A 79 year old Fijian female, was admitted to an outside hospital for progressively worsening shortness of breath over the preceding 6 months, for which she had been treated in-
termittently with oral steroids without relief. She had an extensive work up including CT of the chest which was negative for pulmonary embolism but revealed cystic bronchiectasis. Subse-
quent bronchoscopy showed only nonspecific inflammatory cells. She was thus treated with high
dose IV steroids for cystic bronchiectasis and COPD exacerbation, with no history of tobacco
use. Approximately 1 month into her hospitalization, she developed dysphagia, nausea, vomit-
ing, diarrhea and weight loss. She had an upper endoscopy that showed an esophageal ulcer,
use. Approximately 1 month into her hospitalization, she developed dysphagia, nausea, vomit-
ing, diffuse abdominal pain and malabsorption. In hyper infection syndrome there may be
complete disruption of the mucosal wall, ulcerations, and paralytic ileus. The definitive diagno-
sis is often difficult to make but is usually made on the basis of detection of larvae in the stool.
Treatment is often difficult as well, as S. Stercoralis requires complete eradication to remove
the potential danger of hyper infection and death. Ivermectin is the best studied and currently
recommended for treatment.

A MIMICKER OF CROHN’S DISEASE: LINITIS PLASTICA

P626

E. H. Cho, MD; W. Strum, MD. Gastroenterology and Hepatology, The Scripps Clinic, La Jolla, CA.

Purpose: Linitis plastica is the diffuse type of gastric adenocarcinoma in which the individual
cells infiltrate the gastric wall without forming a discrete mass. It typically presents in younger
patients and portends a poorer prognosis than the intestinal type of gastric adenocarcinoma. We
present a case of metastatic linitis plastica, which was initially misdiagnosed as Crohn’s disease.

Methods: Case report

Results: A 55 year old male presents with pain on defecation, tenesmus, intermittent hema-
tochezia and epigastric abdominal pain. His symptoms began 7 months prior to presentation,
during which time he lost 30 lbs. The patient underwent an upper endoscopy and colonoscopy,
demonstrating gastric mucosal erythema as well as a stricture and area of erythema in the dis-

tal sigmoid. Biopsies of the gastric and colonic mucosa demonstrated “inflammatory changes”. The patient was diagnosed with Crohn’s disease and started on a course of steroids and mesalamine. Despite two months on this regimen, the patient’s condition did not improve and the patient was referred to a tertiary care center. A repeat endoscopy demonstrated a poorly distensible stomach (Fig A) and a loss of rugal folds in the body of the stomach (Fig B). Colonoscopy again demonstrated a stricture in the sigmoid colon. Biopsies from both the stomach and sigmoid colon demonstrated a diffuse, poorly differentiated carcinoma with signet ring cells. A CT scan of the abdomen and pelvis demonstrated diffuse wall thickening of the stomach (Fig C) and the rectum. The patient was diagnosed with linitis plastica with metastases).

Purpose: To support the possible role of H. pylori infection in the development of granuloma-tous gastritis. Case 1: A 25 year old male with no prior medical history presented with epigastric pain. EGD showed diffuse antral erythema with a beetly red appearance of the mucosa. Representative biopsies revealed severe chronic inflammation with scattered non-caseating granulomas. H. pylori organisms were identified. Stains for acid-fast bacilli and fungi were negative. PPD was negative. ESR was normal. CT chest was negative for hilar adenopathy. Patient was given clarithromycin based triple therapy for 14 days and his epigastric pain resolved. EGD repeated 6 weeks later demonstrated severe antral erythema with a nodular appearance. Biopsies revealed a single non-caseating granuloma, chronic inflammation and no H. pylori seen.

Case 2: 64 year old male presented with upper GI bleed. EGD was performed and showed nodular antral mucosa with multiple shallow ulcerated lesions. Biopsies showed marked chronic active gastritis and non-caseating granuloma. H. pylori organisms were identified. Stain for acid-fast bacilli and fungi were negative. CPR, HbA1C and ACE-1 levels in serum were normal. CXR was normal. Patient received clarithromycin based triple therapy for 14 days. EGD repeated 6 weeks later revealed complete healing of the antral ulcerations. Biopsies revealed a single non-caseating granuloma, chronic inflammation, and no H. pylori infection seen. Discussion: Isolated granulomatous gastritis (IGG) is a very rare entity. It refers to an idiopathic chronic granulomatous reaction limited to the stomach. The diagnosis of IGG is made by the exclusion of other granulomatous diseases, such as Crohn’s disease, sarcoidosis, infections (e.g., tuberculosis, histoplasmosis, syphilis), foreign bodies, malignancy, or vasculitis. Miyamoto et al. recently described a possible association of IGG with H. pylori since the granulomatous gastritis resolved in two patients one year after successful eradication of H. pylori. In our cases we observed clinical improvement with H. pylori eradication. However, incomplete resolution of granulomas was noted, possibly due to the short term endoscopic follow up after H. pylori eradication. The natural history and the optimal therapy of IGG have not been yet established.

P627

ZINC-INDUCED HYPOCUPREMIA: A RARE CAUSE OF ANEMIA AND NEUTROPENIA IN THE POST-GASTRIC BYPASS PATIENT

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Purpose: Copper is absorbed in the proximal gastrointestinal tract. A Billroth II operation and neutropenia. His zinc supplements were stopped and an oral copper preparation was initiated. However over the course of 6 months, the patient’s Hgb and ANC declined to 7.7 g/dL and 1000/mm3 respectively.

Methods: Case Report

Results: An 81 year old male with a remote history of severe upper gastrointestinal bleeding related to peptic ulcer disease, necessitating a Billroth II operation 20 years ago, presented with exercise intolerance. The patient had a history of hypertension-related chronic renal disease with a Hgb of 11 g/dL (normal 12-15) and a normal absolute neutrophil count (ANC) at baseline. However over the course of 6 months, the patient’s Hgb and ANC declined to 7.7 g/dL and 0 K/mm3 respectively. Despite treatment with darbepoetin, the patient’s anemia did not improve. A bone marrow biopsy was performed, which demonstrated vacuolated RBC and WBC precursors, characteristic of hypocupremia (Figure 1). Further blood work demonstrated a copper level of 2 ug/dL (normal 60-155) and a ceruloplasmin of 4 mg/dL (normal 22-58). The patient was on zinc supplements since his Billroth II operation. Zinc level was 137 ug/dL (normal 100-200). The patient was diagnosed with zinc-induced hypocupremia as the cause of his anemia and neutopenia. His zinc supplements were stopped and an oral copper preparation was initiated. On two month follow-up, the patient’s Hgb and WBC counts normalized.

Conclusion: Copper is absorbed in the proximal gastrointestinal tract. A Billroth II operation in conjunction with the antagonistic effects of zinc on copper absorption predisposed our patient to hypocupremia, resulting in anemia and neutropenia. Zinc-induced hypocupremia represents a rare condition. Only 25 cases have been described since its first report in 1977. The aim of this case report is to raise awareness of the possible deleterious effects of zinc supplement-ation in the post-gastric bypass patient.

Figure 1

P628

GRANULOMATOUS GASTRITIS IN TWO PATIENTS WITH HELICOBACTER PYLORI INFECTION

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Purpose: To support the possible role of H. pylori infection in the development of granuloma-tous gastritis. Case 1: A 25 year old male with no prior medical history presented with epigastric pain. EGD showed diffuse antral erythema with a beetly red appearance of the mucosa. Representative biopsies revealed severe chronic inflammation with scattered non-caseating granulomas. H. pylori organisms were identified. Stains for acid-fast bacilli and fungi were negative. PPD was negative. ESR was normal. CT chest was negative for hilar adenopathy. Patient was given clarithromycin based triple therapy for 14 days and his epigastric pain resolved. EGD repeated 6 weeks later demonstrated severe antral erythema with a nodular appearance. Biopsies revealed a single non-caseating granuloma, chronic inflammation and no H. pylori seen.

Case 2: 64 year old male presented with upper GI bleed. EGD was performed and showed nodular antral mucosa with multiple shallow ulcerated lesions. Biopsies showed marked chronic active gastritis and non-caseating granuloma. H. pylori organisms were identified. Stain for acid-fast bacilli and fungi were negative. CPR, HbA1C and ACE-1 levels in serum were normal. CXR was normal. Patient received clarithromycin based triple therapy for 14 days. EGD repeated 6 weeks later revealed complete healing of the antral ulcerations. Biopsies revealed a single non-caseating granuloma, chronic inflammation, and no H. pylori infection seen. Discussion: Isolated granulomatous gastritis (IGG) is a very rare entity. It refers to an idiopathic chronic granulomatous reaction limited to the stomach. The diagnosis of IGG is made by the exclusion of other granulomatous diseases, such as Crohn’s disease, sarcoidosis, infections (e.g., tuberculosis, histoplasmosis, syphilis), foreign bodies, malignancy, or vasculitis. Miyamoto et al. recently described a possible association of IGG with H. pylori since the granulomatous gastritis resolved in two patients one year after successful eradication of H. pylori. In our cases we observed clinical improvement with H. pylori eradication. However, incomplete resolution of granulomas was noted, possibly due to the short term endoscopic follow up after H. pylori eradication. The natural history and the optimal therapy of IGG have not been yet established.

P629

AZATHIOPRINE-INDUCED EOSINOPHILIC LUNG NODULES IN A PATIENT WITH CROHN’S DISEASE

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Purpose: Case Report of an unusual case of azathioprine induced eosinophilic lung nodules in a patient with Crohn’s Disease

Methods: Clinical Vignette

Results: Azathioprine-induced Eosinophilic Lung Nodules in a Patient with Crohn’s Disease

Clinical Vignette

Azathioprine is frequently provided to patients after gastric bypass to prevent zinc-deficiency. We report a case of severe upper gastrointestinal bleeding related to peptic ulcer disease, necessitating a Billroth II operation 20 years ago, presented with exercise intolerance. The patient had a history of hypertension-related chronic renal disease with a Hgb of 11 g/dL (normal 12-15) and a normal absolute neutrophil count (ANC) at baseline. However over the course of 6 months, the patient’s Hgb and ANC declined to 7.7 g/dL and 0 K/mm3 respectively. Despite treatment with darbepoetin, the patient’s anemia did not improve. A bone marrow biopsy was performed, which demonstrated vacuolated RBC and WBC precursors, characteristic of hypocupremia (Figure 1). Further blood work demonstrated a copper level of 2 ug/dL (normal 60-155) and a ceruloplasmin of 4 mg/dL (normal 22-58). The patient was on zinc supplements since his Billroth II operation. Zinc level was 137 ug/dL (normal 100-200). The patient was diagnosed with zinc-induced hypocupremia as the cause of his anemia and neutropenia. His zinc supplements were stopped and an oral copper preparation was initiated. On two month follow-up, the patient’s Hgb and WBC counts normalized.

Conclusion: Copper is absorbed in the proximal gastrointestinal tract. A Billroth II operation in conjunction with the antagonistic effects of zinc on copper absorption predisposed our patient to hypocupremia, resulting in anemia and neutropenia. Zinc-induced hypocupremia represents a rare condition. Only 25 cases have been described since its first report in 1977. The aim of this case report is to raise awareness of the possible deleterious effects of zinc supplementation in the post-gastric bypass patient.
oral or intravenous proton pump inhibitor in patients with peptic ulcer bleeding after successful endoscopic epinephrine injection - a prospective randomized comparative trial

2008 ACG Presidential Poster Award Recipient

Y Hsu, MD; Y. Yang, MD; W. Hsu, MD; H. Wu, MD; H. Lin, MD; Division of Gastroenterology, Department of Internal Medicine, Loutong Po-Hsi Hospital, Yilan, Taiwan, Yilan, Taiwan.

Purpose: We aim to assess the outcomes of oral versus low-dose intravenous proton pump inhibitor after endoscopic injection of epinephrine in patients with peptic ulcer bleeding.

Methods: This is a prospective randomized controlled trial conducted in a medical center in Taiwan. From January 2007 to December 2007, peptic ulcer patients with active bleeding, non-bleeding visible vessels or adherent clots were enrolled after successful endoscopic hemostasis achieved by injection with 10ml diluted epinephrine (1:10,000). They were randomized to receive either oral rabeprazole (RAB, 20 mg twice daily for 3 days) and then 20mg orally once daily for 2 months) or omeprazole (OME, 40 mg intravenous infusion every 12 hours for 3 days, and then 40mg esomeprazole orally once daily for two months). The primary end point was the 14-day rebleeding rate. The hospital stay, volume of blood transfused, number of surgeries performed, and the mortality rates at day 14 were compared as well.

Results: A total of 156 patients were enrolled, with 78 patients allocated in the OME group and 78 in the RAB group. Rebleeding occurred in 12 patients (15.4%) in the OME group and 13 patients (16.7%) in the RAB group within 14 days (p>0.1). The two groups were not different statistically in the hospital stay (mean: 8.5±3.9 days in OME group versus 8.6±3.9 days in RAB group, p=0.1), volume of blood transfusion (mean: 123±1.8ml in OME group versus 115±5ml in RAB group, p=0.1), numbers of patients requiring urgent operation (one patient of each group), and mortality rate (1 patient in OME group and 2 patients in RAB group, p>0.1).

Conclusion: Oral rabeprazole and low-dose intravenous omeprazole are equally effective in preventing rebleeding in patients with high-risk bleeding peptic ulcers after successful endoscopic injection with epinephrine.

Clinical variables of patients at entry to the study

<table>
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<tr>
<th></th>
<th>OME (n=78)</th>
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<tbody>
<tr>
<td>Age (mean, year)</td>
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<td>67.9</td>
</tr>
<tr>
<td>Sex (M/F)</td>
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<td>56/20</td>
</tr>
<tr>
<td>Locations of bleeders</td>
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<tr>
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<tr>
<td>Duodenum</td>
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<td>Endoscopic findings</td>
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<td>2</td>
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<tr>
<td>Oozing</td>
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<td>33</td>
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<tr>
<td>NBV++</td>
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<tr>
<td>Clear</td>
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<td>26</td>
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<tr>
<td>Gastric contents</td>
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<td></td>
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<tr>
<td>Blood</td>
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<td>25</td>
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<tr>
<td>Coffee gloves</td>
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<td>35</td>
</tr>
<tr>
<td>Clear</td>
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<td>23</td>
</tr>
<tr>
<td>No. in shock</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>No. with medical illness</td>
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<td>51</td>
</tr>
<tr>
<td>Mean sizer (cm)</td>
<td>1.06</td>
<td>1.12</td>
</tr>
<tr>
<td>No. with H pylori infection</td>
<td>48</td>
<td>51</td>
</tr>
<tr>
<td>Mean hemoglobin (g/dL)</td>
<td>9.81(3.20-10.48)</td>
<td>10.31(9.83-10.85)</td>
</tr>
</tbody>
</table>

NBV is the abbreviation for non-bleeding visible vessel

* mean (95% confidence interval)

No statistical significance between both groups

Outcomes of patients received oral versus low-dose intravenous proton pump inhibitor

<table>
<thead>
<tr>
<th></th>
<th>OME (n=78)</th>
<th>RAB (n=78)</th>
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</thead>
<tbody>
<tr>
<td>Volume of blood transfusion after therapy (ml)*</td>
<td>1231 (487-19955)</td>
<td>1156 (489-1569)</td>
</tr>
<tr>
<td>No. achieving initial hemostasis</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>No. of rebleeding</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>No. of surgery</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Hospital stay (days)*</td>
<td>8.52 (7.42-9.55)</td>
<td>8.80 (7.32-9.67)</td>
</tr>
<tr>
<td>No. of deaths</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

* mean (95% confidence interval)

No statistical significance between both groups

P630

P631

does trainee involvement in colonoscopy affect cecal intubation and polyp detection rates?

L. Krong, MD; M. A. Cerulli, MD; Division of Gastroenterology and Hepatology, New York Methodist Hospital, Brooklyn, NY.

Purpose: There is an increased interest in endoscopic performance indicators. Currently cecal intubation rates along with adenoma detection rates and colonoscopy withdrawal time are being viewed as such performance indicators. A number of studies have been done to assess factors that could potentially affect these indicators. Factors such as inpatient status, female sex, and immobility, among others, have been associated with decreased cecal intubation rates. Trainee involvement could be another factor affecting quality indicators. There are very few studies that evaluated performance indicators in relation to trainee involvement. AIM: To determine whether trainee involvement affects cecal intubation and polyp detection rates.

Methods: We retrospectively reviewed 6,027 consecutive colonoscopies that were performed on adults by six full-time gastroenterologists between mid-2003 and 2007 at a high-volume endoscopy unit in a large urban hospital. All colonoscopies by trainees were supervised by teaching attendings. For each colonoscopic procedure, trainee involvement, polyp findings, extent of the exam, type of anesthesia, patients’ age, sex, inpatient or outpatient status, were summarized and analyzed using Student t-test and Fischer’s exact tests as indicated. P<0.05 was considered to be significant.

Results: Overall cecal intubation rate was 93%. Trainees participated in 26% of all colonoscopies. Colonoscopies with trainees’ involvement had 94% cecal intubation rate compared with colonoscopies performed by attending gastroenterologists alone, 93%. The difference was statistically insignificant. P=0.4. Trainees had 42% polyp detection rate compared with attending gastroenterologists, who had 41% detection rate, P=0.5. Mean age of the patients undergoing colonoscopy with trainee involvement was older as compared to colonoscopies done by attending gastroenterologists alone; 60 (SD 13) and 56 (SD 14) respectively. P=0.005. Female patients constituted 63% of both groups. The percentage of outpatient colonoscopies was the same for trainees and attendings (88%).

Conclusion: Results of this study do not suggest a significant effect of trainees’ participation on cecal intubation and polyp detection rates.

P632

screening colonoscopy in older medicare beneficiaries. do we consider prognosis?

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Purpose: Due to lack of clinical trial data to support colon cancer screening in adults older than 75 years and also due to the heterogeneity of this population with varying health states, an individualized approach to colon cancer screening considering their prognosis is recommended. Since Medicare began to reimburse for screening colonoscopy in average risk adults in year 2001, there has been a steady increase in screening colonoscopy rates in older adults. However it is unclear whether screening colonoscopy is targeted to healthy older adults who would benefit the most and avoided in those with limited life expectancies. We sought to determine the relationship between 4-year mortality risk (prognosis estimate) and use of colonoscopy in the elderly Medicare population in a cross-sectional study using Medicare Current Beneficiary Survey 2003 (MCBS) data.

Methods: The MCBS is a survey of a nationally representative sample of Medicare beneficiaries, which provides comprehensive information of their health status & physical function and health services. We analyzed colonoscopy use in the previous 5 years, across 4 strata of mortality risk in Medicare beneficiaries, i.e. 75+ years old. Beneficiaries with colorectal cancer in last 7 years were excluded. 4-year mortality risk was derived from a published and validated prognostic index with 4 stratas of increasing probability of death in four years (risk groups 1, 2, 3 and 4 with 4%, 15%, 35.5% and 64% risk of death, respectively). Multivariable logistic regression was used to assess the independent association between 4-yr mortality risk and colonoscopy use. Results: Mean age of the population in 80 yrs : 60% females. Of the 6,732 (un-weighted sample) surveyed, 40.6% reported receiving colonoscopy in the last 5 years. There was a significant decreasing trend in the use of colonoscopy with risk groups 1, 2, 3 and 4 (42.5%, 43.5%, 38% and 35.5%, respectively; trend test p < 0.001). The adjusted odds of colonoscopy use were greatest in the low mortality risk group and show a gradual decline with increasing mortality risk (OR CI) for risk groups 1,2, 3 and 4 were 1.00, 0.88 (0.72 – 1.08), 0.66 (0.52 – 0.83) and 0.58 (0.48-0.73) respectively (j). Other factors significantly associated with higher colonoscopy use were male gender, black race, higher education, higher income, number of office visits, and HMO coverage.

Conclusion: The use of colonoscopy was inversely associated with 4-year mortality risk suggesting that current colon cancer screening patterns among older Medicare patients include consideration of their prognosis. Prospective studies are needed to explore the clinical application of the 4-year mortality risk prognostic index as a colon cancer screening decision tool in the elderly.

P633

anemia without low ferritin - do they warrant a GI workup? a preliminary hospital based study

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Purpose: Endoscopic evaluation of the gastrointestinal tract in patients with iron deficiency in men and postmenopausal women is warranted by most guidelines. The yield of endoscopy in patients with normal and high ferritin is unknown. In hospital-based populations with other acute medical problems, the ferritin levels can be elevated and may mask a true iron deficiency anemia. The aim of the study is to analyze the yield of endoscopy in patients with anemia but with a normal or high ferritin.

Methods: Retrospective review of adult men and postmenopausal women that were admitted with anemia to a teaching community hospital for a period of nine months. Only the patients who had an anemia workup with hematological indices were included. A ferritin level of over 100ng/ml was considered as normal or high. Endoscopic procedure reports and pathology reports were analyzed. Gastrointestinal(GI) lesions that were counted as a cause or contributing to the anemia were malignancy, angiodyplasias, polyps, colitis, high grade esophagitis, erosive and hemorrhagic gastritis and extensive diverticulosis.
Results: In the nine month period 340 patients had anemia work up with hematological indices documented. The mean age was 62.2 years with 34% males and 66% females 209 patients fit the subset of patients with normal or high ferritin. 50% of the high ferritin patients had upper endoscopy and colonoscopy 32% had upper endoscopy alone and 18% had colonoscopy alone. The findings were: malignancy 11% (10% colon carcinoma and 1% gastric carcinoma), eritis 2.8%, erosive/hemorrhagic gastritis 14%, grade C esophagitis 4%, peptic ulcer 2.8% and angiodysplasia 4.2%.

Conclusion: Anemia with normal or high ferritin does not conclusively rule out anemia due to blood loss in a hospitalized patient. GI workup will be beneficial in these patients especially because of the incidence of malignancies noted. A prospective or large retrospective study will need to be undertaken to prove this hypothesis.

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PERSPECTIVES AND ATTITUDES OF INTERNAL MEDICINE RESIDENTS TO CHAPERONS USE DURING RECTAL EXAMINATIONS - A DISCONCERTING DISCOVERY

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Purpose: Among residents, there is wide discrepancy for the use of chaperons during various aspects of the physical examination. Reasons typically cited to justify the use of a chaperon include medico-legal protection for the physician, the need for an assistant and patient comfort.

Methods: Seventeen question survey was developed and distributed to all residents in the Internal Medicine training program at four community based hospitals. The survey was broken into three parts: attitudes towards chaperon, practicality, and performance.

Results: 147 residents were surveyed (60% male; 40% female) and upon compilation of their surveys, it was found that nearly 71% of students do not feel chaperons are required for rectal evaluations and don’t routinely use them; but more startling was that 84% of these residents performed rectal exams sometimes or never at all. Additionally 75% of the residents do not feel a chaperon is necessary for the examination of the patient of the same sex; yet 43% stated the sex of the patient does influence their decision on whether a chaperon is needed. The top three reasons cited for not using a chaperon were medical/legal patient comfort, and physician safety. Yet the top three impediments for chaperon use in a hospital is unavailability of ancillary staff, lack of privacy for the overall exam, and time constraints. The ancillary staff members most often sought out were nurses, residents, and finally clerks. When asked what the resident’s performance 34.6% said it increased their comfort, 30% said it decreased apprehension, while 48% said it affected their anxiety. Upon queries regarding chaperon presence would increase patient comfort, 99% stated in the positive. Finally 66% stated they would conduct a rectal exam regardless of whether a chaperon is present, if the exam was pertinent.

Conclusion: From these results it is evident that residents should understand the issues and possible medico-legal consequences of not using chaperons. We feel that issues involving the use of chaperons should be specifically addressed during medical student and resident training. Further data from patient’s perspective attitude and comfort with chaperon is limited.

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COST-EFFECTIVENESS OF EMPIC PPI THERAPY IN THE TREATMENT OF LARYNGOPHARYNGEAL REFLUX SYMPTOMS

R. H. Lee, MD Division of Gastroenterology, University of California San Diego, San Diego, CA.

Purpose: Because of the association between Laryngopharyngeal Reflux (LPR), and Gastroesophageal Reflux Disease (GERD), experts have recommended empiric proton pump inhibitor (PPI) therapy for the treatment of LPR symptoms. The primary aim of this study was to determine the cost-effectiveness of this approach among a hypothetical cohort of patients with typical LPR symptoms.

Methods: A decision tree (Figure 1) was constructed to compare four strategies: 1) Empiric PPI therapy 2) 24-hour pH testing and treatment with PPI’s if positive 3) Upper endoscopy and PPI treatment if there is evidence of erosive esophagitis (EE) 4) “Do Nothing” strategy. Cost estimates were from a third party payer perspective. The primary outcome was the cost per additional case of GERD successfully treated at 3 months.

Results: Under base case conditions “Do Nothing” was the cheapest but least effective approach (Figure 2). Compared to “Do Nothing,” empiric PPI therapy was the most cost-effective approach with an incremental cost-effectiveness ratio (ICER) of $4244 per additional case of GERD successfully treated. 24-hour pH testing was only slightly less cost effective with an ICER of $4667. Upper endoscopy was dominated through the concept of extended dominance. Tornado analysis determined that the model was most vulnerable to uncertainty in: 1) Response to empiric PPI therapy 2) probability of a positive pH test 3) cost of empiric PPI therapy.

Conclusion: Empiric PPI therapy is the most cost-effective approach to LPR symptoms but only within the context of a given set of clinical and economic parameters.

Table 1: Patient Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Non-Erosive Esophagitis (n=66)</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td>56</td>
<td>56</td>
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</tr>
<tr>
<td>Gender</td>
<td>Male (84%) Female (16%)</td>
<td>Male (99%) Female (1%)</td>
<td>ns</td>
</tr>
<tr>
<td>Hiatal Hernia</td>
<td>42%</td>
<td>35%</td>
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<tr>
<td>Psychiatric Co-morbidity</td>
<td>54%</td>
<td>37.5%</td>
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</tr>
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</table>

Figure 1: Decision Tree

Figure 2: Cost-Effectiveness Frontier

P636

A COST ANALYSIS OF THE DIAGNOSTIC WORKUP OF HEARTBURN SYMPTOMS IN PATIENTS WITH EROSIIVE AND NON-EROSSIVE REFLUX DISEASE

R H Lee, MD1 J S Weissman, MD1. Division of Gastroenterology, University of California San Diego, San Diego, CA. 2. Internal Medicine, University of California San Diego, San Diego, CA.

Purpose: Gastroesophageal Reflux Disease (GERD) is the most common cause of outpatient visits to gastroenterology clinics in the United States. While many studies have examined the epidemiologic differences between patients with Non-Erosive Reflux Disease (NERD) and Erosive Esophagitis (EE), very few have compared the utilization of health care resources in these two patient groups. Our goals were: 1) Compare the costs of the diagnostic workup for heartburn symptoms in patients with NERD and EE 2) Identify the key areas which account for disparities in health care costs.

Methods: A chart review was performed on 122 patients who underwent upper endoscopy for heartburn symptoms at the San Diego Veterans’ Affairs Hospital from 2000-2007. Patients were then divided into two categories: 1) EE based upon the presence of esophageal erosions on upper endoscopy (n=56) 2) NERD based upon the absence of endoscopic erosions (n=66).

Using cost data, we then calculated the per patient cost of performing a diagnostic workup for heartburn symptoms in these two patient groups.

Results: There were no significant differences in the age, gender, BMI or the presence of hiatal hernia in the two groups (table 1). 54% of the NERD group had a concomitant psychiatric disorder compared with 37.5% in EE (p=0.03). The cost of the diagnostic workup for NERD was $2793.26 per patient compared with $3991.00 per patient in the EE group (p=0.027). While the utilization of endoscopy was similar in both groups, utilization of GI clinic visits, pH monitoring testing, and diagnostic imaging was greater among patients with NERD (Figure 1). Overall, pH monitoring testing and GI clinic visits accounted for 40% and 51% respectively of the extra costs found in the NERD group.

Conclusion: Health care utilization is greater in NERD than in EE. This may be a consequence of the fact that patients with NERD have a lower response rate to PPI therapy than prompting more frequent clinic visits. In addition, the over-utilization of morbidity/pH testing and diagnostic imaging in NERD may also drive up costs. The increased rate of co-morbid psychiatric disease in NERD raises the possibility that somatization may lead to the increased use of health care resources.

Table 1: Patient Characteristics

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<thead>
<tr>
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<tr>
<td>Age</td>
<td>56</td>
<td>56</td>
<td>ns</td>
</tr>
<tr>
<td>Gender</td>
<td>Male (84%) Female (16%)</td>
<td>Male (99%) Female (1%)</td>
<td>ns</td>
</tr>
<tr>
<td>Hiatal Hernia</td>
<td>42%</td>
<td>35%</td>
<td>ns</td>
</tr>
<tr>
<td>Psychiatric Co-morbidity</td>
<td>54%</td>
<td>37.5%</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Figure 1: Costs of the Diagnostic Workup in Patients with EE and NERD

*p < 0.05
TRIPLE VS QUADRUPLE THERAPY AS PRIMARY TREATMENT FOR HELICOBACTER PYLORI INFECTION: A META-ANALYSIS OF EFFECTIVENESS AND TOLERABILITY

J Luther, MD; P. Schoenfeld, MD; P. Moayyedi, MB ChB, PhD, MPH; N. Vakil, MD; S. George, PharmD, MX; W. D. Chey, MD; 1. University of Michigan Medical Center, Ann Arbor, MI; 2. McMaster University, Hamilton, ON, Canada; 3. University of Wisconsin Medical School, Milwaukee, WI; 4. Conexus Health, Tampa, FL.

Purpose: The American College of Gastroenterology guideline recommends 2 first line thera-
pies for Helicobacter pylori infection: PPI, clarithromycin, & amoxicillin (triple therapy) or PPI, bismuth, tetracycline, & metronidazole (quadruple therapy). A number of randomized trials have com-
pared the efficacy and tolerability of these therapies. We performed a meta-analysis to com-
pare the efficacy and tolerability of triple versus quadruple therapy as first-line treatment of H. pylori infection.

Methods: Search Parameters: Databases reviewed include OVID MEDLINE, CCTR, CDSR, ACP Journal Club: DARE, CLCMR, CLIFITA, and CLEED. Additionally, abstracts of litera-
ture cited in selected papers were also reviewed. Search terms included: “Helicobacter pylori”, “triple therapy”, “quadruple therapy”, “PPI”, “omeprazole”, “Lansoprazole”, “amoxicillin”, “clarithromycin”, “bismuth”, “tetracycline”, “metronidazole”, “eradication”, and “treatment”. Criteria for Inclusion: (1)Randomized, controlled trials (2)Year of Publication = 1990-2008. (3)Abstracts available in English (4)Trials included treatment with triple therapy and quadruple therapy (5)Same Duration of treatment with triple and quadruple therapy (6)Main Outcome Measure = ITT eradication rate. Statistical Analysis: Given homogeneity between studies, a fixed-effects model was assumed with Mantel-Haenszel method used to calculate odds ratios.

Results: Eight RCTs (n=1585) met our inclusion criteria and were included in this analysis. The main results can be found in the table. Quadruple therapy achieved eradication in 77.6% of pa-
ients, while triple therapy achieved eradication in 76.1%, with no statistically significance dif-
ferences observed. There was heterogeneity amongst the studies in the analysis (p<0.015). Of the three studies (n=457 patient) published since 2003, quadruple ther-
apy achieved eradication in 71.0% vs. 68.3% for triple therapy. Compliance between the quadruple therapy and triple therapy groups were similar (OR: 0.85; 95% CI:0.64-1.10). There were also no statistically significance differences in side effects reported by patients treated with quadruple vs triple therapy (OR: 1.03; 95% CI:0.86-1.25).

Conclusion: Quadruple and triple therapies are equally effective in eradicating H. pylori infec-
tion. Patient compliance and side effects were similar for quadruple and triple therapies. Quadruple and triple therapies can be considered equivalent first-line treatment options for H. pylori infection.

Table 1: Shows the affect of EUS technology to diagnose T0 stage of rectal cancers

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Studies</th>
<th>Pooled Sensitivity</th>
<th>Pooled Specificity</th>
<th>Pooled Positive Likelihood Ratio</th>
<th>Pooled Negative Likelihood Ratio</th>
<th>Pooled Diagnostic Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>6</td>
<td>96.3% (91.6 - 96.8)</td>
<td>95.9% (92.4 - 97.3)</td>
<td>16.3 (9.4 - 28.3)</td>
<td>0.08 (0.03 - 0.21)</td>
<td>279.1 (84.0 - 926.9)</td>
</tr>
<tr>
<td>2000</td>
<td>5</td>
<td>100.0% (92.6 - 100.0)</td>
<td>96.6% (95.5 - 97.5)</td>
<td>250.2 (18.9 - 35.6)</td>
<td>0.07 (0.02 - 0.22)</td>
<td>540.3 (131.3 - 2225.7)</td>
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DOES ENDOSCOPIC ULTRASOUND’S TECHNOLOGY AFFECT ITS ABILITY TO PREDICT RECTAL CANCERS OR LARGE POLYPS THAT CAN BE RESECTED ENDOSCOPICALLY: A META-ANALYSIS AND SYSTEMATIC REVIEW

S. Pali, MD; J. Reddy, MD; M. L. Bechtold, MD, A. Choudhary, MD, F. Rashid, MD, M. R. Annilll, MD. Department of Gastroenterology and Hepatology, University of Missouri-Columbia, Columbia, MO.

Purpose: The American College of Gastroenterology guideline recommends 2 first line thera-
pies for Helicobacter pylori infection: PPI, clarithromycin, & amoxicillin (triple therapy) or PPI, bismuth, tetracycline, & metronidazole (quadruple therapy). A number of randomized trials have com-
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2-log drop in the baseline viral load by week 12. Categorical variables were compared by Fisher's exact test and chi-square test. Continuous variables were compared by parametric tests. Comparisons were made by univariate and multivariate analysis.

**Results:** Search identified a total of 395 patients with HCV. Of these, 113 patients were treated with pegylated interferon and ribavirin. Complete data was available from 94 patients to determine sustained virologic responders versus non-responders or relapers. 56 patients had SVR and 38 patients were non-responders. Table 1 shows the differences among patients with SVR and NR with the corresponding p-values.

**Conclusion:** The rural Medicare veteran non-responders had increased fibrosis (p=0.002) and more comorbidity (p=0.001) than hose veterans who achieved SVR, regardless of genotype, age, race, or BMI.

### Table 1: Showing differences of patients with SVR and NR

<table>
<thead>
<tr>
<th></th>
<th>SVR</th>
<th>NR</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>49.09±6.34</td>
<td>49.38±5.47</td>
<td>0.82</td>
</tr>
<tr>
<td>Body mass index</td>
<td>30.93±6.86</td>
<td>30.80±5.24</td>
<td>0.92</td>
</tr>
<tr>
<td>Fibrosis</td>
<td>1.70±1.36</td>
<td>2.5±1.09</td>
<td>0.002</td>
</tr>
<tr>
<td>Co-morbid illnesses</td>
<td>2/36</td>
<td>3/12</td>
<td>0.001</td>
</tr>
<tr>
<td>Male</td>
<td>5/6</td>
<td>3/8</td>
<td>0.0001</td>
</tr>
<tr>
<td>Race</td>
<td>5/60</td>
<td>3/4</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**P641**

### COST-EFFECTIVENESS OF NATALIZUMAB IN PATIENTS WITH CROHN'S DISEASE WHO HAVE FAILED ANTI-TNF THERAPY

B. Sands, MD, MS; D. Wolf, MD; S. Panjabi, PhD; T. Nieceo, PhD; S. Hass, PhD; L. Lacey, PhD; T. Gastrointestinal Unit / MGH Crohn's and Colitis Center, Massachusetts General Hospital and Harvard Medical School, Boston, MA; 2. AstraZeneca; 3. PharmacoEconomics, Elan Pharmaceuticals, Inc., South San Francisco, CA; 4. Nieceo Health Economics, LLC, Escondido, CA; 5. PharmacoEconomics, Elan Pharmaceuticals Ltd., Dublin, Ireland

**Purpose:** To compare the cost-effectiveness (CE) of natalizumab (NAT) to tumor-necrosis factor alpha inhibitors (anti-TNFα) in patients with Crohn's disease (CD) who failed previous anti-TNFα treatment.

**Methods:** A decision analytic framework was used to model treatment for patients with moderate to severe CD (Crohn's Disease Activity Index scores ≥220 and <450). Patients are assumed to have failed treatment with corticosteroids, immunomodulators, and an anti-TNFα agent. The model compared natalizumab (NAT) 300 mg, infliximab (IFX) 5 mg/kg or 10 mg/kg, adalimumab (ADA) 40 mg dosed every other week (EOW) or weekly (QW), and certolizumab 400 mg. The model includes an induction period (induction dose and schedule as per product package insert) followed by a 2-year maintenance phase. At the end of induction and each of the four 6-month maintenance cycles, patients were assigned to 1 of 3 efficacy states (remission, response, nonresponse) based on estimates from the published literature and NAT clinical data. Patients entering the nonresponse health state at any point were assumed to remain in that state for the duration of the model. Medical costs associated with resource use—including hospitalizations, surgeries, physician visits, and laboratory tests—were estimated for patients in each health state from a database assembled by Health Benchmarks International. Wholesale acquisition drug costs were obtained from published price lists. The drug costs for INF and ADA were weighted by dose (maintenance phase) based upon the distribution observed in phase 4 studies.

**Results:** Modeled estimates of total costs and efficacy (per person-year in remission) over the 2-year maintenance period and adjusted by dose for each comparator are presented in the table below. NAT had the lowest CE ratio using all of the following outcome measures of efficacy: remission, steroid-free remission, and response and remission. CE ratios were insensitive to increases in NAT costs (up to 100%) or decreases in NAT efficacy (up to -25%).

**Conclusion:** This model, based on estimates from the published available literature, projected NAT to have the lowest cost-efficacy ratio among comparator biologics for patients who had failed prior anti-TNFα therapy.

<table>
<thead>
<tr>
<th>2-Year Modeled Outcomes</th>
<th>Natalizumab</th>
<th>Infliximab</th>
<th>Adalimumab</th>
<th>Certolizumab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost (Drug + Medical)</td>
<td>$67,090</td>
<td>$61,578</td>
<td>$60,561</td>
<td>$56,365</td>
</tr>
<tr>
<td>% Cost Difference Relative to NAT</td>
<td>-</td>
<td>-9%</td>
<td>-11%</td>
<td>-18%</td>
</tr>
<tr>
<td>Efficacy (Person-years in Remission)</td>
<td>0.37</td>
<td>0.19</td>
<td>0.23</td>
<td>0.17</td>
</tr>
<tr>
<td>% Efficacy Difference Relative to NAT</td>
<td>-</td>
<td>-9%</td>
<td>-60%</td>
<td>-117%</td>
</tr>
<tr>
<td>CE Ratio</td>
<td>$181,086</td>
<td>$321,727</td>
<td>$264,492</td>
<td>$333,112</td>
</tr>
<tr>
<td>% Increase in Cost/Year to Achieve Remission Over the Most Cost-effective Agent</td>
<td>-</td>
<td>+78%</td>
<td>+46%</td>
<td>+84%</td>
</tr>
</tbody>
</table>

**Disclosure:** Dr. Sands - grant support and honoraria for consulting services and for speaking; Elan Pharmaceuticals, Dr. Wolf - consultant and speakers' bureau; Elan Pharmaceuticals, Dr. Panjabi - employee, stock; Elan Pharmaceuticals, Dr. Nieveo - consultant; Elan Pharmaceuticals, Dr. Hass - employee, stock; Elan Pharmaceuticals, Dr. Lacey - consultant; Elan Pharmaceuticals. This research was supported by an industry grant from Elan Pharmaceuticals, Inc. and Biogen Idec, Inc.
IMPROVEMENT?

PATIENT AND PHYSICIAN SATISFACTION WITH PROTON PUMP INHIBITORS (PPI) FOR GERD SYMPTOMS – ARE THERE OPPORTUNITIES FOR IMPROVEMENT?

W D Chen, MD, AGAF, FACC, R Mody, PhD, MBA, E Etaz, BS, MMR. Division of Gastroenterology, University of Michigan Health System, Ann Arbor, MI; 2. TAP Pharmaceuticals Products Inc., Lake Forest, IL.

Purpose: Though PPIs are frequently used for the management of GERD symptoms, there is limited information on patient and physician satisfaction with PPI therapy. The purpose is to better understand the level of patient and physician satisfaction with PPI therapy and to identify predictors of satisfaction.

Methods: An Internet survey was conducted among adult GERD patients, primary care physicians (PCP) and gastroenterologists (GE). Respondents were asked to provide information on use/recommended use of PPIs and other GERD medications, level of satisfaction with current PPI therapy on a 7-point Likert scale, level of agreement to various statements regarding PPI characteristics and demographics. Multivariate regression models were employed to determine the predictors of satisfaction with PPI therapy.

Results: The study included 1013 GERD patients with mean age of 50.9 years (SD=13.5) and 1002 physicians (675 PCP and 327 GE) with average of 16.8 years (SD=7.7) of clinical practice experience. Overall, 36% of GERD patients reported (3%) of physicians endorse that their patients were not very or completely satisfied with their PPI therapy. Unadjusted analysis showed that a significantly lower proportion of GERD patients on bid PPI therapy were very or completely satisfied with their therapy compared to those on QD PPI therapy (50.4% vs 68.7%). Results of the multivariate analysis showed that complete symptom relief was the strongest predictor of satisfaction with PPI among both GERD patients and physicians. Over 35% of patients on QD PPI and 54% on bid PPI indicate that their PPI regimen fail to provide complete symptom relief. Approximately 30% of patients report experiencing breakthrough symptoms at least once a week and more than 40% of patients with breakthrough symptoms take a non-prescription medication to control their breakthrough symptoms. In addition, nearly half (47%) of all GERD patients take additional over-the-counter medications to supplement their PPI therapy.

Conclusion: Approximately one in three GERD patients and physicians report not being very or completely satisfied with available PPI treatments. In addition, a substantial proportion of GERD patients experience breakthrough symptoms and supplement their PPI with OTC medications. These results highlight the need for additional research to further understand the pathophysiology of GERD and identify effective therapies for patients with GERD symptoms despite traditional PPI therapy. This research was supported by an industry grant from TAP Pharmaceuticals Products Inc.

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RISK FACTORS FOR GASTROINTESTINAL ULCER DISEASE IN THE U.S. POPULATION

D A Garross, MD, MSc; H E Thompson, MD; M H Delege, MD, 1. Gastroenterology and Hepatology, Medical University of South Carolina, Charleston, SC; 2. General Internal Medicine, Medical University of South Carolina, Charleston, SC.

Purpose: Gastrointestinal (GI) ulcers are frequently seen in patients with multiple chronic medical conditions. Approximately one out of ten Americans will suffer from GI ulcer disease during their lifetime. GI ulcers cause an estimated 1 million hospitalizations and 6500 deaths per year. In the United States, annual health care costs of GI ulcer disease have been estimated at nearly $6 billion: $3 billion in hospitalization costs, $2 billion in physician office visits, and $1 billion in decreased productivity and days lost from work. Few studies have described the overall prevalence, comorbidities or risk factors associated with this diagnosis. We sought to determine among a US national dataset if individuals with certain medical comorbidities are in fact at increased risk for gastrointestinal ulcer disease, while controlling for relevant confounders. The ultimate question is whether primary prophylaxis for GI ulcer disease is necessary in certain patients with multiple chronic medical illnesses.

Methods: Data source is the National Health Interview Survey (NHIS), a comprehensive nation-ally representative survey conducted by the National Center for Health Statistics, combined years 1997-2003. The NHIS was analyzed to find patients with a self-reported history of GI ulcer disease. We determined the prevalence of GI ulcer via chi-square testing and potential risk factors for GI ulcer via multivariable logistic regression.

Results: The overall prevalence of GI ulcer was 8.4%. An increased probability of ulcer history was observed for older age (OR: 1.67), African-Americans (OR: 1.20) current (OR: 1.99) and former (OR: 1.55) tobacco use, former alcohol use (OR: 1.29), obesity (OR: 1.18), chronic obstructive pulmonary disease (COPD) (OR: 2.34), chronic renal insufficiency (OR: 2.29), coronary heart disease (OR: 1.46) and 3 or more doctor visits in the last year (OR: 1.49). There was only a borderline association with diabetes (OR: 1.13), female gender (OR: 1.08) and overweight status (OR: 1.06). Hispanics were significantly less-likely to report a history of GI ulcer (OR: 0.83).

Conclusion: This large US population-based study reports on a number of demographic, behavioral and chronic medical conditions associated with higher risk of gastrointestinal ulcer disease. Further prospective investigation is warranted to validate these findings. This paper is the first step in addressing the question of whether primary prophylaxis for GI ulcer disease is necessary in certain at-risk populations.

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COST SAVINGS OF TRANSSALANAL ENDOCOPSY Versus STANDARD ENDOSCOPY

J Hybun, MD, T Watt, MD, G Postma, MD, A Chaudhary, MD, R R Schade, MD, 1. Medicine, Medical College of Georgia, Augusta, GA; 2. Otolaryngology, Medical College of Georgia, Augusta, GA.

Purpose: Transnasal endoscopy (TNE) has been found to be an effective, safe, and well-tolerated method for examining the hypopharynx, esophagus, stomach, and duodenum that can be performed using standard Olympus instruments. Cost was determined by reviewing billing records of 10 patients who had office-based TNE and compared these charges to 10 patients who underwent EGD in the hospital endoscopy suite. CPT code 43200 was used to identify patients. All patients undergoing TNE received nasal spray with oxymetazoline (0.05%) and lidocaine (4%) the Pentax VE 1530 TNE scope was employed. In EGD cases, conscious sedation was achieved with midazolam and fentanyl, and upper endoscopy was performed using standard Olympus instruments. Cost was determined by reviewing billing records and the dollar amounts were averaged for each procedure.

Results: The average cost for TNE was $138; supply charges were negligible. Inclusive within the facility fee were charges for medication, cleaning, and maintenance. CPT code 43200 was used to determine the physician fee. In contrast, traditional EGD generated charges of $3700. These included the cost of medication for sedation as well as costs for nursing recovery/depre- cation and cleaning and maintenance of the endoscope. The cost difference between the two procedures was $2564. In addition, since the patient does not need to miss a whole day of work and does not require a companion to accompany him home total savings are much greater than the mere charge differences.

Conclusion: TNE is well-tolerated and convenient for the patient; it is significantly less expen- sive than hospital-based EGD. Since no sedation is used, recovery time is minimal; there is no need for a separate appointment or driver, and normal daily activities can be resumed almost immediately after the procedure, greatly diminishing total procedure and patient costs. The TNE endoscope is significantly smaller than the EGD equipment (OD 5.1 mm in TNE vs OD 6.6fmm in EGD endoscope). The cost of a TNE endoscope is $1975 (compared with 2.8 mm in EGD), allowing only small biopsies to be obtained as needed. Transnasal esophagogastrroduodenoscopy offers significant savings and convenience when compared to standard EGD. It can be performed in an unscheduled patient in the office setting quickly and easily. Gastroenterology training programs should offer instruction in this important technique which can also be used for the evaluation of swallowing disorders.
MORBIDITY IN DIABETICS WITH SYMPTOMS OF GASTROPARESIS

Purpose: Gastroparesis is a serious complication of diabetes mellitus (DM). However, little is known regarding the health implications of gastroparesis in diabetes. The specific aims of this study were to test the hypotheses that diabetic patients with proven gastroparesis differ from those with normal gastric emptying: 1. In the number of days spent in hospital per 1000 patient days. 2. In the prevalence of other manifestations of autonomic neuropathy and microvascular disease and 3. In blood glucose control.

Methods: This was a parallel cohort study with 3 separate groups of DM patients (both Type 1 and Type 2) treated between 2000 and 2008. Group A: Gastroparesis diagnosed by both classic symptoms and a delay in gastric emptying on a radionuclide gastric emptying study. Group B: Classic symptoms of gastroparesis but with a normal gastric emptying study. Group C: Patients without symptoms of gastroparesis (no gastric emptying study performed). We gathered data on subsequent health outcomes and resource utilization including: number of hospitalizations, number of office visits, number of ED visits, number of hospitalization and deaths in this eight-year period. We also collected data on HbA1C levels, medication use, medical history and complications of DM.

Results: There were 94 subjects in each group. By univariate analysis Group A had significantly more Hospital Days per 1000 patient days than Group B (See Table 1). Group A also had significantly more hospitalizations, office visits and ED visits. There was a trend toward more deaths per 1000 patient days in Group A compared to Group B Compared to Group C. Group A again had significantly more days in hospital, hospitalizations, office visits and ED visits. None of these measures differed significantly between Group B and Group C with the exception of more office visits for Group B. HbA1Cs were similar in the 3 groups. Group A patients without symptoms of gastroparesis were more likely to have vascular disease (CAD, HTN, retinopathy) but not more likely to have a history of more office visits for Group B. HbA1Cs were similar in the 3 groups. Group A again had significantly more days in hospital, hospitalizations, office visits and ED visits. In the prevalence of other manifestations of autonomic neuropathy and microvascular disease and 3. In blood glucose control.

Conclusion: By shipping the equipment to the incarceration site, where a trained nurse can administer the test, and then interpreting results remotely significant cost savings can be accomplished when screening for varices in a prison population. This may also prove to be a cost effective way of screening patients with chronic reflux symptoms or to look for Barrett’s esophagus in this population. In fact, this screening method may be a useful tool for delivering care to patients in remote and rural settings.

This research was supported by an industry grant from Given industries supplied 5 capsules for the study.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Number Enrolled</th>
<th>Avg.</th>
<th>HbA1C</th>
<th>PeripheralNeuropathy</th>
<th>Retinopathy</th>
<th>Hypertension</th>
<th>CAD</th>
<th>Avg. Days In Hospital</th>
<th>Avg. Number of Hospitalizations</th>
<th>Avg. Number of ED Visits</th>
<th>Avg. Number of Office Visits</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94</td>
<td>55</td>
<td>7.66</td>
<td>70.8</td>
<td>76.7%</td>
<td>76%</td>
<td>85%</td>
<td>7.8</td>
<td>0.6</td>
<td>0.3</td>
<td>0.1</td>
<td>0.27</td>
</tr>
<tr>
<td>B</td>
<td>94</td>
<td>56</td>
<td>7.09</td>
<td>8.1</td>
<td>76.7%</td>
<td>76%</td>
<td>85%</td>
<td>7.8</td>
<td>0.6</td>
<td>0.3</td>
<td>0.1</td>
<td>0.27</td>
</tr>
<tr>
<td>C</td>
<td>94</td>
<td>55</td>
<td>8.10</td>
<td>76%</td>
<td>88%</td>
<td>52%</td>
<td>43%</td>
<td>7.8</td>
<td>0.6</td>
<td>0.3</td>
<td>0.1</td>
<td>0.27</td>
</tr>
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</table>
A STRUCTURED GI REFERRAL SCHEDULE IMPROVES OUTCOMES IN PATIENTS DISCHARGED FROM THE CHEST PAIN CENTER

M. Mello, B. Weinhagen, A. Moscovich, M. Mello, J. L. Schnaper, INTEGRIS Center for Digestive Health, Oklahoma City, OK.

Purpose: Chest pain centers (CPCs) represent an important advance in the diagnosis and rapid treatment of patients presenting with chest pain of cardiac ischemic origin, as patients undergo a structured protocol to rapidly identify and treat acute cardiac ischemic injury. However, we previously reported that a majority of patients undergoing phone interviews 30 to 60 days after discharge from a CPC with a (c) cardiac work up still had chest pain (CP). Additionally, though many symptoms of GI origin, they were rarely referred to a gastroenterologist (GE) by their primary care provider.

Methods: An on call schedule for GI consultation was established. Every effort was made for personal contact by the on call physician or staff member prior to CPC discharge. If not feasible, patient was given name and number of GI consultant. 50 consecutive patients were contacted for phone interview ≥ 30 days after CPC discharge. We inquired whether appointment was kept, whether diagnostic tests were performed, whether medications were prescribed, and whether the patient’s presenting symptoms to the CPC was gone, present but better, or unchanged.

Results: 47 of 50 patients agreed to interview. 12 did not follow up with GE; in 9, pain did not recur and appointment was cancelled. 1 was certain that pain was musculoskeletal and 2 declined consultation. Of the 35 patients who obtained GI consult 24 reported complete pain relief; 10 had pain improved and 1 persisted unchanged. This contrasts with results of patients discharged from CPC prior to on call schedule; 23 of 39 patients continued to have symptoms; only 2 had been referred to GE. Of the current patients who saw GE, 34 of 35 had EGD. 26 received PPI Rx. Of these, 20 reported complete pain relief, 6 reported pain better. Of 9 patients not receiving PPI Rx, 4 had pain resolution, 3 improved, 2 remained unchanged. 20 were able to report their endoscopic findings and diagnosis.

Conclusion: 1. Of patients discharged from a CPC with ≥ 1 cardiac evaluation, significantly more CPC patients had complete CP relief after structured GI referral than before on call schedule was initiated (P<0.05). 2. Complete pain relief was more common in patients given PPI Rx, than those not receiving PPI (20 of 26 vs 4 of 9) presumably reflecting the fact that acid peptic cause of CP is typically easy to treat, if appropriately diagnosed. 3. Despite good results, only 20 patients were able to describe their endoscopic findings and define their diagnosis.

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UTILIZATION AND COSTS OF MEDICAL SERVICES AMONG GASTROESOPHAGEAL REFLUX (GERD) PATIENTS USING ‘REAL WORLD’ DATA

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Purpose: To examine overall and GERD-related medical services utilization and costs among patients diagnosed with non-erosive GERD (NERD), erosive esophagitis (EE) and Barrett’s esophagus (BE).

Methods: This study applied an observational cohort design to electronic medical records obtained from a fully integrated health delivery system located in the mid-Atlantic region of the US. Adult patients with a diagnosis of BE, EE, or NERD between July 1, 2004 and January 25, 2007 and with at least 6 months of encounter data before and 12 months of encounter data following index diagnosis were included in the study. Patients with a BE, EE, or NERD diagnosis or use of a proton-pump inhibitor during the 6-month pre-period were excluded. Outcomes assessed were use of overall and GERD-related medical services (office visits, hospitalizations, emergency room visits, and procedures) and associated costs at 8, 12, 24 and 52 weeks post diagnosis. All costs represent 2007 dollars and reflect those incurred by the health delivery system for providing care. Descriptive statistics were used to compare the three cohorts with NERD as the reference group.

Results: 19,698 patients met the study inclusion criteria including 78.6% NERD, 20.0% EE and 1.5% BE patients. The mean ages of NERD, EE and BE cohorts were 59.2 yrs (SD=17.2), 54.3 yrs (SD=13.6; p<0.0001) and 57.7 yrs (SD=13.8; p<0.0001), respectively. Females represented 62.0% of NERD, 61.2% of EE (p=0.32) and 34.7% of BE (p=0.0001) patients. Based on the Charlson’s Comorbidity Index, the comorbidity burden was NERD=0.6; EE=0.6 (p=0.0131); and BE=0.8 (p=0.0004). The mean number of GERD-related office visits at 52 weeks post index diagnosis was 1.5 for NERD, 1.7 for EE (p=0.0001) and 2.1 for BE (p=0.0001). At all time points, EE and BE patients had higher GERD-related medical costs than NERD patients (Table 1). The GERD-related medical costs as a % of overall medical costs were also higher for EE (37.5%, 33.1%, 28.8%, 24.8%) and BE cohort (30.7%, 29.4%, 30.0%, 32.7%) as compared to the NERD cohort (31.8%, 27.4%, 25.3%, 20.6%).

Conclusion: Although the prevalence of EE and BE is lower than NERD, they demonstrate more intensive use of medical services throughout the study period. The disease-related costs of GERD as a proportion of the overall medical costs are substantial and related to manifestation of the disease.

Table 1. Overall and GERD-related Medical Care Costs

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Time Period</th>
<th>Overall Medical Care Costs</th>
<th>GERD-related Medical Care Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In weeks</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>NERD</td>
<td>8</td>
<td>$787 (4809)</td>
<td>$250 ($1551)</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>$1079 (5399)</td>
<td>$296 ($1576)</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>$1891 (57670)</td>
<td>$400 ($2821)</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>$3315 (59965)</td>
<td>$683 ($5362)</td>
</tr>
<tr>
<td>EE</td>
<td>8</td>
<td>$641 ($234)</td>
<td>$315 ($2137)</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>$1857 ($5181)</td>
<td>$534 ($2548)</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>$5379 ($5874)</td>
<td>$889 ($4906)</td>
</tr>
<tr>
<td>BE</td>
<td>8</td>
<td>$1292 ($4380)</td>
<td>$397 ($2109)</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>$1893 ($6049)</td>
<td>$557 ($2046)</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>$3268 ($5942)</td>
<td>$979 ($3202)</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>$6364 ($14171)</td>
<td>$2081 ($5323)</td>
</tr>
</tbody>
</table>

NERD - Non-erosive Reflux Disease, EE - Erosive Esophagitis, BE - Barrett’s Esophagus

This research was supported by an industry grant from TAP Pharmaceutical Products Inc.

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A RETROSPECTIVE CHART REVIEW INVESTIGATING THE USE OF COLONOSCOPY IN THE ELDERLY

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Purpose: Currently, there are no guidelines regarding colonoscopy in the elderly population, excluding cancer screening. There is conflicting data regarding the use of colonoscopy in patients over the age of 80. There exists a significant population in the elderly undergoing colonoscopy for screening, fecal occult blood positive results, hematohoezia, and change in bowel habits.

Methods: A retrospective chart review from 11/01/04 to 10/31/06 was performed on all patients who underwent a colonoscopy at a community hospital. Patient age, sex, indication for colonoscopy, adverse events during the procedure, findings during colonoscopy, and results of biopsy or polypectomy, if completed, were all documented. A colonoscopy performed for a screening exam, fecal occult blood positive, hematohoezia, and change in bowel habits were included.

Results: A total of 173 colonoscopic examinations took place that met the strict inclusion/exclusion criteria of the study. Four adverse events occurred in our study population. Two colon perforations and two events of aspiration occurred. Additionally, seven patients had incomplete exams due to a poor colon preparation. Of the 173 examinations, only 1 examination revealed a malignant process. This malignancy was found in a patient with change in bowel movements. No malignant lesions were found in the hematohoezia and screening population of the study.

Conclusion: Colonoscopy in patients over the age of 80 demonstrated minimal diagnostic yield. Colonoscopy itself does carry risk of adverse events that must be considered, especially when diagnostic yield is extremely minimal. Further research is necessary to establish guidelines.

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IMPROVED BONE MASS AFTER ILEAL POUCH-ANAL ANASTOMOSIS FOR PATIENTS WITH ULCERATIVE COLITIS

H. Liu, MD, PhD, R. Lopez, MD, B. Shen, MD. Digestive Disease Institute, Cleveland Clinic, Cleveland, OH.

Purpose: Low bone mineral density (BMD) is prevalent in patients with inflammatory bowel disease and in patients with ileal pouch-anal anastomosis (IPAA). Whether IPAA procedure has beneficial or detrimental effects on BMD is not clear. The aim of this study is to assess whether BMD improved during the course of ulcerative colitis (UC) in patients who underwent IPAA.

Methods: Patients with underlying UC who underwent IPAA and at least twice (pre- and post-) dual X-ray absorptiometry (DEXA) were recruited from our subspecialty Pouchitis Clinic. Bone mineral density was measured by DEXA in the lumbar spine, total left hip, and left femoral neck. Pouch patients with underlying familial adenomatous polyposis were excluded. Student t and Wilcoxon signed rank tests were used.

Results: Of 53 eligible UC patients after IPAA who had two times of BMD scores were enrolled from the Pouchitis Clinic. Eleven patients had pre- and post- IPAA DEXA scan, with 7 being male (63.6%) and the mean age of 43.6 ± 13.8 years. The mean interval from the first pre-operative DEXA scan to IPAA was 25.1 ± 20.7 months and the mean interval from IPAA to the 1st post-IPAA DEXA scan was 30.9 ± 35.9 months. There was a significant increase in the lumbar BMD after IPAA (Table 1). The pre- and post- IPAA body mass index did not change significantly (24.6 ± 4.6 vs. 24.9 ± 6.3 kg/m²; P > 0.05). Forty-two patients had DEXA scan
twice after IPAA, with 23 being male (54.8%) and the mean age of 45.8 ± 12.4 years. The median interval from IPAA and the first post-operative IPAA DXA scan was 35.8 (interquartile range, 20.9-58.5) months, and the median time interval between the two post-IPAA DXA scans was 27.1 (interquartile range 22.8-33.7) months. There was a significant increase in the hip BMD on the 2nd post-IPAA as compared with the 1st post-IPAA (Table 2). The post-IPAA body mass index did not change significantly (24.6 ± 3.6 vs. 25.1 ± 4.1 kg/m², P = 0.05).

Conclusion: IPAA procedure appeared to improve BMD, and this beneficial effect seemed to sustain during the course of the ileal pouch.

Table 1. Changes in Bone Mineral Density Pre- and Post- IPAA

<table>
<thead>
<tr>
<th>N</th>
<th>Pre-IPAA DXA (g/cm²)</th>
<th>Post-IPAA DXA (g/cm²)</th>
<th>Changes in Bone Mineral Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbar Density</td>
<td>1.03 ± 0.22</td>
<td>1.06 ± 0.19</td>
<td>0.13 ± 0.15*</td>
</tr>
<tr>
<td>Hip Density</td>
<td>0.95 ± 0.21</td>
<td>0.92 ± 0.17</td>
<td>-0.03 ± 0.05</td>
</tr>
<tr>
<td>Femoral Neck Density</td>
<td>0.92 ± 0.20</td>
<td>0.92 ± 0.20</td>
<td>-0.00 ± 0.06</td>
</tr>
</tbody>
</table>

*p = 0.039

Table 2. Changes in Bone Mineral Density After IPAA

<table>
<thead>
<tr>
<th>N</th>
<th>1st Post IPAA DXA (g/cm²)</th>
<th>2nd post IPAA DXA (g/cm²)</th>
<th>Changes in Bone Mineral Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbar Density</td>
<td>1.06 ± 0.17</td>
<td>1.08 ± 0.17</td>
<td>0.02 (±0.04)</td>
</tr>
<tr>
<td>Hip Density</td>
<td>0.89 ± 0.19</td>
<td>0.92 ± 0.12</td>
<td>-0.03 ± 0.03*</td>
</tr>
<tr>
<td>Femoral Neck Density</td>
<td>0.86 ± 0.12</td>
<td>0.85 ± 0.15</td>
<td>-0.02 (±0.01, 0.03)</td>
</tr>
</tbody>
</table>

*p = 0.04

P656

CHARACTERIZATION OF CLINICAL AND SEROLOGIC FEATURES OF CROHN'S DISEASE AND ANTI-TNF-α USE IN A CHINESE COHORT

H. Lu, MD, PhD,1 R. Zhang, MD,1 B. Shen, MD,1 J. Hammel, MD,1 B. Shen, MD,2 J. Quan, MD,3 Digestive Disease Institute, Cleveland Clinic, Cleveland, OH. 2. Gastroenterology, Peking Union Medical College Hospital, Beijing, China.

Purpose: A rising incidence of Crohn’s disease (CD) as well as ulcerative colitis has been observed in Asian countries. The clinical phenotypes and disease course of CD in the Chinese population is not well characterized. With availability of anti-TNF-α agent in China, the frequency of its use has not been described.

Methods: Consecutive patients with CD were enrolled in the Peking Union Medical College Hospital, a major tertiary referral center for the whole country, between 1980 and 2007. Descriptive statistics were used.

Results: Of one hundred and sixty-three patients were enrolled, with 93 (68.4%) being male, the mean age at onset of 33.5 ± 15.5 years, and the mean age at diagnosis was 37.3 ± 15.1 years. The mean duration of follow-up was 99.9 ± 86.8 months. Two patients (1.5%) had familial history of IBD and 23 (17.2%) had a history of appendectomy. Thirty-two patients (24.2%) were smokers or ex-smokers. 38.8% (26/67) of patients were ASCA positive and 5.7% (5/86) of patients were ANCA positive. 3% (3/99) of patients ever received anti-TNF-α therapy 85 patients (62.5%) required at least one CD-related bowel resection surgery during the follow-up. The number of bowel resection surgery was 1 in 51 patients (37.5%), 2 in 23 patients (16.9%), and 3 in 11 patients (8.1%). 51 patients (37.5%) had bowel obstruction complication; 26 (19.1%) had abdominal mass, and 8 patients (5.9%) had significant GI bleeding (>800 cc). Of extraintestinal manifestations, 19 patients (14.0%) had arthropathy, 8 (5.9%) had primary sclerosing cholangitis, and 3 (2.2%) had ocular colitis.

Conclusion: In this Chinese cohort, CD was characterized by a low prevalence of family history of IBD and a low prevalence of positive ASCA. Penetrating, structuring, or peri-anal phenotypes were common. Despite the fact that the majority of the patients required bowel-resection surgery, only 3% had ever received anti-TNF-α therapy.

Location and Behavior based on Montreal Classification of Crohn’s Disease

<table>
<thead>
<tr>
<th>Disease Location</th>
<th>Disease Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminal ileum</td>
<td>Non-penetrating non-stricturing</td>
</tr>
<tr>
<td>Colon</td>
<td>Stricture</td>
</tr>
<tr>
<td>Ileocecal</td>
<td>Peneatrating</td>
</tr>
<tr>
<td>Upper GI</td>
<td>Non-penetrating non-stricturing + Perianal</td>
</tr>
<tr>
<td>Terminal ileum + Upper GI</td>
<td>Stricture + Perianal</td>
</tr>
<tr>
<td>Colon + Upper GI</td>
<td>Penetrating + Perianal</td>
</tr>
<tr>
<td>Ileocecal + Upper GI</td>
<td>Perianal</td>
</tr>
</tbody>
</table>

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FACTORS ASSOCIATED WITH CONVERSION OF AN ULCERATIVE COLITIS DIAGNOSES TO CROHN’S DISEASE

A. Wagen, MD, S. Katz, MD, MAGC FACP, B. Fung Liu, MD, D. Onealco, MD, C. Sommers, MD, N. Krohn, MD. Gastroenterology, Long Island Jewish Medical Center, Glen Oaks, NY.

Purpose: Despite clinical, radiographic, endoscopic and histological examinations, approximately 10% of inflammatory bowel disease (IBD) patients cannot be definitively diagnosed with either ulcerative colitis (UC) or Crohn’s Disease (CD). A population of patients initially thought to have UC might manifest characteristics of Crohn’s colitis years later. Henryksen et al. noted a reduction rate of 2.7% of newly diagnosed UC patients to CD within 5 years. Our experience is that approximately 15% of patients with a diagnosis of UC ultimately convert to a diagnosis of CD. Melmed et al. evaluated several clinical ‘red flags’ to help predict a diagnostic change. 3 features were more common in patients whose diagnosis changed from UC to CD: non-bloody diarrhea, weight loss >10% of premorbid weight, and greater length of colon involvement.

Method: A retrospective case control study of patients in a community gastroenterology practice with over 30 years of experience in treating IBD was performed. Patients with a diagnosis of UC and CD were identified by ICD-9 codes. The diagnoses were verified by endoscopic and histologic criteria. Patients who converted from a diagnosis of UC to CD were identified. The red flags evaluated by Melmed were reviewed as well as methods of initial diagnosis, reasons for change in diagnosis, time from UC diagnosis to CD diagnosis, and initial GI and extraintestinal complaints. Analysis was performed to identify features that are associated with conversion of diagnosis.

Results: The Prometheus IBD serology panel was obtained on 17 converters.

Conclusions: The results of this study will help prepare UC patients for the possibility of diagnosis conversion and allow physicians to select appropriate medical and surgical therapy.

Disclosure - Seymour Katz: recipient educational grant: Prometheus

This research was supported by an industry grant from Prometheus
DIAGNOSTIC VALUE OF EGD IN PATIENTS WITH ILEAL POUCH-ANAL ANASTOMOSIS

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Purpose: This study aimed to assess the diagnostic yield of esophagogastroduodenoscopy (EGD) in patients with ileal pouch-anal anastomosis (IPAA) and to identify risk factors associated with CD recurrence.

Methods: The study included 66 patients after subtotal colectomy and ileal pouch reconstruction. Patients were evaluated for recurrence of CD symptoms and endoscopic inflammation. The study included patients with recurrent CD, identified by ileoscopy, and those with endoscopically normal pouches. Risk factors associated with CD recurrence were assessed using multivariable analysis.

Results: Among the 66 patients, 36 (55%) had recurrent CD, 27 (41%) had normal pouches, and 3 (5%) had indeterminate pouches. The most common indications for ileoscopy were CD activity assessment in 34.5%, abdominal pain in 33.3%, diarrhea in 26.4%, and small bowel obstructive symptoms in 18.4%. Risk factors associated with CD recurrence included CD activity assessment in 34.5%, abdominal pain in 33.3%, diarrhea in 26.4%, and small bowel obstructive symptoms in 18.4%. Recurrence of CD in the neo-terminal ileum was diagnosed by ileoscopy in 58 cases (67%). The median interval from the 1st ileostomy to the disease recurrence was 7 IQR (3, 15) years. The most common findings during ileoscopy were erythema 36.2%, ulceration 32.8% and stricture in 24.1%. Risk factors associated with CD recurrence after ileostomy are listed in Table 1.

Conclusion: Ileoscopy via stoma stoma detected 67% of patients with evidence of CD recurrence. Risk factors for postoperative recurrence of CD in these patients were the total duration of CD years from CD diagnosis to the first ileostomy, perforating disease, small bowel disease, and the requirement of biologics.

Factors Associated with Recurrence after Ileostomy: Multivariable Cox Proportional Hazards Analysis

<table>
<thead>
<tr>
<th>Factor</th>
<th>RR (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of CD (yrs)</td>
<td>0.91 (0.86, 0.95)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Years from CD Diagnosis to 1st Ileostomy</td>
<td>1.09 (1.03, 1.12)</td>
<td>0.002</td>
</tr>
<tr>
<td>Perforating CD vs. Other Indications</td>
<td>2.1 (1.2, 3.7)</td>
<td>0.009</td>
</tr>
<tr>
<td>Small Bowel vs. Colon</td>
<td>4.4 (1.3, 14.8)</td>
<td>0.019</td>
</tr>
<tr>
<td>Ileocolitis vs. Colon</td>
<td>1.6 (0.76, 3.5)</td>
<td>0.21</td>
</tr>
<tr>
<td>Use of Biologics after Ileostomy</td>
<td>2.6 (1.4, 4.7)</td>
<td>0.002</td>
</tr>
<tr>
<td>Current Smoker</td>
<td>1.4 (0.73, 2.8)</td>
<td>0.29</td>
</tr>
</tbody>
</table>

Efficacy and Safety of Adalimumab for the Treatment of Japanese Patients with Moderately to Severely Active Crohn's Disease: Results from a Randomized Controlled Trial

L. Shen, MD1,2, R. Lopez, MS,2 E. Queener, LPN3. Digestive Disease Institute, Cleveland Clinic, Cleveland, OH

Purpose: Adalimumab (ADA) is approved for the induction and maintenance of remission in adults with active Crohn's disease (CD).

Methods: This study aimed to determine the efficacy of ADA in inducing remission in Japanese patients (pts) with moderate to severe CD (CDAI > 220). ADA was randomized to receive induction therapy at Week 0 with ADA 160/80 mg, ADA 80/40 mg, or placebo at Week 4. A total of 17 subjects (25.8%) had baseline CD activity CDAI > 300, and mean duration of CD was 9.5 years. In addition, 58% of pts had prior infliximab exposure, 16% were receiving concomitant steroids, 4% 5-aminosalicylates, and 1% immunosuppressants and CD-related antibodies. The point estimates of remission at Week 4 were greater for both ADA groups vs. placebo. Week 4 efficacy data, including remission, CR-70 and CR-100, are provided (Table). ADA was well-tolerated, with 6% serious adverse events (SAEs); 9% in placebo group including 1 infectious SAE (cytomegalovirus), and no lupus, demyelinating diseases, or death.

Conclusion: ADA treatment was efficacious in inducing remission and response at Week 4 compared with placebo for Japanese pts with moderate to severe CD. The 160/80 mg dosage group demonstrated numerical superiority for remission at Week 4, with a trend toward better efficacy of ADA 160/80 mg over 80/40 mg. The results for CR-70 and CR-100 at Week 4 are in line with the results for remission. Efficacy was similar to results in non-Japanese trials, and the rate and type of SAEs were consistent with ADA experience in a non-Japanese CD population. This research was funded by Abbott Laboratories, Abbott Park, IL.

Week 4 Efficacy of Adalimumab in Japanese Patients

<table>
<thead>
<tr>
<th>Population</th>
<th>Remission</th>
<th>CR-70</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA 160/80 mg (n=33)</td>
<td>33%</td>
<td>46% ▼</td>
</tr>
<tr>
<td>ADA 80/40 mg (n=34)</td>
<td>18%</td>
<td>50% ▼</td>
</tr>
<tr>
<td>Placebo (n=23)</td>
<td>13%</td>
<td>17%</td>
</tr>
</tbody>
</table>

*p<0.05 vs. placebo.

Detection of tissue eosinophils and evidence of extensive degranulation in biopsies of inflammatory bowel disease (IBD) patients

A. Leighton, MD, Q. De Petris, MD, S. F. Pasha, MD, J. R. Heigh, MD, S. R. Gurud, MD, C. Protheroe, Tech, S. Janarathanan, MD, M. Crowell, PhD, J. J. Lee, PhD
1. Gastroenterology & Hepatology, Mayo Clinic College of Medicine, Arizona, Scottsdale AZ; 2. Laboratory Medicine and Pathology, Mayo Clinic College of Medicine, Scottsdale, AZ; 3. Biochemistry and Molecular Biology, Mayo Clinic College of Medicine, Scottsdale, AZ.

Purpose: The exact etiology and pathogenesis of IBD is not well defined. In particular, colonic immune responses and the importance of specific pro-inflammatory cells remain controversial. However, the ubiquitous presence of eosinophils (EOS) in the gut submucosa together with hypotheses implicating EOS as potential regulators of the immune tissue microenvironment, suggest these cells may play a role in IBD patients. We tested the hypothesis that tissue biopsies from ulcerative colitis (UC) and Crohn’s disease (CD) patients would display more robust EOS infiltrate associated with degranulation when compared to controls.

Methods: To validate our hypothesis, we used a novel anti-eosinophil peroxidase (EPO) mouse monoclonal antibody capable of reliably detecting both tissue EOS and evidence of released EPO using formalin-fixed paraffin-embedded tissues by immunohistochemistry. We assessed for tissue infiltration of EOS and the release of secondary granule proteins (i.e., degranulation) in colon biopsies from clinically-defined UC and CD patients compared to normal controls using Crohn’s disease activity index (CDAI), histopathology, and clinical score. Additionally, the extent of EOS infiltration and the level of EOS activation (defined by degranulation) were tested as metrics of inflammation. All data are presented as means±SD.

Results: Seventy-nine patients with UC (mean age 42±19yrs, F50%), 5 patients with CD (mean age 44±15yrs, F50%), and 5 healthy patients (mean age 63±12yrs, F80%) were studied. The groups were not statistically different in terms of age or gender. This novel IHC assay confirmed that EOS are increased in IBD patients (i.e., relative to “normal” controls) and these infiltrates are associated with significant levels of EOS degranulation. Interestingly, CD was associated with an intense and diffuse massive release of EOS granule protein compared to UC which was much more focal and patchy and less intense. UC patients also had a unique vascular ring pattern.

Conclusion: Our new anti-EPO monoclonal antibody-based assay demonstrates that IBD is associated with increased EOS and extensive degranulation. These results suggest that EOS activates may be an important component of immune/inflammatory responses in the colon of IBD patients, CD more than UC, and may have future implications in understanding the pathogenesis and treatment of these diseases.
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OUTCOMES OF MEDICAL THERAPY FOR STRUCTURE AND INTERNAL PERFORATING CROHN'S DISEASE: A RETROSPECTIVE COHORT STUDY
R. Samimi, MD, MPH; H. A. Husni, MS, MD, F. DiMaggio, MD, M. Issa, MD, Dartmouth-Hitchcock Medical Center, Lebanon, NH.

Purpose: To describe outcomes of medical therapy for stricture and internal perforating (IP) Crohn's disease (CD).

Methods: Adults with stricture and IP who underwent medical treatment at the University of Maryland IBD program from 2004 to 2008 were evaluated. We assessed 30, 90, and 180 day response rates to medical treatment, time to clinical relapse in responders, time to surgery after medical treatment, and postoperative complications.

Results: 51 patients underwent medical therapy. 60% had stricturing disease, 11% had IP CD, and 29% had both IP and stricture disease. Disease location was ileal in 38%, colonic in 24%, and ileocolonic in 38%. 60% of patients had previous surgical treatment (median, 0.71 years). Patients with ileocolonic disease required surgery at 0.55 years versus 1.07 years in patients with ileal disease (p=0.023). Race and disease location were important factors for time to relapse or surgery in 30-day responders. African Americans (AA) had a median of 0.27 years to relapse or surgery versus 1.30 years in Caucasians (p=0.02). Patients with ileocolonic disease had a median time to relapse of 0.405 years versus 2.23 years in ileal disease and 0.63 years in colonic disease (p=0.015). 24% of patients experienced an intraabdominal septic complication. IASC was noted in 30 days of therapy. Only biologic therapy had an effect on post-op complications with 32% of those receiving biologics having IASC compared to 6% of patients who did not receive biologics (p=0.059).

Conclusion: The outcomes of medical treatment of strictures or IP are poor as 64% ultimately require surgery. However, the short term response rate to medical therapy is 54%. Importantly, IASC was noted in 30 days of therapy in patients with ileocolonic disease. Medical therapy is a failure for ileocolonic or ileal colonic disease location. Further, AA require surgery or relapse earlier than Caucasians. We report a high rate of IASC, especially in patients treated with biologic therapy. This should be considered prior to attempting medical therapy. Further study is needed to determine which, if any, patients should be treated with medical therapy for strictures or IP CD.

Dr. Cross, Speakers Bureau and Grant Support: Centocor, Speakers Bureau and Grant Support: Abbott, Speakers Bureau: UCB

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COMPARISON OF COMPUTED TOMOGRAPHIC ENERGEOGRAPHY WITH STANDARD DIAGNOSTIC ASSESSMENTS FOR DETECTING ACTIVE CROHN'S DISEASE
J. Shafran, MD, P. Burguner, ARNP, Shafarin Gastroenterology Center, Winter Park, FL.

Purpose: To determine the sensitivity and specificity of computed tomographic enterography (CTE) compared with standard diagnostic assessments for detecting active Crohn's disease (CD).

Methods: Seventy-nine patients with confirmed UC were seen for routine or emergency office visits from September 2007 through May 2008 and had baseline CTE and SIBDQ scores captured. Patients' self-reported medication adherence scores were obtained via questionnaire and ranged from 0% to 100%; an adherence score ≥90% was considered adherent.

Results: Seventy-nine patients completed the self-reported medication adherence section of the questionnaire, with 87% (69 patients) reporting adherence of ≥90%. The SIBDQ and partial UCDAI scores in the adherent group (ie, patients with adherence score ≥90%) were favorable, with a mean SIBDQ score of 54.4 (median, 56; range, 30-70) and a mean partial UCDAI score of 1.9 (median, 2; range, 0-3). Conclusion: These data suggest a positive correlation between medication adherence, improved quality of life, and disease activity. While we acknowledge the limitations of patient-reported adherence and subjective questionnaires, routinely utilizing interactive methods to score and follow patients may allow clinicians to observe trends and patient responses to a variety of medical therapies. Continued development of a web-based, interactive tracking system will allow more frequent access to changing patient conditions and may have a significant role in the improvement of adherence outcomes.

Disclosures - Shafran (Salix Pharmaceuticals) Consultant, Speakers Bureau, Investigator for clinical trials; Burguner (Salix Pharmaceuticals) Investigator for clinical trials

This research was supported by an industry grant from Salix Pharmaceuticals

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VITAMIN D DEFICIENCY IN INFLAMMATORY BOWEL DISEASE PATIENTS: ASSOCIATION WITH DISEASE ACTIVITY AND QUALITY OF LIFE
A. W. Samimi, MD, A. Ananthakrishnan, MD, J. Knox, PA-C, Y. Zavadova, MD, B. G. Bruton, MD, M. Issa, MD, Division of Gastroenterology and Hepatology, Medical College of Wisconsin, Milwaukee, WI.

Purpose: Vitamin D (VitD) deficiency is one of the most common deficiencies observed in Inflammatory Bowel Disease (IBD; Crohn's disease (CD) and Ulcerative Colitis (UC)). New evidence suggests that VitD modulates immunity with insufficiently being linked to immune disorders. However, it is unknown if VitD deficiency parallels disease activity in IBD. We determined the prevalence of VitD deficiency in our IBD cohort and examined its relationship with disease activity, complications and disease related quality of life (QOL).

Methods: This was a retrospective cohort study evaluating all IBD patients who had levels of 25-OH Vitamin D (25-OH-OD) measured. VitD deficiency was defined as a <20ng/dl level in healthy individuals and <10ng/dl in patients. Disease activity was assessed using the Harvey-Bradshaw Index (HBI) and UC disease activity index (UCDAI) for CD and UC respectively. The Short inflammatory bowel disease questionaire (SIBDQ) scores were used as measures of QOL. Multivariate logistic regression was used to identify independent predictors of VitD deficiency as well as its association with disease activity and QOL.

Results: There were 304 IBD patients (403 CD and 101 UC) included in our study. The mean disease activity index for the patients with UC was 15.5 y and 10.4 for CD. The mean age was 46.1 y. For the entire cohort our VitD deficiency was defined as a 25-OH-OD level <20ng/dl with severe deficiency being <10ng/dl. Demographic information, disease location and behavior, maintenance regimen, medical hospitalizations and surgeries were recorded. Disease activity was assessed using the Harvey Bradshaw Index (HBI) and UC disease activity index (UCDAI) for CD and UC respectively. The Short inflammatory bowel disease questionnaire (SIBDQ) scores were used as measures of QOL. Multivariate logistic regression was used to identify independent predictors of VitD deficiency as well as its association with disease activity and QOL.

Conclusion: VitD deficiency is common in IBD. Older age and age at diagnosis were the only clinical predictors of low vitamin D levels. VitD deficiency was independently associated with lower QOL and greater disease activity in CD. There is a need for prospective studies to assess this correlation and examine the impact of VitD supplementation on disease course.

P672

A NEW TOOL TO MEASURE THE BURDEN OF CROHN'S DISEASE AND ITS TREATMENT: HOW TO MEASURE QUALITY OF LIFE WITHIN CROHN'S DISEASE PATIENT REGISTRY AND MAKE IT MEANINGFUL
A. L. Wilcox, MD, C. Druggen, ARNP, C. J. Darwey, MD, C. A. Siegel, MD, IBD Center, Dartmouth-Hitchcock & Medical Center, Lebanon, NH.

Purpose: Quality of life is difficult to efficiently measure in the clinic setting. Our aim was to develop and test a simple tool to measure the burden of Crohn's disease and its treatment and to continue to observe how patients and their physicians perceive the impact of Crohn's disease on quality of life (QOL).

Methods: A cross sectional, self-administered survey was developed, revised and tested for understanding. The survey was composed of closed response questions including the SIBDQ and a recently validated “feeling thermometer” to measure disease and treatment burden. The questionnaire was distributed to consecutive patients with Crohn’s disease in the Dartmouth-Inova Health System. The questionnaire was distributed during the time of the visit, the patient’s provider completed a questionnaire which contained the feeling thermometer and the Harvey Bradshaw index (HBI). Results are reported as simple descriptive statistics and Pearson’s correlation coefficients were calculated to compare the response to a

Disclosures - Shafran, (Salix Pharmaceuticals) Consultant, Speakers Bureau, Investigator for clinical trials; Burguner, (Salix Pharmaceuticals) Investigator for clinical trials

This research was supported by an industry grant from Salix Pharmaceuticals

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single thermometer question to the SIBDQ or HBI and to compare responses between pa-
tients and their physicians.

Results: 113 surveys were completed. The mean age of respondents was 41.9 years (range 19-
77) and 68% were female. Mean disease duration was >10 years. 73% had previously required hospitalization and 55% underwent prior surgery. 70% of patients had taken oral steroids, 53% received azathioprine, 63% had taken an immunomodulator, and 45% received at least one dose of infliximab. Using the feeling thermometer (scale 0-100), the mean current health of partici-
pants was 64.4 (SD 21, range 10-99) with projected improvement to 87.5 (SD 13.9, range 20-
100) at 5 years. 70% of patients had a disease burden of 24.3 (SD 18.3, range 0.78). When asked how treatment impacts QOL, the treatment specific burden was 12.7 (SD 15.2, range 0.70). Physicians perceived their patients' mean current health as 71.3 (SD 22, range 11-100) with a disease burden of 19 (SD 18.7, range 0.85). Mean SIBDQ score was 46.2 (SD 13, range 12-70) and mean HBI was 2.9 (SD 3.6, range 0.16). The correlation between the thermometer current health question and SIBDQ was “good to very good” (r=0.74). Physi-
cians’ response to the thermometer QOL question performed less well compared to the HBI (r=0.62). The correlation between patient and physician perception of current health was 0.69.

Conclusion: A single question using the feeling thermometer provides an accurate assessment of QOL in patients with Crohn’s disease. The burden of disease is greater than the burden of treatment for patients. Physicians fairly accurately perceive the impact of Crohn’s disease on their patients’ QOL.

P673 SAFETY PROFILE OF ONCE-DAILY 5.5-G GRANULATED MESALAMINE AS MAINTENANCE THERAPY FOR MILD-TO-MODERATE ULCERATIVE COLITIS: RESULTS FROM 2 PHASE 3 TRIALS


Purpose: Maintenance of ulcerative colitis (UC) remission is an important goal of therapy. Easy-to-administer therapeutic agents with a favorable safety profile can have a substantial im-
 pact on the quality of life of patients with UC and compliance. A novel formulation, granulated mesalamine capsules provides both delayed and extended release of 5-aminosalicylic acid directly to the terminal ileum and colon for once-daily dosing. Granulated mesalamine is currently in late-
stage development for the maintenance of UC remission.

Methods: Data from 2 identically designed, randomized, multicenter trials of granulated mesalamine 1.5 g (4 capsules) once daily (n=367) for 6 months versus placebo (n=185) in pa-
tients who were in UC remission (assessed by revised Sutherland Disease Activity Index rectal bleeding subscore = 0; mucosal appearance subscore <2) were pooled to evaluate the safety profile of granulated mesalamine. Assessment of adverse events (AEs), including UC relapse, clinical hematology, blood chemistry, and urinalysis, was conducted at baseline; months 1.3 and 6.6 last study visit while on study medication; and 2 weeks posttreatment and by telephone (AEs only) at week 2 and months 2, 4, and 5.

Results: Demographics and baseline characteristics were similar between the 2 groups. Mean exposure to study medication was higher with granulated mesalamine (145 d) than placebo (126 d). Fewer patients who received granulated mesalamine (28%) withdrew versus patients who received placebo (43%) due to disease relapse (12% vs 21%, respectively) or AEs (11% vs 16%, respectively). For granulated mesalamine versus placebo, the most common AEs were UC flare (11% vs 24%, respectively), headache (11% vs 8%, respectively), and diarrhea (8% vs 7%, respectively). There was a low and similar incidence of renal, hepatic, or pancreatic AEs in patients treated with granulated mesalamine (6%) and placebo (5%) groups. The percentage of pa-
tients who experienced serious AEs was small in both the granulated mesalamine (1%) and placebo (2%) groups, and no event reported in the granulated mesalamine group was consid-
ered drug-related. No deaths occurred during the study.

Conclusion: Granulated mesalamine appears to have a favorable safety profile when, combined with its low tablet load and convenient once-daily dosing, may support its adminis-
tration and limit the therapy for maintenance of UC remission.

Disclosure - Dr. Zakkour: Consultant TAP Novartis, Pfizer; Grant/Research Support: Salix Pharma-
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chant - Employee: Salix Pharmaceuticals Dr. Shaw - Employee: Salix Pharmaceuticals Dr. Yuan - Employee: Salix Pharmaceuticals Dr. Bortey - Employee: Salix Pharmaceuticals Dr. Forbes - Employee: Salix Pharmaceuticals This research was supported by an industry grant from Salix Pharmaceuticals

P674 CERTOLIZUMAB PEGOL, ADALIMUMAB AND INFlixIMAB DRAMATICALLY REDUCE THE LEVELS OF TLR2, TLR4 AND CD40 EXPRESSION ON LPS-
STIMULATED MONOCYTES

G. Fussani, PhD1, A. Nesbit, PhD, UCB-Celtech, Slough, United Kingdom.

Purpose: Certolizumab pegol, adalimumab and infliximab have been shown to dra-
matically inhibit the LPS-stimulated production of inflammatory cytokines such as IL-1ß by monocytes, whereas etanercept is considerably less potent at mediating this effect.1 This func-
tion is thought to be initiated by signaling through membrane TNFs, although the exact mech-
anism is not completely understood. The aim of this study was to examine the effects of these anti-TNFα reagents on the levels of cell surface molecules such as Toll Like Receptor (TLR) 2 (CD282), TLR4 (CD284) and CD14, which are involved in the response to LPS and which have been shown to be upregulated during inflammation, particularly in Crohn’s disease. Refer-

Methods: A comprehensive search for randomized, placebo-controlled trials of parenteral bio-
logic therapies for the induction of active Crohn’s disease was conducted using online data-
brases. Those trials with an open-label induction were excluded, as were phase I studies. For each trial, the placebo response and remission rates for the study week at which those rates were assessed were recorded. Using logistic regression, the placebo response and remission rates were then analyzed as a function of when the trial was published and the study week at which they were assessed.

Results: A total of 19 trials published from 1997 through 2007, were included in the study. As shown in Figure 1, the placebo remission rate increased significantly with each successive year of publication (OR 1.05 [C.I. 1.01 – 1.08], p=0.0051), meaning the odds of a placebo-induced remis-
sion increased by 5% per year. The increase in placebo response over this time was not sta-
tistically significant (OR 1.01 [C.I. 0.98 – 1.04], p=0.5340). The odds of a placebo induced remis-
sion (OR 1.15 [1.12 – 1.18], C.I. p<0.0001) and response (OR 1.12 [1.09 – 1.14], p<0.0001) significantly increased as the week of evaluation increased.

Conclusion: The remission rate in the placebo arm of trials of parenteral biologic therapies for Crohn’s disease has significantly increased over the past decade. The placebo response rate has not seen a significant increase. The placebo response and remission rates increase with the week of evaluation. There are multiple factors that contribute to this increase in placebo in-
duced remission in Crohn’s disease over time, and accurate estimates of the placebo response and remission rates are crucial in the design of new trials for Crohn’s therapies.

Figure 1 Disclosure - Dr. Bloomfield: Abbott-sponsor's bureau, Centocor- sponsor's bureau, Prometheus- sponsor's bureau

P675 PLACENT IS BECOMING MORE EFFECTIVE IN CROHN’S DISEASE

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Purpose: Randomized, placebo controlled trials are typically used to assess the efficacy of new therapies for Crohn’s Disease. The placebo response and remission rates vary among different studies. The purpose of this study was to analyze how the placebo response and remission rates in Crohn’s trials have changed over time in the new era of parenteral biologic therapies.

Methods: A comprehensive search for randomized, placebo-controlled trials of parenteral bi-
ologic therapies for the induction of active Crohn’s disease was conducted using online data-
brases. Those trials with an open-label induction were excluded, as were phase I studies. For each trial, the placebo response and remission rates for the study week at which those rates were assessed were recorded. Using logistic regression, the placebo response and remission rates were then analyzed as a function of when the trial was published and the study week at which they were assessed.

Results: A total of 19 trials published from 1997 through 2007, were included in the study. As shown in Figure 1, the placebo remission rate increased significantly with each successive year of publication (OR 1.05 [C.I. 1.01 – 1.08], p=0.0051), meaning the odds of a placebo-induced remis-
sion increased by 5% per year. The increase in placebo response over this time was not sta-
tistically significant (OR 1.01 [C.I. 0.98 – 1.04], p=0.5340). The odds of a placebo induced remis-
sion (OR 1.15 [1.12 – 1.18], C.I. p<0.0001) and response (OR 1.12 [1.09 – 1.14], p<0.0001) significantly increased as the week of evaluation increased.

Conclusion: The remission rate in the placebo arm of trials of parenteral biologic therapies for Crohn’s disease has significantly increased over the past decade. The placebo response rate has not seen a significant increase. The placebo response and remission rates increase with the week of evaluation. There are multiple factors that contribute to this increase in placebo in-
duced remission in Crohn’s Disease over time, and accurate estimates of the placebo response and remission rates are crucial in the design of new trials for Crohn’s therapies.

Disclosure - Dr. Bloomfield: Abbott-sponsor's bureau, Centocor- sponsor's bureau, Prometheus- sponsor's bureau

P676 Poster Withdrawn

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LATE-ONSET ULCERATIVE COLITIS: A HISTORICAL ANALYSIS OF THE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE EXPERIENCE

C. Y. Lee, MD, G. C. Crooks, MD. Division of Gastroenterology, Washington University School of Medicine, St. Louis, MO.

Purpose: The clinical course of late-onset UC has yet to be defined. Disease behavior and response to therapy among UC patients who are diagnosed at an older versus younger age may be different. We aimed to determine the clinical behavior and therapeutic requirements of patients diagnosed with UC at age 50 years or greater.

Methods: A retrospective chart review was performed for all patients over age 50 presenting with a new diagnosis of UC from 2001-2006. Patients were seen predominately by 2 gastroenterologists specializing in Inflammatory Bowel Disease care at Washington University School of Medicine. Disease extent and symptom severity at the time of diagnosis, using the Montreal Classification (Sandor et al. Gut 2006;55:749-753), are shown in Tables 1 and 2. Symptom severity assessment at one year (Fig 1) revealed that 70% of patients achieved steroid-free symptomatic remission. Importantly, nearly two-thirds (65%) of patients in steroid-free remission were on a 5-ASA regimen alone (67% F, 63% M). Two patients required colectomy and no deaths occurred during the initial year after diagnosis.

Conclusion: Earlier literature suggested older patients present with limited disease but more severe symptoms. However, only 9% of our late-onset UC population had proctitis or 86% had moderate or severe disease. Despite having greater disease extent and severity, ~2/3 of these older-onset patients achieved steroid free remission at 1 year with a 5-ASA alone. This striking response to therapy may be due to age dependent differences in intestinal barrier and immune cell function, or instead resultant from this population’s tendency to more rapidly seek evaluation and treatment. Regardless, our findings indicate that the prognosis for steroid free remission in late-onset UC may be greater than previously reported, and that 5-ASA’s are a highly effective therapy in this population.

Table 1. UC disease extent at diagnosis.

<table>
<thead>
<tr>
<th>Extent</th>
<th>All (%)</th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proctitis</td>
<td>9</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Left-sided</td>
<td>51</td>
<td>63</td>
<td>41</td>
</tr>
<tr>
<td>Extensive</td>
<td>40</td>
<td>29</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 2. UC symptom severity at diagnosis.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>All (%)</th>
<th>Male (%)</th>
<th>Female (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>14</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Moderate</td>
<td>74</td>
<td>80</td>
<td>68</td>
</tr>
<tr>
<td>Severe</td>
<td>12</td>
<td>8</td>
<td>16</td>
</tr>
</tbody>
</table>

DISCLOSURE: - DR. KAPLAN: Abbott Laboratories, Honorarium; Schering Plough, Honorarium; Dr. Heitman: none Christopher Ma: none Shane Devlin; Schering Plough, Advisor, speaker’s bureau, honouraria; Abbott, Advisor; speaker’s bureau, honouraria; Remo Panaccione: Schering Plough, Advisor, speaker’s bureau, honouraria, research support; Centocor, Advisor, speaker’s bureau, honouraria, research support; Abbott, Speaker’s bureau, honouraria, research support.

OUTCOMES OF ILEAL POUCH ANAL ANASTOMOSIS IN AFRICAN AMERICAN PATIENTS

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Purpose: It has been recognized that inflammatory bowel disease (IBD) has a higher prevalence in African American populations than one thought. Recent studies have suggested there are differences in disease behavior, surgical rates, response to medical therapy, and extraintestinal manifestations between races. The effects of race on the outcomes of patients with ileal pouch anal anastomosis (IPAA) have not been studied.

Methods: Eleven African American patients and 611 consecutive Caucasian patients with IPAA who presented to the Pouchitis Clinic from 2002 to present were included in this study. We compared pouch outcome, Crohn’s disease of the pouch, and chronic pouchitis rates between African American and Caucasian patients. In addition, we also assessed 14 demographic and clinical variables.

Results: There were no significant differences in the frequency of pouch failure, Crohn’s disease (CD) of the pouch, or rates of chronic pouchitis between African American and Caucasian patients. There was also no significant difference found in rates of pouch-related hospitalization and extraintestinal manifestations of IBD. African Americans were found to have significantly shorter duration of IBD (11.8 years vs. 17.2 years, p<0.001) as well as significantly shorter duration of pouch (3 years vs. 7 years, p<0.02). The age of African American patients who presented at the Pouchitis Clinic appeared to be younger (Table 1).

Conclusion: While there were no significant differences in pouch outcome between the races, African American patients appeared to be younger at presentation, with a shorter duration of IBD and ileal pouch. The data suggest that natural history of ulcerative colitis and disease course after restorative proctocolectomy may be different between the racial groups. Further studies are needed.

Table 1. Demographics and Clinical Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>African American (n=11)</th>
<th>Caucasian (n=611)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>38.6 (10.2)</td>
<td>45.4 (14.4)</td>
<td>0.053</td>
</tr>
<tr>
<td>Duration of IBD (yrs)</td>
<td>11.8 (3.5)</td>
<td>17.2 (10.1)</td>
<td>0.001</td>
</tr>
<tr>
<td>Duration of pouch (yrs)</td>
<td>3 (1.9)</td>
<td>7 (4.12)</td>
<td>0.026</td>
</tr>
<tr>
<td>Pouch Failure</td>
<td>1 (0.1)</td>
<td>47 (7.61)</td>
<td>0.5</td>
</tr>
<tr>
<td>Crohn’s Disease of the Pouch</td>
<td>2 (18.2)</td>
<td>128 (21.0)</td>
<td>0.99</td>
</tr>
<tr>
<td>Chronic Pouchitis</td>
<td>1 (0.1)</td>
<td>197 (32.2)</td>
<td>0.19</td>
</tr>
<tr>
<td>Pouch-related Hospitalizations</td>
<td>2 (18.2)</td>
<td>86 (14.1)</td>
<td>0.66</td>
</tr>
<tr>
<td>Primary Sclerosing Cholangitis</td>
<td>1 (0.1)</td>
<td>28 (4.6)</td>
<td>0.48</td>
</tr>
</tbody>
</table>

Values presented are mean (SD) for age and duration of UC, median (P25, P75) for duration of pouch, and N (%) for all categorical variables. p Values correspond to Student’s t-tests for age and duration of UC, Wilcoxon rank sum tests for duration of pouch, number of visits, and duration of follow-up, and Fisher’s Exact tests for all categorical variables.

IMMUNOMODULATOR AND CORTICOSTEROID USE ARE NOT ASSOCIATED WITH PROLONGED SUCCESS WITH INFlixIMAB

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Purpose: Infliximab (IFX), a chimeric monoclonal antibody to tumor necrosis factor-alpha, is an effective treatment for Crohn’s disease (CD) and ulcerative colitis (UC). Some patients, however, do not respond to IFX or lose response with subsequent infusions, often requiring dose adjustments. The aim of this study was to identify factors associated with a loss of response to IFX in inflammatory bowel disease patients in a study population from an academic medical center’s infusion center.

Methods: Patients receiving IFX between 1998 and 2007 for CD or UC at a university infusion center were identified by chart review. Demographic data, IFX dosing schedules, concurrent medications and laboratory values were collected. Kaplan-Meier testing and Cox proportional hazards regression analysis were performed to determine which variables were associated with IFX discontinuation.

Results: Of 106 patients who received IFX for CD or UC between 1998 and 2007 were reviewed. 83 patients met inclusion criteria and were followed for a median of 16.6 months. 70
ONCE-DAILY GRANULATED MESALAMINE

Purpose: The main goals of treatment for patients with ulcerative colitis (UC) are to induce and maintain remission of disease, thereby improving patient quality of life. Granulated mesalamine delivers the first-line therapeutic agent, 5-aminosalicylic acid (5 ASA), directly to the colon and allows for once-daily (q.d.) dosing via delayed- and extended-release mechanisms. This study evaluated the effect of a high-fat meal on the pharmacokinetics (PK) of a single 5-g dose of granulated mesalamine.

Methods: Thirty healthy adults (23 male, 7 female; mean age, 24 y; range, 18-43 y) completed the crossover study. Participants received a single oral dose of granulated mesalamine 1.6 g q.d. after an overnight fast or consumption of a high-fat breakfast. Plasma, urine, and feces were collected during the 4 days after dosing to assess the effect of a high-fat meal on the PK of 5-ASA and its metabolite, N-Ac-5-ASA. Maximum concentration (Cmax), area under the concentration-time curve from time 0 to infinity (AUCinf), and time to maximum concentration (Tmax) were determined.

Results: Plasma Cmax values for 5-ASA and N-Ac-5-ASA were equivalent in the fed and fasted conditions (Table). After the high-fat meal, 5-ASA AUCinf was slightly increased, which was not considered clinically significant. The Tmax was prolonged for 5-ASA and N-Ac-5-ASA after the high-fat meal. The high-fat meal had no effect on cumulative fecal and urinary excretion of 5-ASA plus N-Ac-5-ASA but did result in a 29% decrease in mean fecal excretion of 5-ASA, a 17% increase in mean N-Ac-5-ASA fecal excretion, and a 30% increase in mean 5-ASA urinary excretion compared with fasted-condition excretion values.

Conclusion: These findings suggest that the overall systemic absorption of 5-ASA and N-Ac-5-ASA is low and comparable whether administered q.d. or b.i.d. after an overnight fast or consumption of a high-fat meal. Plasma, urine, and feces were collected during the 4 days after dosing to assess the effect of a high-fat meal on the PK of 5-ASA and its metabolite, N-Ac-5-ASA. Maximum concentration (Cmax), area under the concentration-time curve (AUCinf), and time to maximum concentration (Tmax) were determined.

Plasma Pharmacokinetics (Mean ± Standard Deviation)*

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Fasted (N=30)</th>
<th>Fed (N=30)</th>
<th>Fed/Fasted Ratio (90% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cmax, µg/mL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-ASA</td>
<td>2.5±1.45</td>
<td>2.5±1.27</td>
<td>104 (87-125)</td>
</tr>
<tr>
<td>N-Ac-5-ASA</td>
<td>3.7±1.85</td>
<td>3.6±1.38</td>
<td>103 (90-117)</td>
</tr>
<tr>
<td>AUC0-τ, µg·h/mL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-ASA</td>
<td>12.98±6.09</td>
<td>13.75±7.50</td>
<td>111 (96-128)</td>
</tr>
<tr>
<td>N-Ac-5-ASA</td>
<td>44.91±18.47</td>
<td>43.2±25.56</td>
<td>95 (84-108)</td>
</tr>
<tr>
<td>Tmax, h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-ASA</td>
<td>4.00 (3.00-8.00)</td>
<td>8.00 (3.00-20.00)</td>
<td>-</td>
</tr>
<tr>
<td>N-Ac-5-ASA</td>
<td>6.00 (2.00-16.00)</td>
<td>8.00 (3.00-24.00)</td>
<td>-</td>
</tr>
</tbody>
</table>

CI, confidence interval. *Ratios and CIs calculated from geometric means of log transformed results; ratios multiplied by 100. **Median (range).
**P683**

**A PHARMACOKINETIC AND SCINTIGRAPHIC COMPARISON OF MMX™ MESAMALINE AND DELAYED-RELEASE MESAMALINE**

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**Purpose:** To compare the plasma pharmacokinetic (PK) profiles, regional gastrointestinal transit time and tablet disintegration in the colorectum between a single dose of MMX mesalamine (1.2g/tablet; Lialda™, Shire Pharmaceuticals Inc., Wayne, PA, USA) and pH-dependent delayed-release mesalamine (DRM [Asacol™ 400mg; Giuliani SpA, Italy]).

**Methods:** Five healthy male subjects aged between 18 and 65 years. Subjects (n=8) were randomized to MMX mesalamine (1x1.2g tablet radiolabeled with 1.5MBq 153Sm) or DRM (3x400mg tablets each radiolabeled with approximately 0.5MBq [153Sm], respectively). Subjects were admitted to the unit during the evening of Day -1 and were fasted for 8 hours prior to, and until 4 hours post-dosing. On Day 1, all subjects received their allocated formulation. Subjects also ingested 20 radio-opaque beads immediately after intake of study drug. A series of PK, scintigraphic and safety assessments were performed until 96 hours post-dose when the subjects were discharged from the unit and asked to collect their stool samples until all radio-opaque marker beads had been recovered.

**Results:** MMX mesalamine and DRM appeared to have similar PK profiles (possibly due to both formulations initially releasing 5-ASA in the terminal ileum where the majority of systemic absorption occurs). There were numerous18 between-treatment differences in measured parameters (Table 1). Initial tablet disintegration appeared to occur earlier in the GI tract for MMX mesalamine than for DRM (Table 2). Complete disintegration occurred later for MMX mesalamine compared with DRM (Table 2). GI transit was complete in approximately 70 hours after administration of either formulation.

**Conclusion:** The MMX mesalamine releases 5-ASA in a steady fashion throughout the large intestine. In contrast, DRM appears to release the majority of its 5-ASA load in the ascending colon. PK analysis did not discriminate between the differences in release profile between the two formulations.

**Table 1. Pharmacokinetic parameters of 5-ASA (mean/SD)**

<table>
<thead>
<tr>
<th>Formulation</th>
<th>Lag time (hrs)</th>
<th>Time to max. concentration (hrs)</th>
<th>Max. concentration (ng/mL)</th>
<th>Area-under-curve 0-96 hrs (ng/hr/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMX mesalamine</td>
<td>3.5±1.4</td>
<td>7.0±3.0</td>
<td>71±1549</td>
<td>4,069±3,028</td>
</tr>
<tr>
<td>DRM</td>
<td>4.2±2.5</td>
<td>8.8±3.2</td>
<td>790±262</td>
<td>4,444±2,610</td>
</tr>
</tbody>
</table>

**Table 2. Tablet disintegration (hours post-dose [mean/SD])**

<table>
<thead>
<tr>
<th>Disintegration</th>
<th>Initial</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMX mesalamine</td>
<td>4.75±1.3</td>
<td>17.37±6.3</td>
</tr>
<tr>
<td>DRM</td>
<td>6.16±1.8</td>
<td>7.27±2.1</td>
</tr>
</tbody>
</table>

**Disclosure:** Dr H Wray - Lead study investigator, study funded by Shire Pharmaceuticals Inc; Dr R Joseph, Dr M Palmen and Dr D Pierce - Employees of Shire Pharmaceuticals Inc. This research was supported by an industry grant from Shire Pharmaceuticals Inc.

**P684**

**A PROSPECTIVE, CONTROLLED LONGITUDINAL STUDY OF THE EFFECTS OF ORAL STEROIDS AT 3, 6 AND 12 MONTHS ON BONE MINERAL DENSITY (BMD) IN PATIENTS WITH IBD**

**Purpose:** The rate and course of bone loss at 3, 6 and 12 months in patients treated with a 3 month course of prednisone is not well described in IBD. The objective of this prospective study is to determine the rate and course of bone loss at 3, 6 and 12 months in patients treated with a 3 month course of prednisone (Pred), compared to a control group matched for disease activity, not treated with prednisone (non-P).

**Methods:** 18 Pred patients (n=18) underwent baselineDEXA to determine BMD at the lumbar spine (LSS) and bilateral hips, and were compared to 15 non-P patients with active disease; all patients underwent serial DEXA measurements at 3 and 6 and 12 months. All patients were treated empirically with oral calcium 1500 mg/day and vitamin D 800 IU/day. Baseline disease activity was assessed using the modified Mayo score for UC, and the Harvey Bradshaw Index for CD.

**Results:** 17 UC patients and 16 CD patients, 23 males and 10 females were studied. There were no demographic differences or baseline risk factors between groups. The proportion of patients with osteoporosis at baseline were similar in the Pred and non-P groups (17 vs. 20%). The decline in mean LSS t scores at 3 months, compared to baseline, was greater in the Pred group at the LSS compared to non-P (0.15 vs 0.0), as well as at the hip (-0.23 vs 0.0). There was no further decline in mean t scores from 3 to 6 and 12 months at either the LSS or hip in the Pred group. At 3 months, 5 of 18 (28%) patients in the Pred group had >5% decline in BMD in the LSS and 3 of 18 (17%) in the Pred group had >5% decline in BMD at the hip. At 6 months no additional patients in the Pred group developed >5% BMD loss at the LSS, and 4 of 18 (22%) improved compared to baseline. Between 3 and 12 months 1 additional Pred patient had >5% BMD loss at the hip.

**Conclusion:** A 3 month course of prednisone led to a greater decline in mean t scores at both the LSS and hip in patients by 3 months. However, in this group of patients who had discontinued prednisone by 3 months, and maintained on calcium and Vitamin D supplementation, there was no additional loss in BMD at the LSS or hip in prospective follow-up at 6 and 12 months. A short course of prednisone, therefore did not lead to progressive bone loss beyond the duration of its use for up to 1 year. This research was supported by an industry grant from Proctor and Gamble.

**P685**

**IMPACT OF NARCOTIC USE ON REQUIREMENT OF COLECTOMY IN INPATIENTS WITH ULCERATIVE COLITIS**

**Purpose:** Narcotics have been commonly used to treat diarrhea and abdominal pain. The effect of narcotic use in the disease course of ulcerative colitis (UC) has not been studied. The aim of the study was to evaluate the impact of narcotic use on the requirement of colectomy in inpatients with UC.

**Methods:** All patients with UC admitted to GI service for disease flare-ups between 2002 and 2007 were included. Exclusion criteria: 1) patients with UC admitted to colorectal surgery service for emergent or elective colectomy; 2) patients with Crohn’s disease. Demographic, clinical, and laboratory data were reviewed. The definition of narcotics use was oral or IV administration of the agents at the time of admission or hospital transfer. Proctocolectomy was defined as the operation performed during the current or subsequent hospitalization. Stepwise multivariable analysis was performed.

**Results:** 105 patients were included. 23 (21.9%) patients were on oral or intravenous narcotics at the time of admission or hospital transfer. 38 (36.2%) patients had colectomy eventually. 53 were males. 30 (28.6%) patients were transferred from outside institution. 18 had colectomy during hospitalization and 20 had colectomy during subsequent hospitalization. There was no significant difference between patients with and without narcotic use regarding age, gender, disease extent, steroid use, hemoglobin, white blood cell count, platelet count, rate of readmission, and rate of colectomy (39.1% vs 35.4%, p=0.11). On multivariate analysis only steroid use remained in the model as an independent risk factor of predicting colectomy (Odds ratio, 2.412, 95% confidence interval, 1.235–4.713, p=0.016). Narcotic use was not an independent risk factor of colectomy in this study cohort.

**Conclusion:** Narcotic use was common and was observed in 1/4 patients with UC who were admitted to GI service. However, the narcotic use appeared not to have an independently significant impact on the colectomy rate in inpatients with UC. In contrast, the requirement of steroid treatment was associated with an increased risk for colectomy.

**P686**

**USE OF A BLOOD IFN-γ RELEASE ASSAY (QUANTIFERON-TB GOLD TEST) FOR TUBERCULOSIS SCREENING IN INFLAMMATORY BOWEL DISEASE (IBD)**

**Purpose:** Reactivation of latent Mycobacterium tuberculosis (TB) is a major infectious complication associated with anti-TNF-α therapy in IBD. Tuberculin skin tests (TST) may have high rates of false negatives due to concomitant immunosuppressive therapy. Newly developed blood IFN-γ release assays may improve accuracy for detection of prior TB exposure. We evaluated the performance of a commercially available test (Quantiferon-TB Gold test; QFT-G) for TB screening in a cohort of IBD patients.

**Methods:** We performed a retrospective, observational study of all patients who were initiated and maintained on an anti-TNF-α agent in a single IBD referral center over a one-year time period. Modality of initial or follow-up TB screening (QFT-G vs. Tuberculin Skin Test; TST) was recorded and their performance was analyzed.

**Results:** Among 184 IBD patients, 20% (n=36) had the QFT-G as the initial method of testing (Group A), while 80% (n=118) patients had TST. The two groups were similar in demographic characteristics. In Group A, the QFT-G test was negative in 96.7% of patients (n=29), and was indeterminate for 3.3% (n=1). These patients were followed for an average of 14 (+9.5) months. None of these patients has developed TB to date. In Group B, the TST was negative in 93.2% of patients (n=110), and positive in 6% (n=7). One patient (0.8%) had an allergic reaction to TST. The patients were followed for a period of 23 (+18.6) months with no sign of TB to date. Of the 7 patients who had a positive TST, 2 patients were later tested with QFT-G Three of those had negative results and were subsequently started on isoniazid with no signs of TB infection/reactivation (mean follow-up 14 months (range 8–24 months). Forty-nine of the 111 patients who initially tested negative with TST were later tested with QFT-G for follow-up. The QFT-G was negative in all of the patients. Since our last QFT-G, the patients were followed for a period of 17 (+11) months, with no signs of TB to date.
Conclusion: QFT-G is a useful test in screening IBD patients for TB exposure, initially and during annual screening. QFT-G interferon gamma release assays may help to facilitate TB screening in IBD patients prior to initiation of anti-TNF-α therapy, as they do not require return visits and will give a result following a single encounter.

Disclosure - Dr. Bino - Consultant, Speaker’s Bureau, Grant/Research Support: Centocor Consultant, Speaker’s Bureau Abbott Consultant, Speaker’s Bureau: CCR Pharma.

P087

THE PREVALENCE OF POSITIVE SEROLOGIC TESTS FOR CELIAC SPRUE DOES NOT DIFFER BETWEEN IRRITABLE BOWEL SYNDROME (IBS) PATIENTS AND HEALTHY CONTROLS

S. Sato-Loftus, MD, MPH1, T.L. Brantner, J. M. Zimmerman, N. J. Talley, MD, PhD,2 T. A. Murray, MD,1 J. Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN; 2. Department of Internal Medicine, Mayo Clinic, Jacksonville, FL.

Purpose: In a systematic review, Cash, et al. have reported that routine performance of serologic tests for celiac disease may be useful in patients with IBS but have suggested that validation of studies indicating an increased prevalence of celiac disease in this population is needed. Spiegel, et al. performed a cost-effectiveness analysis and found that testing for celiac disease has acceptable cost when the prevalence is above 1%. The aim of this study was to compare the prevalence of celiac disease in patients with and without IBS.

Methods: As part of a large, family case-control study conducted at a major Midwestern medical center, outpatients with a physician diagnosis of IBS and age, gender, race, and region group-matched outpatients without IBS were recruited and asked to complete a validated bowel disease questionnaire and provide a blood sample. Medical chart review was also performed to confirm or refute an underlying IBS diagnosis and other gastrointestinal comorbidities including celiac disease. The blood sample was separated into DNA and serum, and stored serum was used for tissue transglutaminase (TTg) IgA testing using validated assays for screening, followed by testing for endomyosal antibodies (EMA) using immunohistochemistry in those with positive or weakly positive TTg test results. Individuals considered to have celiac disease if both test results were positive. Chi-square analysis was performed to compare the prevalence between the two groups.

Results: Serum was studied from 566 case- and 555 control-probands 80% of participants were female with a median age of 50, 69% of cases and 0% controls met Rome I or II criteria for IBS. 7 cases and 5 controls had a positive or weakly positive TTg test. 6 cases (1%) and 3 (0.5%) controls were confirmed to have celiac disease by EMA testing (NS, p=0.05). Of the IBS cases with celiac, 2 reported normal bowel habits in the last 30 days, 2 reported constipation, and 2 reported constipation and diarrhea. All controls with celiac disease reported normal bowel habits.

Conclusion: Our study found no difference in the prevalence of celiac disease between patients with IBS and patients without IBS seen at a tertiary medical center. Furthermore, the prevalence of celiac disease was only 1%, suggesting that testing for celiac disease is not cost-effective.

This research was supported by an industry grant from NIH and Solvay Pharmaceuticals.

P088

IS HIGH-DEFINITION MANOMETRY A COMPREHENSIVE TEST OF ANAL SPHINCTER FUNCTION: COMPARATIVE STUDY WITH MANOMETRY AND ULTRASOUND

2008 ACG/AstraZeneca Senior Fellow Award

K. Tanpipatlachak, MD1, J. Paulson, BS1, R. A. Attaluri, MD1, S. Rao, MD, PhD, FRCPC2, 1. Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA; 2. Division of Colon and Rectal Surgery, Chulalongkorn University, Bangkok, Thailand.

Purpose: Anorectal manometry (ARM) provides useful information on anal sphincter function, and anal ultrasound (AUS) on morphology. Hypothesis: High-definition manometry (HDM) provides comprehensive information on integrated anal sphincter function. Aim: To examine the anal sphincter structure and function with a novel technique, HDM, and to compare its yield with ARM and AUS in subjects with fecal incontinence (FI), constipation (CC) and healthy controls (HV).

Methods: The HDM probe (Sierra Scientific Instruments) is 6 cm long, 1 cm diameter with 256 pressure sensor elements arranged in 16 axial sites at 16 levels with a lumen for balloon inflation. ARM was performed with 6-sensor-solid-state probe (Gaeltec, UK) and AUS with 7 mHz pressure sensor elements arranged in 16 axial sites at 16 levels with a lumen for balloon inflation. HDM probe (Sierra Scientific Instruments) is 6 cm long, 1 cm diameter with 256 pressure sensor elements arranged in 16 axial sites at 16 levels with a lumen for balloon inflation. ARM was performed with 6-sensor-solid-state probe (Gaeltec, UK) and AUS with 7 mHz pressure sensor elements arranged in 16 axial sites at 16 levels with a lumen for balloon inflation. HDM provides comprehensive information on integrated anal sphincter function. Aim: To examine the anal sphincter structure and function with a novel technique, HDM, and to compare its yield with ARM and AUS in subjects with fecal incontinence (FI), constipation (CC) and healthy controls (HV).

Results: Six HV (F/M=4/2, mean age 34 yrs), 5 FI (F/M=3/2, mean age 55 yrs) and 7 CC (F/M=5/2, mean age 43 yrs) subjects were examined. Anal sphincter pressure profiles and sphincter length (mean ± SD) showed good correlation between ARM and HDM (r=0.53±0.02). ARM showed anterior sphincter defects in 1 HV, 3 FI and 3 CC subjects. HDM showed anal sphincter defects in 1 HV, 4 FI, and 2 CC subjects. Agreement for detection of sphincter defects was 100% in HV, 40% in FI, 57% in CC. Mean procedure related discomfort rated on VAS (10=worst discomfort) were 3.4, 4.7 and 4.0 for ARM, HDM and AUS, respectively (p=0.44).

Conclusion: HDM is feasible, well tolerated and provides comparable information to that obtained with ARM and AUS. The circumferential array gives superior definition of anal sphincter length, relaxation and paradoxical contraction. HDM also provides vector manometry profile, and its 3D display provides both functional and anatomical information of anal sphincter, all in a single test.
NOVEL GENOMIC BIOMARKERS THAT DIFFERENTIATE BETWEEN IRRITABLE BOWEL SYNDROME AND NORMAL PATIENTS USING PERIPHERAL BLOOD SPECIMENS
C. C. Harris, M.S., T. Y. Ma, M.D., Ph.D., J. A. Leighton, M.D., L. Tang, Ph.D., P. Doherty, R.N., F. Zhou, Ph.D., T. Williams, M.D., L. Davis, Ph.D., J. Alsbrook, II, Ph.D., J. Exagen Diagnostics, Inc., Albuquerque, NM; 2. Internal Medicine, Division of Gastroenterology and Hepatology, University of New Mexico, Albuquerque, NM; 3. Division of Gastroenterology and Hepatology, Mayo Clinic, Scottsdale, AZ; 4. Pathology, University of New Mexico, Albuquerque, NM.

Purpose: A laboratory diagnosis of Irritable Bowel Syndrome (IBS) would have great clinical utility for primary care physicians and gastroenterologists. We describe here a gene expression biomarker set that distinguishes patients with an IBS diagnosis from normal patients.

Methods: In an effort to discover a molecular profile diagnostic for IBS we investigated 10 genes that were previously identified by applying Exagen’s proprietary in silico data analysis engine. Compara™ to publicly available full-genome expression microarray data from 85 IBD patients and 42 normal controls. The expression levels of these 10 discovery phase genes were assayed in a pilot study of independently ascertained prospective cohorts of 98 patients with IBS and 98 healthy individuals free from GI symptoms. Each IBS patient was diagnosed by a board-certified gastroenterologist using Rome I criteria. All protocols were IRB approved; informed consent was obtained and peripheral blood samples and clinical data were collected from all patients. Expression data was obtained from peripheral whole blood samples (with no mononuclear enrichment) by isolating total mRNAs, synthesizing cDNAs, and performing real-time quantitative PCR. Expression levels of the 10 candidate biomarker genes were assayed on each patient specimen and normalized to a within-patient reference gene.

Results: An optimal scoring algorithm for classification of patients as IBS or normal was derived based on 4 of the 10 tested genes (BLCAP, UBE2G1, THL8, HST1H3BK). The classification of patients by clinical diagnosis and test result is given in Table 1. The diagnostic performance of the classification is summarized in Table 2. The NPV for an adjusted 25% prior probability of IBS (a rule-out scenario) is 96%. The PPV for an adjusted 75% prior probability of IBS (a rule-in scenario) is 93%.

Conclusion: The genes identified as diagnostic of IBS in this pilot study, if confirmed in a larger clinical validation study, have potential as a clinical laboratory diagnostic test for IBS.

Disclosure: Mr. Harris – Employee: Exagen Diagnostics, Inc.; Dr. Davis – Employee: Exagen Diagnostics, Inc.; Dr. Alsbrook – Employee: Exagen Diagnostics, Inc.; Dr. Feng – Employee: Exagen Diagnostics, Inc.; Dr. Williams – Employee: Exagen Diagnostics, Inc.; Dr. Leighton – Advisory Board Member: Exagen Diagnostics Inc.; Dr. Ma – Advisory Board Member: Exagen Diagnostics Inc.

Table 1. Classification by 4-gene IBS biomarker

<table>
<thead>
<tr>
<th>Biomarker Classification</th>
<th>Clinical Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBS</td>
<td>Normal</td>
</tr>
<tr>
<td>Normal</td>
<td>87</td>
</tr>
</tbody>
</table>

* Fisher’s exact Odds Ratio (2-sided) = 28.3, p < 2 x 10^-16

Table 2. Diagnostic performance of 4-gene IBS biomarker

<table>
<thead>
<tr>
<th>Biomarker Classification</th>
<th>Clinical Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBS</td>
<td>Normal</td>
</tr>
<tr>
<td>Normal</td>
<td>84%</td>
</tr>
</tbody>
</table>

* result based on study prevalences

Poster Abstracts – Monday, October 6

P01

RIFAXIMIN SIGNIFICANTLY IMPROVES QUALITY OF LIFE VS PLACEBO IN PATIENTS WITH DIARRHEA-PREDOMINANT IRRITABLE BOWEL SYNDROME

Purpose: A randomized, double-blind, multicenter, phase 2 trial showed the nonabsorbed antibiotic rifaximin 550 mg twice daily (b.i.d.) significantly improved IBS symptoms versus placebo in patients with diarrhea-predominant IBS (IBS-D). Secondary analyses from that study evaluated the efficacy of rifaximin for improving quality of life (QOL) measures in patients with IBS-D.

Methods: Adults diagnosed with IBS-D (Rome II criteria) received rifaximin 550 mg b.i.d. or placebo for 14 days. Both groups received placebo for an additional 14 days after the initial 2-week treatment. Quality of life was assessed with the 34-item IBS-QOL questionnaire at baseline and 4 weeks after initiating treatment. Each item was scored on a 5-point scale (1=not at all; 2=slightly; 3=moderately; 4=quite a bit; and 5=extremely or a great deal). Results for composite and subscale scores were converted to a scale ranging from 0 to 100, with higher scores indicating better QOL. Analyses included all randomized patients.

Results: A total of 388 patients were treated at 75 centers in the United States; 191 patients received rifaximin and 197 patients received placebo during the 2-week initial treatment period. The mean improvement from baseline to overall QOL scores at week 4 was significantly greater with rifaximin compared with placebo (Table). Patients in the rifaximin group reported significantly greater mean improvement from baseline in QOL scores for diarrhea, body image, health worry, social reaction, and relationship subscales compared with placebo (Table). Rifaximin was well tolerated; with similar incidence of adverse events compared with placebo.

Conclusion: In patients with IBS-D, rifaximin 1100 mg/d for 14 days significantly improved QOL measures compared with placebo. These findings, along with previously reported data, suggest a potential therapeutic role for rifaximin 550 mg b.i.d. for improving symptoms and QOL in patients with IBS-D.

Mean Change From Baseline in IBS-QOL Scores at Week 4

<table>
<thead>
<tr>
<th>Domain</th>
<th>Rifaximin 1100 mg/d (n=191)</th>
<th>Placebo (n=197)</th>
<th>Improvement with rifaximin over placebo, % P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall score</td>
<td>20.4</td>
<td>15.8</td>
<td>28.7</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>24.8</td>
<td>19.8</td>
<td>25.3</td>
</tr>
<tr>
<td>Interference with activity</td>
<td>22.2</td>
<td>18.1</td>
<td>22.2</td>
</tr>
<tr>
<td>Body image</td>
<td>20.1</td>
<td>14.6</td>
<td>36.7</td>
</tr>
<tr>
<td>Health worry</td>
<td>16.0</td>
<td>12.2</td>
<td>30.6</td>
</tr>
<tr>
<td>Food avoidance</td>
<td>25.0</td>
<td>20.5</td>
<td>22.1</td>
</tr>
<tr>
<td>Social reaction</td>
<td>17.3</td>
<td>13.2</td>
<td>31.6</td>
</tr>
<tr>
<td>Sexual</td>
<td>13.6</td>
<td>10.9</td>
<td>24.9</td>
</tr>
<tr>
<td>Relationship</td>
<td>14.9</td>
<td>10.7</td>
<td>39.5</td>
</tr>
</tbody>
</table>

Disclosure - Chy. Talley, Lembo, (Salix Pharmaceuticals) Speakers Bureau, Consultant Yu, Borety (Salix Pharmaceuticals) Employee

This research was supported by an industry grant from Salix Pharmaceuticals

P02

NO EVIDENCE FOR ASSOCIATION OF TEGASEROD WITH CARDIOVASCULAR ADVERSE ISCHEMIC EVENTS (CVE) IN ROUTINE CLINICAL PRACTICE

Purpose: Tegaserod, a partial 5HT4 agonist previously approved for treatment of irritable bowel syndrome with constipation and chronic idiopathic constipation, was suspended from marketing in the US in 2007 based on results of a pooled analysis of CVE from 29 placebo-controlled trials of tegaserod (18,645 patients). There were more CVEs in patients treated with tegaserod (3.01% vs placebo: 1.03%) (P<0.001). Our aim was to evaluate the association of tegaserod with CVE in a setting representing routine clinical practice.

Methods: Within a large US health insurance database, we conducted a matched cohort study of 52,229 patients who initiated tegaserod and 52,229 patients with similar characteristics (diagnoses, medications and health care utilization) who did not initiate tegaserod as of entry into the cohort. Matching was based on highly predictive propensity scores incorporating over 20 characteristics associated with tegaserod initiation. Subjects were followed for up to 6 months for the occurrence of CVE comprised of cardiovascular events (i.e., myocardial infarction, acute coronary syndrome and coronary revascularization) and cerebrovascular events (i.e., stroke). CVE were identified using in insurance claims and were confirmed by medical records (85% reviewed). We conducted as-matched analyses providing adjusted hazard ratios (HR) and 95% confidence intervals (CI), along with as-treated analyses accounting for changes in dispensed therapy up to 6 months after cohort entry which provided adjusted rate ratios (RR).

Results: The tegaserod initiator and non-initiator cohorts were essentially identical with respect to age, gender, concomitant medical conditions, medication use and geographic distribution at the start of follow-up. There was no increase for any component CVE event or stroke with tegaserod vs the matched comparator group; totals are presented in the table below. These results were largely unaffected by adjustment for numerous characteristics and in subgroups defined by a wide range of stratification variables.

Conclusion: This large cohort study of patients within a US clinical practice setting found no evidence of increased risk for myocardial infarction, cardiac revascularization or other cardiovascular ischemic event in tegaserod initiators or users relative to non-initiators or non-users.

Table 1. As-Matched Results

<table>
<thead>
<tr>
<th>CVE</th>
<th>Total Event Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroke</td>
<td>16/10,359</td>
</tr>
</tbody>
</table>

P090

The mean improvement from baseline to overall QOL scores at week 4 was significantly greater with rifaximin compared with placebo (Table). Patients in the rifaximin group reported significantly greater mean improvement from baseline in QOL scores for diarrhea, body image, health worry, social reaction, and relationship subscales compared with placebo (Table).

Rifaximin was well tolerated; with similar incidence of adverse events compared with placebo.

Conclusion: In patients with IBS-D, rifaximin 1100 mg/d for 14 days significantly improved QOL measures compared with placebo. These findings, along with previously reported data, suggest a potential therapeutic role for rifaximin 550 mg b.i.d. for improving symptoms and QOL in patients with IBS-D.
THE RISK MANAGEMENT PROGRAM (RISKMAP) IS EFFECTIVE IN MITIGATING SERIOUS OUTCOMES OF ILEAL OXYTOCIN ADMINISTRATION: PREDOMINANT IRRITABLE BOWEL SYNDROME

K. Z. Ameen, MD, V. Y. Basu, MD, PhD, A. Sivakumar, MD, S. T. Yun, MD, PhD, L. P. D. Han, MD, PhD, Science and Technology, Prometheus Laboratories, San Diego, CA.

Purpose: The SHT3 receptor antagonist alnoketrone hydrochloride (ALO) was withdrawn from the US market in November 2000 after 9 months of marketing due to unexpected but serious adverse events (AEs) of ileal oxytocin (IC) and complications of constipation (CoC), which resulted in hospitalization, and rarely blood transfusion, surgery, and death. ALO was reintroduced with a narrowed indication for women with chronic, severe, diarrhea-predominant irritable bowel syndrome (IBS-D) in November 2002 under a comprehensive risk management action plan (RiskMAP) that includes the Prescribing Program for Lotronex® (PPL). The incidence rates (IRs) of IC and CoC associated with the use of ALO over 5 years of marketing since reintroduction are summarized.

Methods: The safety data were obtained from adverse events (AEs) reported from use of marketed product (MP) from November 2002 through 31 December 2007. AE reports included spontaneous reports by patients, from healthcare professionals (HCP), and unsolicited reports via the voluntary RiskMAP patient survey. ALO reporting is required by physicians under the PPL.

Results: During the 5 years since reintroduction of ALO, approximately 26,000 patients received 160,000 prescriptions under the PPL. IC was reported in 18 patients with 15 confirmed by medical documentation, colonoscopy, sigmoidoscopy or biopsy, and CoC by 15 patients with 5 confirmed by healthcare professionals. There were no reports of mesenteric ischemia. No risk factors for IC or CoC were identified. None of these events resulted in outcomes of surgery, transfusions, or death. The IRs of IC and CoC before and after reintroduction are shown in Table 1.

Conclusion: A very limited number of patients with severe IBS-D have been prescribed ALO since reintroduction under the PPL. IC and CoC associated with the use of ALO have been rarely reported, resolved on prompt withdrawal of therapy, and were not associated with clinically significant sequelae. IRs of medically confirmed cases of IC and CoC are similar to those prior to reintroduction and has remained stable over the 5 years following reintroduction to the MP. The IR and risk factors for IC and CoC associated with ALO remain unclear. The RiskMAP program is effective in mitigating serious outcomes of IC and CoC in the limited number of patients who have been prescribed ALO under the PPL.

Incidence of IC and CoC During Post-Marketing Surveillance of Aloxetron: Before and After Reintroduction in June 2002 with RiskMAP

<table>
<thead>
<tr>
<th>Incidence Before June 2002</th>
<th>Incidence After June 2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Patients</td>
<td>316,882</td>
</tr>
<tr>
<td>Number of Prescriptions</td>
<td>586,000</td>
</tr>
<tr>
<td>Patient-yrs</td>
<td>48,829</td>
</tr>
<tr>
<td>Ischemic Colitis</td>
<td>13,150</td>
</tr>
<tr>
<td>All reported cases</td>
<td>1.7 per 1000 pt-yrs</td>
</tr>
<tr>
<td>Confirmed Cases</td>
<td>0.96 per 1000 pt-yrs</td>
</tr>
<tr>
<td>Comlications</td>
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<tr>
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<td>Confirmed cases</td>
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Disclosure: Dr. Henry Pan Employee of Prometheus Laboratories Dr. Venessa Z Ameen Employee of Prometheus Laboratories Dr. Kenneth Tong Consultant Prometheus Laboratories

MUCOSAL MASTOCYTOSIS AS A HISTOLOGICAL MARKER IN DIARRHEA PREDOMINANT IRRITABLE BOWEL SYNDROME

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Purpose: Irritable Bowel Syndrome (IBS) affects approximately 1 in 5 (20%) adults in the USA. Particularly women. An exact etiology of IBS is controversial; however it is a functional disorder of the brain-gut axis changes in the intestinal (or) and gut immune dysregulation. ROME III criteria are the gold standard. No specific serological, immunological or histological markers exist. We propose mucosal mast cell aggregation in the pathogenesis of IBS.

Methods: 120 patients (72 women, 48 men, age range 20 to 50 years, meet ROME III criteria) with diarrhea predominance (>3 bowel movements (BM) per day, n=78), pure constipation (<3 BM per week, n=8) and mixed symptoms (n=34) were included. Detailed clinical history including onset, pattern and symptom duration was taken. Laboratory tests included blood counts, Basic Metabolic Panel, thyroid function, Inflammatory Bowel Disease (IBD) and celiac panels, stool analysis for C. difficile toxin, ova and parasites. Patients with blood in stool, weight loss, celiac disease, systemic mastocytosis and IBD were excluded. All patients had flexible sigmoidoscopy and rectal biopsies (Carris Labs, Irving,TX).

Results: Despite a normal macroscopic appearance, 88/120 (91%) patients [diarrhea predominant 78/8 (100%), pure constipation 7/8 (87.5%) and mixed symptoms 24/34 (70.5%)] had >20 mast cells per high power field (hpf) with Tryptase immunostain.

Conclusion: We propose a unique histological entity, mast cell proctopathy (MCP), that appears to be a specific histological marker for diarrhea predominant IBS and may play a role in the immuno-pathogenesis. A large prospective trial with random biopsies throughout the colon will further establish this feature.
Evaluating breath methane as a diagnostic test for constipation predominant IBS

L Hung, BS, K Low, BA, R Khachatourian, MD, A. Sahakian, MD, M. Makhani, MD, V Pokhunun, MRHS, M. Pimentel, MD, FRCPC. Cedars-Sina Medical Center, Los Angeles, CA.

Purpose: Recent research in IBS has suggested that patients with irritable bowel syndrome (IBS) who produce methane on lactulose breath test (LBT) have constipation predominant symptoms. Methane has also been demonstrated to slow intestinal transit. Further data implies that treating methane positive subjects with antibiotics results in a clinical improvement in C-IBS. In this study, we prospectively evaluate the strength of methane as a diagnostic test for C-IBS.

Methods: Consecutive patients with Rome I positive IBS referred for a lactulose breath test were eligible to participate. Subjects were excluded if they had a history of IBD or intestinal surgery. Subjects were asked to complete a symptom questionnaire to grade their bloating, diarrhea and constipation on a VAS scale (0-100mm). Once completed, a physician interviewed and in the same way, graded the three symptoms. In addition, the physician was asked to determine if they felt that the patient suffered from D-, C- or M-IBS. Both the subject and the physician were blinded to the breath test findings.

Results: A total of 56 (42 female and 14 male) Rome I positive IBS subjects were enrolled in the study. Of these, the lactulose breath test demonstrated 28 subjects to be hydrogen only producers and 28 methane producers. There were no demographic differences between methane and non-methane subjects. The agreement between physician and patient symptom severity was good for constipation (R=0.69), diarrhea (R=0.69) and bloating (R=0.62). Using physician scoring, the severity of constipation was greater in the methane group (49.3±28.7) when compared to the hydrogen group (57.5±31.47) (P<0.01). In contrast, diarrhea was less severe in the methane group (12.3±21.0) when compared to the hydrogen group (36.7±32.4) (P>0.01). Out of the 56 patients, the physician diagnosed C-IBS in 23 subjects. When methane was used to predict the assignment of C-IBS compared to non-C-IBS, it had a sensitivity of 91.3% and a specificity of 78.8% (OR=39.0, CI=7.9-184.7). Of the 23 methane positive individuals, 10 had D-IBS, 2 had a mixed phenotype and 11 had C-IBS. In order to evaluate whether treating methane positive subjects with antibiotics results in a clinical improvement in C-IBS, we conducted a systematic review using PubMed, Cochrane Library, and Google Scholar.

Conclusion: Methane has a robust ability to identify C-IBS. More importantly, the high specificity may allow the identification of an antibiotic treatable group of patients since methane may be the culprit in causing constipation.

Poster Abstracts – Monday, October 6

The efficacy of probiotics in the therapy of irritable bowel syndrome (IBS): A systematic review

B A. Brook, M Sc MBA, N L. Kleiman, PhD, A K. Melkonian, MD, J. N. Talley, MD, PhD, R. J. Reichelt, MD, W Baran, PhD, M. King, PhD, A. C. Ford, MRCP, MD, L. J. Brandt, MD, E. A. Fox-Orenstein, DO, T. Crennmon, MD, N. J. Talley, MD, PhD, E. M. Quigley, MB, BCh, BAO1. 1. Gastroenterology, McMaster University, Hamilton, ON, Canada; 2. Gastroenterology, Mayo Clinic Jacksonville, FL; 3. Gastroenterology, Mayo Clinic Rochester MN; 4. Gastroenterology, University College Cork, Cork, Ireland. 5. Gastroenterology, Montefiore Medical Center, New York, NY.

Purpose: IBS is common and can be difficult to treat. Bacteria may be important in the pathogenesis of IBS and altering the microbial environment with probiotics may be an effective therapy. Randomized controlled trials (RCTs) have been conflicting so we conducted a systematic review for the updated ACG monograph on IBS.

Methods: Medline (1966-2007), Embase (1988-2007) and the Cochrane Controlled Trials Reg- ister (2007) electronic databases were searched as were abstracts from DDW and UEGW and contacted authors for extra information. We included only parallel group RCTs with at least one week of therapy comparing probiotics with placebo or no treatment in adults with IBS ac- cording to any acceptable definition. Studies had to provide abdominal pain or global IBS symptom improvement as an outcome. Eligibility assessment and data extraction were per- formed by two independent researchers. Data was synthesized using RevMan software.

Results: We identified 19 RCTs (18 papers) in 1628 IBS patients. The quality of the trials was reasonable with 8 reporting adequate methods of randomization and 5 reporting method of concealment of allocation. Fifteen RCTs were double blind. There were 9 RCTs involving 868 patients that gave outcomes as a dichotomous variable. Probiotics were statistically signifi- cantly better than placebo (RR of IBS not improving = 0.67; 95% CI = 0.49 to 0.91 with an NNT = 4 (95% CI = 2 to 20) and significant heterogeneity (I2 = 75%, Cochran Q= 32.2, d = 8, p<0.0001). There were 15 trials assessing 1351 patients that reported improvement in IBS score as a continuous outcome. There was a statistically significant effect of probiotics in reducing symptom score (SMD = -0.35; 95% CI = -0.62 to -0.09) with significant heterogeneity (I2 = 79%, Cochran Q = 9.78, d = 0.50). The funnel plot analysis showed a reasonable risk (RR) of symptoms not improving for dichotomous data and standardized mean difference (SMD) for continuous data using random effects models.

Conclusion: There was no statistically significant benefit over placebo. There were 9 trials using combinations of probiotics (but all one including bifidobacterium) that did suggest a significant improvement in IBS score with active treatment compared to placebo. There was no evidence of funnel plot asymmetry (Egger test = -2.92; 95% CI = -5.10 to -0.74, p=0.017) for the continuous data but not the dichotomous data.

Conclusion: Probiotics may be efficacious in IBS particularly when used in combinations that contain bifidobacterium. There is evidence of publication bias or other small study effects how- ever and it is therefore possible that the efficacy of probiotics has been overestimated.
Efficacy of Rifaximin for the Treatment of Symptoms Associated with Irritable Bowel Syndrome

Purpose: Emerging evidence suggests that intestinal bacteria, including small intestinal bacterial overgrowth, may play an important role in the pathophysiology of irritable bowel syndrome (IBS) and that antibiotic treatment may have therapeutic benefits for patients experiencing IBS symptoms. Rifaximin is a nonabsorbed antibiotic with minimal systemic absorption (≤0.4%) and broad-spectrum activity against intestinal pathogens. Results from clinical studies suggest that rifaximin may improve gastrointestinal (GI) symptoms associated with IBS. This retrospective chart review evaluated the efficacy of rifaximin alone or in combination with other IBS treatments for improving IBS symptoms.

Methods: Medical records were identified for consecutive adults with IBS who had lactulose breath tests between October 2006 and July 2007. Analyses included patients who had received rifaximin 400 mg three times daily for 10 days. Global symptom improvement and improvement in specific IBS symptoms were evaluated.

Results: Of the 159 patients (mean age, 58 y) included, 44 (28%) were diagnosed with diarrhea-predominant IBS (IBS-D), 33 (21%) with constipation-predominant IBS (IBS-C), and 24 (15%) with alternating IBS. 58 patients (36%) had no reported IBS subtype diagnosis. Baseline symptoms included abdominal pain (n=83; 52%), bloating (n=114; 72%), constipation (n=79; 50%), diarrhea (n=97; 61%), and gas (n=119; 74%). During rifaximin treatment, 76 patients (48%) received concomitant treatment with other antibiotics, tegaserod, or probiotics. Of the 118 patients for whom percentage global improvement was reported, 65 (55%) achieved ≥50% improvement and 21 (18%) had ≥80% improvement at the first follow-up visit within approximately 1 month of completing rifaximin treatment. The mean percentage global improvement after rifaximin treatment was 45%. At follow-up, ≥50% improvement of abdominal pain, bloating, constipation, diarrhea, and gas was reported in 16%, 12%, 10%, 15%, and 11%, respectively, of patients who reported the specific symptom at baseline. The percentage of patients with ≥50% improvement in the predominant GI symptom after rifaximin treatment was higher for patients with IBS-D versus IBS-C. Similarly, among patients with available global improvement data, those with IBS-D reported a higher percentage mean global improvement after rifaximin treatment compared with patients with IBS-C (55% vs 34%). Rifaximin was generally well tolerated.

Conclusion: These findings suggest that rifaximin 1200 mg administered for 10 days alone or in combination with other IBS treatments improved GI symptoms in patients with IBS and support the potential therapeutic benefit of rifaximin for the treatment of IBS.
**P702**

**EFFECTS OF AGE AND GENDER ON ANORECTAL FUNCTION IN CHRONIC CONSTIPATION**

*J. Baker, BS, R. Saad, MD, J. J. Rubenstein, MD, MSc, W. D. Chey, MD.* University of Michigan, Ann Arbor, MI.

**Purpose:** Little information exists on the age-related changes in anorectal function as measured by anorectal manometry (ARM) in patients with chronic constipation (CC). Through analysis of a large cohort of ARM studies, we assessed the impact of age and gender on anorectal function and sensation in patients with CC.

**Methods:** A retrospective chart review was performed on ARM studies performed at a single tertiary care center from 2002 to 2007. Data recorded included age and gender; length of high pressure zone (sphincter length); resting sphincter pressure; maximum sphincter pressure; and thresholds, large and maximum tolerated rectal volume. Comparisons of normally distributed variables were made using a t-test.

**Results:** A total of 438 ARMs were performed in patients with CC. 371 ARMs were performed in women (135 under age 65 yrs) and 67 in men (43 under age 65 yrs). The main results from our analyses are summarized in the 2 tables. Anal sphincter length, resting sphincter tone and maximum sphincter pressure were significantly lower in constipated young women compared to constipated young men. Similar differences in sphincter characteristics were observed in elderly women and men with CC. Constipated elderly women demonstrated a lower maximum tolerated rectal volume compared to constipated elderly men. There was a significant decrease in anal sphincter length and resting tone in constipated elderly women compared to constipated younger women. There was a significant decrease in maximum squeeze pressure in constipated elderly men compared with constipated younger men.

**Conclusion:** Gender and age influence anal sphincter parameters and rectal sensation in patients with CC. Our data suggest that age and gender should be taken into consideration when interpreting ARM results. Furthermore, it is possible that age and gender related differences in anorectal function and sensation may offer insights into the pathogenesis of CC in these populations.

**P703**

**EFFICACY OF NITAZOXANIDE IN GAS-RELATED INTESTINAL SYMPTOMS**

*J. Bueno, PhD, Drex Sc.; H. Eutamen, PhD; M. Gillet, MSc; Y. Theodorou, PhD.*

Gas-related intestinal symptoms are prevalent manifestations of irritable bowel syndrome (IBS), equal (2), and worse (1). A symptom score was recorded and calculated from a symptom diary. Initial follow-up was performed after the end of treatment at day 7 and the secondary follow-up remained open as required.

Results: A study enrolled 103 patients (69 females and 34 males) with a median age of 44 years (range 18-70) and 74 (72%) patients had been previously diagnosed with IBS. In total, 81 (79%) reported symptom improvement: much better (35%), better (31%), a little better (15%). Six months after treatment, 53 (51%) patients returned with symptom recurrence. All of them reported previously sustained improvement for a period of at least 4 months. No major adverse effects were noted, one patient reported a rash, and 17 (16%) noted abdominal pain.

Conclusion: NTZ is an effective treatment for gas-related intestinal symptoms, including patients with IBS. Based on published data utilizing other antibiotics for SIBO and IBS, enhanced research in this area needs to be performed by prolonging the time of treatment in all patients needed to assess the efficacy of long-term use of NTZ in functional colonic disorders.

**P704**

**EFFECT OF ORAL CYCLIC GMP ON TNBS-INDUCED COLITIS AND VISCERAL HYPERSENSITIVITY IN RATS**

*L. F. Bueno, PhD, Drex Sc.; H. Eutamen, PhD; M. Gillet, MSc; Y. Theodorou, PhD.*

Purpose: Activation of intestinal guanylate cyclase C receptors (GC-C) results in the production and secretion of cyclic guanosine monophosphate (cGMP) and elicits fluid secretion, intestinal transit, and decreased visceral pain. Linaclotide, a therapeutic development for the treatment of irritable bowel syndrome with constipation, is an agonist of GC-C and causes marked elevations in enteric cGMP levels. The aim of the present study was to determine if linaclotide may be an important strategy in the treatment of chronic colitis by testing whether it has anti-inflammatory and/or anti-oxidant properties when dosed orally to rats with TNBS-induced colitis.

Methods: Male Wistar rats received GMP (3, 10, 30, and 100 mg/kg) or vehicle by intragastric gavage 2 hours before intracolonic TNBS administration and twice daily for 4 days thereafter. Following the treatment period, animals were sacrificed and macroscopic damage score (MDS), myeloperoxidase (MPO) activity and microscopic scores (MS) in the colon were assessed. In a parallel study, rats implanted with abdominal intramuscular electrodes received an oral dose of GMP (3, 50, and 100 mg/kg) or vehicle 60 min prior to colo-rectal distension (CRD) uniformly to probe inflation in steps of 0.4 to 1.2 ml. Abdominal contractions (index of visceral pain) were recorded under basal and post-inflammation conditions.

Results: Vehicle treated animals, with TNBS-induced colitis, had higher MPO activity and MS (p<0.05) compared with control animals. cGMP (30 and 50 mg/kg) significantly reduced MPO activity compared to the no-stent group (18/41 (43.9%) versus 15/62 (24.2%), p=0.036). The frequency of lymph node metastasis in pathological T1, T2, T3 and T4 were 1/52 (1.9%), 13/23 (56.5%), 14/22 (63.6%) and 5/6 (83.3%), respectively. The accuracy of EUS staging in the stent group was 94/1 (46.3%) significantly lower than in the no stent group: 43/62 (69.4%) (p = 0.03). EUS findings were recorded and compared to rats with TNBS-induced colitis.

**P705**

**EUS STAGING OF PRIMARY AMPULLARY NEOPLASMS IN PATIENTS WITH VERSUS WITHOUT A BILIARY STENT**

*G. Culver, MD, Ann Arbor, MI.*

Purpose: To the best of our knowledge, only 1 study thus far compared accuracy rate of EUS T staging in ampullary neoplasms. Despite a few recent studies demonstrating a higher accuracy rate with intraductal ultrasound (IDUS), however, accuracy may be affected when a biliary stent is present. The best of our knowledge, only 1 study thus far compared accuracy rate of EUS T staging in patients with versus without an indwelling biliary stent. Our aim was to compare the accuracy of EUS T and N staging in ampullary neoplasms in patients with versus without a plastic biliary stent.

Methods: EUS, ERCP and surgery databases using keyword related to ampullary neoplasms at Indiana University Medical Center were searched over a 15-year period (1992 to 2007) to identify patients who had ampullary neoplasms. EUS findings were recorded and compared to pathologic staging. Only patients with sufficient pathologic specimen for T staging were utilized. The EUS staging was based on AJCC criteria and was performed with a 20 MHz radial echoendoscope. Pathologic staging was based on AJCC 2002. Pathologic staging was histological diagnosis with or without high grade dysplasia and in situ Tumor (Tis) were classified as pathological T1. All patients who had ampullary neoplasms were included. Results: 628 cases were identified. 525 cases were excluded for following reasons: no EUS was performed (15), normal ampulla on EUS and pathology report (5), no pathological report (40), myeloperoxidase (MPO) activity and microscopic scores (MS) in the colon were assessed. In a parallel study, rats implanted with abdominal intramuscular electrodes received an oral dose of GMP (3, 50, and 100 mg/kg) or vehicle 60 min prior to colo-rectal distension (CRD) uniformly to probe inflation in steps of 0.4 to 1.2 ml. Abdominal contractions (index of visceral pain) were recorded under basal and post-inflammation conditions.

**P706**

**HYPERSENSITIVITY IN RATS**

*L. E. Bueno, PhD, Drex Sc.; H. Eutamen, PhD.*

This study was supported by an industry grant from IRONWOOD Pharma Inc.
in the no stent group (p = 0.16). The accuracy of EUS nodal staging in the stent group was 29/41 (70.7%) compared to 48/62 (77.4%) in the no stent group (p = 0.59).

Conclusion: EUS staging is more accurate in the absence of a biliary stent but does not affect the EUS nodal staging. EUS understaging occurred more commonly in the stent group. EUS staging of ampullary lesions should be performed prior to placement of a biliary stent when possible.

P706
THE IMPACT OF NARROW BAND IMAGING IN SCREENING COLONOSCOPY: RESULTS FROM A RANDOMIZED, CONTROLLED TRIAL
R. Radaelli, MRCP, MD. S. Paggi, MD. A. Amato, MD. G. Muscat, MD. G. Mandelli, MD. V. Terruzzi, MD. Gastroenterology, Valduce Hospital, Como, Italy.

Purpose: Missed lesions are a major concern for colonoscopy. Narrow band imaging (NBI) is a newly developed technology which allows a better definition of mucosal micro-capillaries, increasing the contrast of adenomas with the surrounding mucosa. Whether NBI can increase detection of colon neoplasms is uncertain. The aim of the study was to evaluate whether the routine use of NBI in the withdrawal phase of the procedure compared to white light (WL) enhances the detection of polypoid and non-polypoid (flat or depressed) lesions in patients undergoing screening colonoscopy.

Methods: Consecutive 50-69 year-old outpatients with positive occult fecal blood test (FOBT), participated to a national screening program and referred to our Unit for colonoscopy were enrolled. Olympus HD 180 series colonoscopes with push button switch from WL to NBI were used. Once reaching the cecum with adequate cleansing conditions of the colon, the patients were randomized to a WL or NBI retraction phase according to a computer generated list. A sample size of at least 208 patients (104 in each arm) was calculated, hypothesizing a difference of 20% in the adenoma detection between WL and NBI (0.05 significance level, 80% power).

Results: From November 2007 to August 2008, 215 subjects (mean age 60 yrs, males 54%) were included. Both arms were well balanced as concerns demographic features, quality of bowel cleansing and examination time during the withdrawal phase. The main results of study are shown in the Table. High grade dysplasia/immaculate carcinoma was diagnosed in 13/49 (26.5%) flat or depressed lesions, and in 52/333 (15.6%) polypoid lesions, respectively (p = 0.057).

Conclusion: Routine use of NBI during the retraction phase of colonoscopy does not seem to increase the adenoma detection rate. However, the prevalence of non-polypoid (flat or depressed) adenomas in this setting is substantial, and our study evidences an objective benefit of increasing the adenoma detection rate. However, the prevalence of non-polypoid (flat or depressed) lesions, and in 52/333 (15.6%) polypoid lesions, respectively (p= 0.057).

P707
CYST FLUID VISCOSITY PREDICTS MUCINOUS CYSTIC LESIONS OF THE PANCREAS
S. Ram, DO, K. McCreath, MD, M. Sandert, MD, K. Fasanella, MD, A. Khalid, MD. Gastroenterology, University of Pittsburgh Medical Center, Pittsburgh, PA.

Purpose: Mucinous cystic lesions of the pancreas have malignant potential. Cross-sectional imaging and EUS alone cannot reliably differentiate mucinous from non-mucinous cysts. Therefore, sampling of cyst fluid is important for accurate diagnosis. Cyst fluid CEA level obtained via EUS-FNA is currently the standard for the diagnosis of mucinous cystic lesions of the pancreas (Sens 63%, Spec 84%, cutoff 192 ng/ml), but requires at least 1 cc of fluid for measurement.

Methods: A retrospective review was performed to identify patients with a pancreatic cyst who underwent EUS-FNA over a 5 year period at the University of Pittsburgh Medical Center. We describe cyst fluid as watery, slightly viscous or viscous based on whether there is a “string sign” produced when 2 glass slides (1 containing a drop of cyst fluid) are touched together and then pulled apart. Only those patients whose EUS report included a gross description of the aspirated cyst fluid and cytology, a positive of non-mucinous cysts. Therefore, sampling of cyst fluid is important for accurate diagnosis. Cyst fluid CEA level obtained via EUS-FNA is currently the standard for the diagnosis of mucinous cystic lesions of the pancreas (Sens 63%, Spec 84%, cutoff 192 ng/ml), but requires at least 1 cc of fluid for measurement. As mucinous epithelium secretes mucin and glycoproteins, a viscous cyst aspirate is felt to correlate with a mucous cyst. Viscometers can objectively measure cyst fluid viscosity, however these are not standardized. We hypothesized that the subjective finding of viscous cyst fluid predicted the presence of a mucinous cyst.

Results: Of 215 subjects, 154 (71.5%) had a gross description of the aspirated cyst fluid. Of these, 112 (72.4%) were identified as non-mucinous and 42 (27.6%) as mucinous. Of the 62 cysts with watery aspirates, 56 were mucinous and 6 were non-mucinous. Of the 22 cysts with watery aspirates, 17 were mucinous and 5 were non-mucinous. The sensitivity, specificity, accuracy, PPV and NPV for classifying a cyst as mucous via our subjective viscosity assessment were 78%, 75%, 78%, 92% and 47%, respectively.

Conclusion: The finding of viscous cyst fluid predicts the presence of a mucinous cyst with moderate operating characteristics, similar to that of cyst fluid CEA. This is helpful if there is not enough fluid to send for CEA measurement. The finding of a watery aspirate does not reliably exclude the presence of a mucinous cyst.

Table 1

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<td>Post stent hospital stay (days)</td>
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P709  
DEEP SMALL BOWEL FOREIGN BODY RETRIEVAL USING SPIRAL OVERTUBE-ASSISTED ENTEROSCOPY  
C. Swales, MD,1 D. Cave, MD, PhD,2 P. Akerman, MD,2 K. Bhattacharya, MD,1 1. Medicine, University of Massachusetts, Worcester, MA; 2. Medicine, Rhode Island Hospital, Providence, RI.  
Purpose: Small bowel foreign bodies have traditionally been managed either expectantly or with surgery. This has largely stemmed from the lack of any reliable endoscopic technology to reach and retrieve small bowel foreign bodies. DBE and Spirus have emerged as new technologies to allow for endoscopic therapy of small bowel pathology.  
Methods: Two patients with PJS who had documented small bowel polyps on capsule endoscopy were evaluated. One patient had previous endoscopy DBE with no polypectomy, however more polyps were seen on repeat capsule study. In both cases, procedures were performed in the operating room using endotracheal anesthesia; the patient was positioned left-laterally. The polyp was identified in situ using the Discovery EndoEase SB spiral overtube (Spirus Medical, Stoughton, MA). Results: The mean time to maximal insertion depth was 42+/-12 minutes. The polypectomy number was 3.5+/-2.1. The total procedure time was 140+/-12 minutes. In one case, a tadoEase SB spiral overtube (Spirus Medical, Stoughton, MA). Conclusion: Spiral overtube-assisted enteroscopy is a valuable tool in small bowel endoscopy, and can aid in the successful retrieval of a foreign body when traditional endoscopic methods have failed.

Disclosure - Dr. Akerman - Consultant, Spirus Medical

P710  
SUCCESSFUL POLYPECTOMY OF SMALL BOWEL POLyps IN PaTIENTS WITH PEutz-JhegHers SYNDrome USING DISCoVERY ENDoEASE SB SPIRAL OVERTUBE (SPIRus)  
C. Swales, MD,1 D. Cave, MD, PhD,2 P. Akerman, MD,2 K. Bhattacharya, MD,1 1. Medicine, University of Massachusetts, Worcester, MA; 2. Medicine, Rhode Island Hospital, Providence, RI.  
Purpose: Small bowel polyps in Peutz-Jeghers Syndrome (PJS) have traditionally been managed either expectantly or with surgery. This has largely stemmed from the lack of any reliable endoscopic technology to reach and retrieve small bowel polyps. Double-balloon enteroscopy (DBE) and recently spiral overtube-assisted enteroscopy (Spirus) have emerged as new technologies to allow for endoscopic therapy of small bowel pathology.  
Methods: Two patients with PJS who had documented small bowel polyps on capsule endoscopy were evaluated. One patient had previous endoateral DBE with no polypectomy, however more polyps were seen on repeat capsule study. In both cases, procedures were performed in the operating room using endotracheal anesthesia; the patient was positioned left-laterally. The polyp was identified in situ using the Discovery EndoEase SB spiral overtube (Spirus Medical, Stoughton, MA). Results: The mean time to maximal insertion depth was 42+/-12 minutes. The polypectomy number was 3.5+/-2.1. The total procedure time was 140+/-12 minutes. In one case, a tadoEase SB spiral overtube (Spirus Medical, Stoughton, MA). Conclusion: Spiral overtube-assisted enteroscopy is a valuable tool in small bowel endoscopy, and can aid in the successful resection of PJS polyps.

Disclosure - Dr. Akerman - Consultant, Spirus Medical

P711  
EVALUATION OF MEDIATELlAL MASSES BY ENDOsCOPIc ULTRASOUND (EUS) AND EUS-GUIDED FNE NEEDLE ASPIRATION: A LARGER SINGLE CENTER EXPERIENCE  
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Purpose: Endoscopic Ultrasound (EUS) and EUS-guided fine needle aspiration (EUS-FNA) are effective methods to evaluate posterior mediastinal structures. The purpose of our study is to evaluate the diagnostic yield of EUS and/or EUS-FNA in the evaluation of mediastinal masses.  
Methods: The medical records for patients who underwent EUS or EUS-FNA for the evaluation of mediastinal masses from July 2001-July 2007 were retrospectively reviewed. FNA was performed with a 22-gauge needle in the majority of solid or complex lesions and in cystic lesions if atypical features were present. Final diagnosis was based on FNA cytology, surgical pathology, and/or clinical follow-up.  
Results: A total of 65 patients were identified (mean age 55.5, age range 10-79, 67% white, 62% male). Sixty two patients had a mediastinal mass identified by CT, one by MRI, and one each by a “bulge” on EGD or barium swallow. Lesions were classified by EUS into three categories: solid, cystic, or complex (both solid and cystic components). Median mass size was 44 ± 31 cm. EUS identified solid masses in 39 cases, and FNA was performed in 37. Clinical condition prohibited FNA in one patient, and FNA was not performed in one case with EUS findings consistent with lipoma. Final diagnosis was malignant in 87% (34/39), inflammation or fibrosis in 10% (4), and lipoma in one case. FNA was 97% accurate in this group with one false negative found to be malignant at thoracotomy. Complex masses were identified in 7 cases, and FNA was performed in all 7 with 100% accuracy. 86% (6/7) were benign with a final diagnosis of cysts in 4 cases, granulomas in 2 cases, and thymus carcinoma in one. Cystic masses were seen in 19 cases, and FNA was performed in 11 that were deemed atypically dense with material or “grunge” present. FNA was 100% accurate in all 11 cases in which it was performed. Overall sensitivity and accuracy of EUS-FNA was 97% and 98%, respectively. Of note, two of the patients with cystic masses were lost to follow-up so no clinical or surgical confirmation was available. None of the patients experienced a complication; specifically, no mediastinitis was encountered.  
Conclusion: EUS can differentiate solid from cystic masses and hence can guide fine needle aspiration when EUS is available. EUS-FNA can be performed safely and is accurate in the evaluation of mediastinal masses and allows non-invasive tissue acquisition particularly when other modalities have failed or lesions are not amenable to the percutaneous approach or mediastinoscopy. FNA may not be necessary to rule out malignancy if the appearance is classic for bronchogenic cyst by EUS. We reserve FNA for atypical appearance of cysts or in solid and complex mediastinal masses.

P712  
POLYETHYLENE GLYCOL BOWEL PREPARATION IS ASSOCIATED WITH HYPOKALEMia  
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Purpose: Electrolyte imbalances have been documented in subjects following a sodium phosphate (NaP) bowel purge and significant renal toxicity has occurred in a select few patients. This has prompted clinicians to consider alternate purgative agents in patients who may be at increased risk for developing electrolyte abnormalities. Significant electrolyte abnormalities have not been previously documented with polyethylene glycol (PEG) purgative agents and PEG has been considered a safe alternative in subjects who may not tolerate the transient electrolyte shifts associated with NaP agents.  
Methods: This study was a retrospective study of serum electrolytes, creatinine (Cr) and volume status in 49 subjects who underwent bowel preparation with a PEG based agent prior to colonoscopy. Serum Bun/Cr ratio was calculated as a proxy for volume status. 47/49 subjects had day of colonoscopy blood work obtained. Baseline electrolyte values and Cr were available for comparison in 45/47 subjects. Statistical evaluation was performed using Fisher’s exact test (gender) and Student’s t-test for all other factors.  
Results: When day of colonoscopy (post-PEG) potassium levels were compared to baseline potassium levels, a significant drop in potassium was identified (4.02 vs 4.28, p=0.018). There was no evidence of significant volume contraction after PEG purge with Bun/Cr and Albumin levels unchanged from baseline (12.9 vs 14.4, p=0.11; 3.9 vs 4.0, p=0.178, respectively). 5/47 subjects (11%) had post-PEG hypokalemia. None of these subjects had significant life-threatening events which would alter their renal function post-PEG. There were no cases of renal failure.  
Conclusion: When assessing the effect of PEG on renal function, it may not be significant as the incidence of renal failure with PEG is low. Possible explanations for this include: 1) PEG is less likely to cause significant renal toxicity; 2) there are significant differences in renal function before and after PEG; 3) the amount of PEG used is less; 4) the volume of fluid used is less. Future research should examine if PEG is safe in patients with renal disease.
**P713**

**A QUALITY INITIATIVE TO DECREASE PATHOLOGY SPECIMEN LABELING ERRORS USING RADIOFREQUENCY IDENTIFICATION IN A HIGH-VOLUME ENDOSCOPY CENTER.**

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**Purpose:** Our institution has had problems with mislabeling of tissue specimens in our gastrointestinal and colorectal surgery endoscopy units. Most labeling errors have been due to either the wrong patient label or no label being affixed to a specimen bottle. As a result, an initiative was created to reduce the number of specimen labeling errors. This initiative involved the application of radiofrequency identification (RFID) technology to specimen bottles, moving to a paperless pathology requisition system and confirmation of the correct patient by both the endoscopy nursing staff and the endoscopist on each specimen bottle.

**Methods:** We reviewed the number of specimen labeling errors from our endoscopy unit for the first three months of 2007, prior to the implementation of the initiative and the first three months of 2008; 6 months after the initiation of RFID specimen labeling with paperless requisition and two provider confirmation of correct site, correct patient specimen labeling. Specimen labeling errors were categorized as Class 1 (typographical with no potential clinical consequences), Class 2 (minor error, unlikely to have clinical consequences) and Class 3 (significant error that has the potential to detrimentally impact patient care). The Fischer’s exact test was used to compare the rate of specimen bottle labeling errors before and after the initiation of this new system.

**Results:** In the first three months of 2007, our endoscopy unit sent 8231 specimen bottles to our pathology laboratory for evaluation and 8559 bottles in the first three months of 2008. There were 646 (7.85%) Class 1 errors in the first quarter of 2007 and 35 (0.41%) in the first quarter of 2008 (p<0.001). There were 112 (1.36%) Class 2 errors in the first quarter of 2007 and ten (0.12%) in the first quarter of 2008 (p=0.001). Finally, in the first quarter of 2007 there were seven (0.9%) Class 3 errors and in the first quarter of 2008, there were two (0.02%) Class 3 errors. However, with the new system in place, both Class 3 errors in the first quarter of 2008 were recognized and corrected prior to the processing of the specimens in the pathology laboratory (p=0.001).

**Conclusion:** These data suggest that the initiation of a new specimen labeling system that uses RFID technology, a paperless requisition process and confirmation of the correct site correct patient by two health-care providers, significantly decreased specimen labeling errors of every level in a high-volume endoscopy center.

**P714**

**THE SIGNIFICANCE OF GASTRIC AND DUODENAL ISCHEMIA REPORTED ON ENDOSCOPIC BIOPSY: A CASE SERIES.**

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**Purpose:** In clinical practice, endoscopic biopsies taken from lesions of the stomach and duodenum are occasionally reported as consistent with ischemic injury. It is not established in the literature if a pathologic report of ischemia, particularly if unexpected, is suggestive of a specific diagnosis, requires further evaluation or has prognostic significance. This series was compiled to examine the diagnostic and prognostic significance of ischemia reported on gastric or duodenal biopsies.

**Methods:** A search of the endoscopic pathologic database at UCLA was performed to locate mucosal biopsy reports of the stomach or duodenum that were reported as consistent with ischemia. Cases were characterized by obtaining data including age, sex, presentation, endoscopic or surgical treatment, endoscopic features, radiologic findings, mortality, rebleeding and diagnosis.

**Results:** Over a ten year period, 15 cases were collected. The dominant indication for upper endoscopy was bleeding (73%). 12 cases were treated medically, three surgically and none endoscopically. Diagnoses included stress ulceration (n=2), complication of chemotherapy (n=2), unknown (n=2), surgical Anastomotic ulcer (n=1), portal hypertension (n=2), mesenteric vein thrombosis (n=2), Helicobacter pylori associated ulcer (n=1), portal gastropathy (n=1), vasculitis (n=1) and atherosclerotic disease (n=1). Half of the lesions appeared “aggressive” (large, necrotic, fistula, circumferential, pseudomembrane, 53%). There were six cases of bleeding after initial endoscopy (40%) and four deaths (27%). CT or MRI were obtained in 14 cases but were officially reviewed at the end of the day (O-VCE). All results were blinded from each other. Questionnaire on tolerability and satisfaction was administered after the procedures. Spearman comparison coefficient and descriptive statistical analysis were performed.

**Conclusion:** There was significant agreement between the Rockall scores produced by real-time video capsule endoscopy and standard upper endoscopy in subjects presenting with upper gastrointestinal bleeding. No significant bleeding lesions were missed.

**Table 1 Comparison of Findings**

<table>
<thead>
<tr>
<th>Category</th>
<th>EGD</th>
<th>O-VCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Findings</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Non-Erosive Gastroduodenitis (NEGD) (%)</td>
<td>12(69%)</td>
<td>8(49%)</td>
</tr>
<tr>
<td>Erosive Gastroduodenitis (EG) (%)</td>
<td>2(10%)</td>
<td>2(10%)</td>
</tr>
<tr>
<td>NEO/EG Correlated (%)</td>
<td>14(70%)</td>
<td>10(50%)</td>
</tr>
<tr>
<td>Polyp (%)</td>
<td>2(10%)</td>
<td>1(5%)</td>
</tr>
<tr>
<td>Portal Gastropathy (%)</td>
<td>1(5%)</td>
<td>3(15%)</td>
</tr>
<tr>
<td>Unremarkable Erosion (%)</td>
<td>2(10%)</td>
<td>2(10%)</td>
</tr>
<tr>
<td>Rockall Scores (0-11)(mean)</td>
<td>2.9</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Vascular Lesions (AVM/Red Spot) (15%)**

<table>
<thead>
<tr>
<th>Ulcerative Lesions Patient 1 Patient 2</th>
<th>FINDING Eosinophilic Ulcer Gastric Ulcer no stigma</th>
<th>FINDING Eosinophilic Ulcer Non-diagnostic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Blood on VCE Patient 1 Patient 2 Patient 3 Patient 4</td>
<td>FINDING Duodenitis Gastroduodenitis Polyp Lipoma</td>
<td>FINDING Fresh Blood Fresh Blood Fresh Blood Fresh Blood</td>
</tr>
</tbody>
</table>
A RETROSPECTIVE STUDY TO DETERMINE THE ABILITY OF VIDEO CAPSULE ENDOSCOPY TO DETECT UPPER GASTROINTESTINAL PATHOLOGY COMPARED TO STANDARD ENDOSCOPY IN PATIENTS WITH OBSCURE BLEED

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Purpose: Currently no dedicated studies comparing upper gastrointestinal findings on video capsule endoscopy (VCE) to standard upper endoscopy (EGD) exist. The purpose of this retrospective study is to examine whether VCE and EGD can detect similar upper gastrointestinal findings in patients with obscure bleeding.

Methods: All patients 18 years or older who presented with obscure bleeding and underwent both EGD and VCE were included. Both VCE and EGD were retrospectively reviewed from January 2000 to December 2007. All VCEs were performed with the M2A (Given) Pillcam. Each VCE and EGD report was blindly reviewed and findings were noted for both modalities. Patient demographics, dates, indications, findings, gastric transit time, and post endoscopy Rockall scores were collected. Data was analyzed by Spearman correlation coefficients and descriptive statistics.

Results: Sixty-five (13M:42F) subjects were enrolled. Mean age was 66.5 years (18-96). The indication was 38% for iron deficiency anemia and 62% for occult bleeding. The duodenum was reached in 100% of subjects. The mean gastric transit time was 35.2 seconds. See Table 1 for findings. One duodenal ulcer was detected on VCE and fresh blood was seen on the corresponding EGD. Unremarkable VCE exams had corresponding non-significant findings on EGD 82% of the time. Post endoscopy Rockall scores for the VCE and EGD were 0.55 and 0.47 respectively, with a Spearman correlation coefficient of 0.29 (p=0.019). Rockall scores agreed perfectly 55% of the time and by one unit 97% of the time. EGD 82% of the time. Post endoscopy Rockall scores for the VCE and EGD were 0.55 and 0.47 respectively, with a Spearman correlation coefficient of 0.29 (p=0.019). Rockall scores agreed perfectly 55% of the time and by one unit 97% of the time.

Conclusion: Video capsule endoscopy and standard upper endoscopy appear to have similar detection rates for upper gastrointestinal pathology in patients presenting with obscure bleeding. The correlation appears to be strongest for erosive and non-erosive gastroduodenitis. VCE appears to detect more vascular lesions compared to EGD. The majority of unremarkable exams on VCE corresponded to non-significant findings on EGD.

Table 1 Comparison of Findings

<table>
<thead>
<tr>
<th>Category</th>
<th>VCE</th>
<th>EGD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Findings</td>
<td>145</td>
<td>127</td>
</tr>
<tr>
<td>Non-erosive gastroduodenitis (NEGID) (%)</td>
<td>29(45%)</td>
<td>30(46%)</td>
</tr>
<tr>
<td>Erosive gastroduodenitis (EGI) (%)</td>
<td>12(18%)</td>
<td>6(9%)</td>
</tr>
<tr>
<td>NEGID Combined (%)</td>
<td>41(63%)</td>
<td>36(55%)</td>
</tr>
<tr>
<td>Gastroduodenal polyp (%)</td>
<td>6(9%)</td>
<td>4(6%)</td>
</tr>
<tr>
<td>Esophagitis (%)</td>
<td>3(5%)</td>
<td>2(3%)</td>
</tr>
<tr>
<td>Esophageal varices (%)</td>
<td>2(2%)</td>
<td>0(0%)</td>
</tr>
<tr>
<td>Portal gastropathy (%)</td>
<td>2(3%)</td>
<td>2(3%)</td>
</tr>
<tr>
<td>Unremarkable Exam (%)</td>
<td>17(26%)</td>
<td>17(26%)</td>
</tr>
<tr>
<td>Post endoscopy Rockall score 0-4 (mean)</td>
<td>0.55</td>
<td>0.47</td>
</tr>
<tr>
<td>Vascular lesion (AV/Alined spot) (%)</td>
<td>11(17%)</td>
<td>9 missed on EGD</td>
</tr>
<tr>
<td>Ulcerative lesions Patient 1</td>
<td>FINDING</td>
<td>FINDING</td>
</tr>
<tr>
<td>Patient 2</td>
<td>Erasive gastrouodenitis</td>
<td>Gastric ulcer no stignata</td>
</tr>
<tr>
<td>Patient 3</td>
<td>Polyp</td>
<td>Gastric ulcer no stignata</td>
</tr>
<tr>
<td>Patient 4</td>
<td>Unremarkable</td>
<td>Gastric ulcer no stignata</td>
</tr>
<tr>
<td>Patient 5</td>
<td>AVM</td>
<td>Gastric ulcer no stignata</td>
</tr>
<tr>
<td>Fresh Blood on VCE Patient 1</td>
<td>FINDING</td>
<td>FINDING</td>
</tr>
<tr>
<td>Patient 2</td>
<td>Fresh Blood</td>
<td>Gastritis</td>
</tr>
<tr>
<td>Patient 3</td>
<td>Fresh Blood</td>
<td>Duodenitis</td>
</tr>
<tr>
<td>Patient 4</td>
<td>Fresh Blood</td>
<td>Esophagitis</td>
</tr>
<tr>
<td>Patient 5</td>
<td>Fresh Blood</td>
<td>Poly</td>
</tr>
<tr>
<td>Patient 6</td>
<td>Fresh Blood</td>
<td>Fresh Blood</td>
</tr>
</tbody>
</table>

THE ENDOSCOPIC TREATMENT OF ESOPHAGEAL VARICES WITH GASTRIC EXTENSIONS USING A COMBINED LIGATION AND SCLEROTHERAPY TECHNIQUE

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Purpose: Hemorrhage from gastroesophageal varices is the most severe complication of portal hypertension and accounts for 10-30% of all cases of upper gastrointestinal bleeding. The endoscopic treatment of esophageal varices has been well established; however, gastric varices are historically much more difficult to treat with poorer outcomes. We report a novel application using combination sclerotherapy and band ligation to obliterate gastric varices that extend from esophageal varices.

Methods: Five patients who underwent secondary treatment for esophageal varices and were discovered to have gastric extensions of these varices were selected for this retrospective case series. The varix below the Z line was injected with 2.5 cc of ethanolamine and the esophageal component then immediately treated with traditional endoscopic band ligation. The main outcome measurements were varical bleb, associated complications, and subsequent varical bleeding.

Results: The patients received one to three treatments over a period of one to eight months. During an average follow-up period of 29 months, varices were ablated 100% of the time with no complications and zero subsequent varical bleeding episodes. See table 1 for procedure results.

Conclusion: Endoscopic therapy for esophageal varices has been well established; while consistent successful treatment of gastric varices has eluded the endoscopist. Subsequent re-bleeding...
is likely to occur when GOV type varices are treated with banding alone. This may be due to banding causes high intraluminal pressures in the gastric component, which results in secondary gastric varices and thus a propensity for subsequent bleeding. Here we have demonstrated a possible approach to two of the four types of gastric varices; specifically, the types that exist from extending esophageal varices (GOV type). The limitations of extrapolating the results of these five patients to the general population are substantial; nonetheless, our results are encouraging with 100% efficacy to date and a 0% rate of complications or further variceal bleeding. This may represent a potential solution to a difficult clinical problem. A randomized controlled trial with sufficient power will be required to definitively prove clinical value of this approach.

Table 1

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age/Sex</th>
<th>Time of Rx (Entosology)</th>
<th># of Prior Treatments</th>
<th>Grade of Varices at Treatment</th>
<th>Grade of Varices after Treatment</th>
<th># of Bleds Prior</th>
<th># of Bleds after Rx/Time Period</th>
<th># of Treatments/Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58 F (Port)</td>
<td>A5</td>
<td>0</td>
<td>3-4</td>
<td>1/2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>66 F (NASI)</td>
<td>A6</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>69 M (Idiopathic)</td>
<td>B8</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>50 M (Alcohol)</td>
<td>B9</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>65 M (Alcohol)</td>
<td>A5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

PT20

THUMBS UP: OVERUSE SYNDROMES AMONG ENDOSCOPISTS IN ILLINOIS

G. Berkelhamer, MD, F.A.C.G., C. Berkelhamer, MD, F.A.C.G., 1 Internal Medicine, University of Illinois, Oak Lawn, IL; 2. Gastroenterology, University of Illinois, Oak Lawn, IL.

Purpose: Overuse syndromes, such as de Quervain’s tenosynovitis of the left thumb have been reported among high volume endoscopists. Our purpose was to determine the incidence of overuse syndromes among endoscopists in Illinois, and to correlate overuse syndromes with volume of endoscopy and years in practice.

Methods: A survey was mailed to members of the American Gastroenterological Association in Illinois. The survey asked for age, years in practice, and number of endoscopies performed per year; the presence and severity of pain in the thumb, hand, wrists, elbow, shoulder, neck and back; and whether the respondents felt their pain was attributable to endoscopy. The injured group was analyzed to correlate injury with endoscopic volume and years in practice. Chi squared and Mann-Whitney U tests were used.

Results: 476 surveys were mailed and 23 surveys were returned undeliverable, for a total of 453 surveys delivered. 157 responses were received (35%). Respondent characteristics: average age 47, 85% male, 93% right-handed. Years in practice of respondents: less than 10 years 29%, 10-15 years 18%, 15-20 years 15%, 21-25 years 27%, 26-30 years 7%. Volume of endoscopies per year: zero 1%, 1-500 19%, 501-1000 47, 1001-1500 8.8%, 1501-2000 4.2%, 2001-2500 4.2%, 2501-3000 3.4%, 3001-3500 3.4%. Respondent characteristics: average age 47, 85% male, 93% right-handed. Years in practice of respondents: less than 10 years 29%, 10-15 years 18%, 15-20 years 15%, 21-25 years 27%, 26-30 years 7%. Volume of endoscopies per year: zero 1%, 1-500 19%, 501-1000 47, 1001-1500 8.8%, 1501-2000 4.2%, 2001-2500 4.2%, 2501-3000 3.4%, 3001-3500 3.4%. Respondent characteristics: average age 47, 85% male, 93% right-handed. Years in practice of respondents: less than 10 years 29%, 10-15 years 18%, 15-20 years 15%, 21-25 years 27%, 26-30 years 7%. Volume of endoscopies per year: zero 1%, 1-500 19%, 501-1000 47, 1001-1500 8.8%, 1501-2000 4.2%, 2001-2500 4.2%, 2501-3000 3.4%, 3001-3500 3.4%. Respondent characteristics: average age 47, 85% male, 93% right-handed. Years in practice of respondents: less than 10 years 29%, 10-15 years 18%, 15-20 years 15%, 21-25 years 27%, 26-30 years 7%. Volume of endoscopies per year: zero 1%, 1-500 19%, 501-1000 47, 1001-1500 8.8%, 1501-2000 4.2%, 2001-2500 4.2%, 2501-3000 3.4%, 3001-3500 3.4%.

Conclusion: Overuse syndromes are not uncommon among endoscopists. Most overuse syndromes are mild or moderate, but occasionally can cause severe pain. Increasing volume of endoscopy increased both the risk and severity of overuse syndromes. Methods to reduce overuse syndromes among endoscopists would be of interest.
Cryospray Ablation™ for the Treatment of HPV-Induced Squamous Cell Carcinoma of the Esophagus

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Purpose: The importance of liquid nitrogen cryoablation (CryoSpray Ablation™) for the treatment of HPV-associated lesions of the esophagus.

Methods: The index patient is a 66 year old male referred to our institution for evaluation of esophageal plaques with focal high grade dysplasia in the distal esophagus. Biopsy specimens obtained underwent genomic DNA extraction, which was positive for HPV Type 66 DNA. Considered a high risk factor for the development of dysplasia and neoplasia of the oroesophaogastic junction treated with photodynamic therapy (PDT) on multiple occasions for recurrent squamous cell carcinoma (SCC) in situ of the esophagus. The patient also developed focal HGD of the posterior cricoid and invasive SCC of the right arytenoids, which was successfully treated with photodynamic therapy. These lesions all arose in the setting of histologically proven HPV-induced condyloma acuminata. The patient also underwent esophageal dilation on multiple occasions for recurrent PDT-associated strictures. In 2/2008, the patient presented with dysphagia and was found to have a 3cm epipharyngeal mass encompassing 1/3 of the pharyngeal circumference. With the recent availability of cryoablation, the decision was made to treat this new lesion using the CSA System (Baltimore, MD) as the index case for an HPV-associated SCC of the esophagus. CryoSpray™ is administered under direct visualization with a low-pressure delivery system of liquid nitrogen at -196°C. The rapid cooling initiates apoptosis and is believed to stimulate the immune response. The entire lesion was treated with 4 cycles of 10 seconds each on initial therapy. Surveillance endoscopy performed after 2 weeks showed the lesion to measure 1.0 x 1.5cm, occupying 1/3 of the luminal circumference. Subsequent endoscopy performed 4 weeks after initial treatment, with the lesion now discrete islands; one 0.4cm in diameter and one 0.7cm in diameter. Each of these lesions was treated with 4 cycles of 10 seconds each of cryoablation.

Results: The patient tolerated both interventional procedures well and was without post-procedure odynophagia or need for esophageal dilation since the initiation of cryoablation therapy. Endoscopy with multiform biopsy specimens at 12 weeks after the initial cryoablation showed no evidence of residual tumor.

Conclusion: In this index case, CryoSpray Ablation™ was safe and effective for the therapy of HPV-associated SCC and should be further investigated for treatment of other squamous cell lesions of the oroesophageal tract.

Methods: The subject group referred for colonoscopy was separated into three groups (oral fluid diet only, liquid diet only, or high residue diet). The study included 1815 patients. The data was analyzed by chi square and ANOVA (p < 0.05). The results were noted. The endoscopist evaluated the preparation quality during the procedure using the validated Aronchick scale with 1 as excellent and 5 as inadequate quality. The data was analyzed by using the t-test as indicated using SPSS version 15.0.

Results: Total 157 patients included in the study, were divided into three groups (51 Golyte, 64 Miralax, 42 Nulytely). Mean age was 60 years (range 27 to 81). Gender: P76, M1. There was no statistically significant difference between the three groups in the quality of bowel preparation (p-value 0.861) or baseline characteristics including age, sex, race, level of education, comorbid conditions, prior abdominal surgery, prior colonoscopy, compliance with a liquid diet and bowel preparation compliance rates. However, more patients in Golyte group felt that it was more difficult for them to take the medication than to comply with a liquid diet(64.7% vs. 35.3%; p-value 0.001 compared with other two groups). The main reasons for this were the large amount and the taste of the Golyte. In a separate analysis, patient’s liquid diet compliance rather than perceived bowel habits and level of education better predicted bowel preparation quality.

Methods: Data was gathered on consecutive ambulatory outpatient patients presenting for colonoscopy who were randomized in chronological order to receive Golyte, Miralax, or Nu- lytely. Written consent was obtained. Data collected from patients who gave their own informed consent or unable to speak English were excluded from the study. Patient demographic, medical history, level of education, previous abdominal surgery, prior bowel habits, compliance with a liquid residue diet and bowel preparation used were noted. The endoscopist evaluated the preparation quality during the procedure using the validated Aronchick scale with 1 as excellent and 5 as inadequate quality. The data was analyzed by using the t-test as indicated using SPSS version 15.0.

Results: Total 157 patients included in the study, were divided into three groups (51 Golyte, 64 Miralax, 42 Nulytely). Mean age was 60 years (range 27 to 81). Gender: P76, M1. There was no statistically significant difference between the three groups in the quality of bowel preparation (p-value 0.861) or baseline characteristics including age, sex, race, level of education, comorbid conditions, prior abdominal surgery, prior colonoscopy, compliance with a liquid diet and bowel preparation compliance rates. However, more patients in Golyte group felt that it was more difficult for them to take the medication than to comply with a liquid diet(64.7% vs. 35.3%; p-value 0.001 compared with other two groups). The main reasons for this were the large amount and the taste of the Golyte. In a separate analysis, patient’s liquid diet compliance rather than perceived bowel habits and level of education better predicted bowel preparation quality.

Methods: Retrospective analysis of 126 consecutive patients (36 males. 90 females, mean age 54 years) who underwent MII-EEM and esophagostomy between January 2007 to April 2008. Esophageal function testing was performed with an MII-EEM catheter 4 impedance measuring segments (40, 30, 20 and 15 cm above LES). The indices were the number of episodes of acid reflux (pH<4) and the number of episodes of bolus transit. Endoscopy findings were evaluated for esophagitis (defined as Grade A or greater) and hiatal hernia (defined as 2cm or greater). The studies were assessed and results were compared using PRISM statistical software.

Results: Among the 126 patients, 20% had incomplete bolus transit. 25 patients had evidence of esophagitis, of whom 12% had incomplete bolus transit. 101 patients did not have esophagitis, of whom 22% had incomplete bolus transit. There was no statistically significant difference in the presence of incomplete bolus transit whether the patients had esophagitis or not (p=0.43, Mann Whitney test). 64 patients had hiatal hernia, of whom 16% had incomplete bolus transit. 62 patients did not have hiatal hernia, of whom 24% had incomplete bolus transit. There was no statistically significant difference in the presence of incomplete bolus transit whether patients had hiatal hernia or not (p=0.39, Mann Whitney test).

Conclusion: This initial study indicates that endoscopic findings of esophagitis or hiatal hernia are not predictive of esophageal function as assessed by MII-EEM clearly is still the way to evaluate the capacity of the esophagus to transit boluses.

Methods: To develop an assessment tool, Standardized Procedure Evaluation (SPE), to objectively evaluate progression of gastroenterology fellows in training endoscopic skills.

Results: Trainees were proctored at the endoscopy unit of The Brooklyn Hospital Center, 450-bed community hospital in New York City. The vast majority of the approximately 2500 EGDs performed yearly are performed by trainees under the guidance of a gastroenterologist. The SPE was designed by two faculty gastroenterologists with extensive endoscopic experience and the chief gastroenterology fellow. A standard EGD including peroperative tasks was itemized into a 26-point grading system (Table 1). Nine gastroenterology fellows (four 3rd year fellows, four 2nd year fellows, one 1st year fellow) were graded prospectively throughout their training. The SPEs were completed by two faculty gastroenterologists during the final three months of their academic year for each of the nine fellows. Each fellow was graded twice. The SPE included a 10-point Likert scale during 10 separate diagnostic endoscopies. An average score was compiled for each fellow during each year of training. The gold standard in each case was that which the attending gastroenterologist could do and what the standard fellow could do with the aid of an experienced attending gastroenterologist.

Results: This pilot project demonstrated a difference in endoscopic skill based on level of training (Graph 1). The fellows in the first year attained an average score of 42.2 out of 76. This improvement continued for the second and third year fellows. The third year fellows demonstrated significant improvement during their final year of training. Statistical analysis showed the difference of means between SPE scores of each year of training was statistically significant (p < 0.05). The data also revealed an increase in performance score for each individual fellow as they progressed through training.

Conclusion: The SPE that was developed appears to be a good tool for the assessment of endoscopic skills in fellows in training. Further testing with larger number of fellows and evaluators is needed to validate the tool for widespread use.
Table 1: Esophagegastroduodenoscopy Standardized Procedure Assessment

<table>
<thead>
<tr>
<th>Task</th>
<th>1st Year (n=18)</th>
<th>2nd Year (n=16)</th>
<th>3rd Year (n=8)</th>
</tr>
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<tbody>
<tr>
<td>Focused H&amp;P</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Informed Consent</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Patient Positioning</td>
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<td>3</td>
</tr>
<tr>
<td>Equipment Testing</td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Assessment of Anesthesia</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Intubation of UES</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Examination of Esophagus</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Assessment of GE</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Examination of Stomach</td>
<td>2</td>
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<td>3</td>
</tr>
<tr>
<td>Intubation of Pylus</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Assessment of Duodenal Bulb</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ability to Enter 2nd Port of Duodenum</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Inspection of 2nd Port of Duodenum</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Slow Withdraw on Duodenal Sweep</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Assessment of Angiograms</td>
<td>2</td>
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<tr>
<td>Biopsy Technique</td>
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<tr>
<td>Assessment of Greater Curvature</td>
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<td>2</td>
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<tr>
<td>Deflation Prior to Withdraw</td>
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<tr>
<td>Overall Handling of the Scope</td>
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<tr>
<td>Attention to Patient Safety</td>
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<td>Attention to Patient Comfort</td>
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<td>Assessment of Pathology Seen</td>
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<tr>
<td>Appropriate Photo Documentation</td>
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</tr>
<tr>
<td>Patient Discharge</td>
<td>3</td>
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</tr>
</tbody>
</table>

Average SPE Score Vs. Year of Fellowship

- 80
- 60
- 40
- 20
- 0

Year of Fellowship

P729

PREDICTORS OF DEPTH OF MAXIMAL INSERTION AT DEEP ENTEROSCOPY

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Purpose: The success of deep enteroscopy (DE) depends on the distance reached in the small bowel. Factors predictive of the depth of maximal insertion (DMI) are unknown. We hypothesized that a history of abdominal surgeries and the body mass index (BMI) can impact the DMI.

Methods: All patients enrolled in the DE database at our institution were considered eligible. Exclusion criteria were intra-operative DE, DBERCPR and advancement limited by pathology. We stratified patients based on their abdominal surgical history. The factors predictive of the DMI were calculated using ANOVA and Spearman correlation analysis.

Results: A total of 400 patients were excluded (24 pathology limited, 5 instrument malfunction, 5 retrograde access in patients with Roux-en-Y anatomy, 5 other reasons). The remaining 95 patients, average age 62 (range 18-86), 64% female, BMI 27.6 (range 15.5-113) had 113 procedures, 65 antegrade, 14 retrograde and 17 both. Two patients had bidirectional pancreatography. The indiction for DE was obscure bleeding in 78%. The average antegrade DMI was 190.2 (range 50-420) cm, retrograde 116.5 (10-275) cm, average procedure time 70.3 and 88 min respectively. Sixty-three patients (66%) had previous abdominal surgeries (range 1-8 patients). A history of any abdominal surgery and surgery excluding appendectomy were negative predictors of the DMI for both the antegrade (ANOVA, P=0.0006; p=0.0005) and retrograde approaches (P=0.05; p=0.02) respectively. A history of pelvic surgery, bowel surgery and number of abdominal surgeries were negative predictors only for the antegrade approach (p=0.002; p=0.002; p=0.0003). Patients with 3 or more surgeries had a significantly lower DMI than those with 1 (216±71.7 cm, vs. 135±30.8 cm, p=0.001 for antegrade and 148±71.8 vs. 114±49.6 cm, p=0.001 for retrograde). There was no significant correlation between the DMI and age, BMI or procedure duration for either approach, likely because most procedures were therapeutic.

Conclusion: Previous abdominal surgeries can significantly impact the depth of maximal insertion at DE. This may explain the differences between the success rates of DE in different populations and may allow clinicians to predict the level of difficulty and yield of DE.

Disclosure: Dr. M. Chourou - research support, consultant: Spiru Discovery Int'l; Speakers bureau: Given Imaging; Dr. D. Helper - consultant: Spiru Discovery Int'l.

P730

THE OKLAHOMA EXPERIENCE WITH DOUBLE BALLOON ENTEROSCOPY (DBE): 1ST 100 PROCEDURES

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Purpose: While DBE indications are similar worldwide, patient (pt) population and pathology varies. We report our pt population, predominantly elderly with vasculopathy, often on anti-platelet agents, being evaluated for GI bleeding.

Methods: Between 4/07 and 5/08, 100 DBE procedures were performed on 88 pts. Capsule endoscopy (CE) preceded DBE in nearly all pts. 83 procedures were performed antegrade, 17 retrograde, initial route guided by CE findings and or clinical presentation.

Results: Mean age was 64, 20 pts > 80 years. 75% were ASA class a. One pt was hospitalized for hepatic encephalopathy. No other complications occurred. Of 82 pts evaluated for GI bleeding 57 were on single or combination anti platelet agents, anti coagulants, or had intrinsic coagulopathy. 70 procedures were performed for transfusion requiring blood loss (mean 6 units). Mean estimated insertion from the pylorus was 295cm and did not differ in patients ≥80 years (330cm). Prior multiple abdominal surgeries or prior adhesionolysis affected antegrade depth of insertion; procedures in 6 of these 8 pts had intubation ≤200cm, versus 4 of 75 of remaining procedures. Of 94 procedures performed for blood loss, (+) findings were present in 39 of 60 procedures with gross bleeding, versus 14 of 34 with occult bleeding (P=0.05). (+) findings were present in 44 of 70 procedures for patients requiring transfusions, versus 12 of 24 for patients not requiring transfusions. Usually DBE confirmed CE findings. However, in eight patients positive CE findings (6 with blood, 2 with small AVM’s) had negative DBE. Conversely, 5 of 8 pts with CE had (+) DBE, with DBE catherization DBE allowed treatment or guided therapy in 65% of patients, primarily by cauterizing AVM’s, but also by marking surgical lesions, identifying ulcer in bypassed remnant, cauterizing bleeding ulcers and anastomoses.

Conclusion: These predominately elderly vasculopathic pts often requiring anti platelet or anticoagulant therapy: 1. Age over 80 did not negatively affect DBE insertion depth; prior multiple operations or adhesionolysis did. 2. DBE can be safely performed in pts ≥80 and in patients with ASA class a. 3. Pts with overt bleeding and those requiring transfusions are significantly more likely to have positive DBE than those with occult blood loss or not requiring transfusions. 4. CE and DBE are complementary, but not identical: CE sometimes identifies occult pathology that DBE confirmed and treatable findings occurred in patients with negative CE; therefore, negative CE pts with significant blood loss should undergo DBE. 5. DBE allowed treatment or guided therapy in 65% of pts.
P731 GASTROINTESTINAL COMPLICATIONS ASSOCIATED WITH LEFT VENTRICULAR ASSIST DEVICES

Methods: This is a retrospective study of 500 patients who underwent long-term LVAD therapy. Complications were defined as an adverse event associated with LVAD placement or operation, as documentation in the medical record, and were categorized by organ system involvement: infectious, cardiovascular, neurologic, musculoskeletal, respiratory, renal, gastrointestinal, dermatologic, and decubitus ulcers. Analysis was performed using descriptive statistics.

Results: In the LVAD population, gastrointestinal complications were noted in 320 (64%) patients. Of these patients, 294 (59%) were identified as gastrointestinal complications. The most common complications were gastrointestinal bleeding (54%), followed by gastrointestinal perforation (42%), gastrointestinal obstruction (19%), and gastrointestinal fistula (12%). In addition, 10% of patients developed gastrointestinal infection.

Conclusion: Gastrointestinal complications are common in patients undergoing LVAD therapy. Further research is needed to identify modifiable risk factors and develop strategies to prevent and manage these complications.
Therapies and Outcomes over First Year of Treatment

### P736
**VALIDATION OF THE PEDIATRIC GASTROESOPHAGEAL REFLUX DISEASE SYMPTOM QUESTIONNAIRE: A SCORING SYSTEM (PGSQ)**
N. Nelson, MD,1 L. Roberts, MPH,5 S. Kohari, PhD,1 S. R. Orenstein, MD,3 B. Gold, MD,3 E. Haussler, MBChB,1 R. Mody, PhD,1 L. Kleinman, DrPH,1 O. Dabous, MD,5 1. Pediatrics, Children’s Memorial Hospital, Northwestern University, Chicago, IL; 2. Center for Health Outcomes Research, United BioSource Corporation, Bethesda, MD; 3. Health Economics and Outcomes Research, TAP Pharmaceutical Products, Lake Forest, IL; 4. Pediatrics, Children’s Hospital, University of British Columbia, Vancouver, BC, Canada; 5. Pediatric Gastroenterology, Hepatology and Nutrition, Emory University School of Medicine, Atlanta, GA. 6. Pediatric Gastroenterology, Children’s Hospital of Pittsburgh, Pittsburgh, PA.

**Purpose:** PGSQ is a new tool developed to assess pediatric gastroesophageal reflux disease (GERD). There are 2 versions of the instrument: PGSQ-P (completed by parents of children age 2-8yrs) and the PGSQ-C (completed by children age 9-17yrs). The objective of this study was to determine the psychometric properties of these two age-specific versions of PGSQ.

**Methods:** The PGSQ was developed using input from patients, parents and physicians. Both versions were validated during a 3-week longitudinal study: 231 participants were enrolled at 11 clinical sites in the US. Subjects included: 75 parents of children 2.8 yrs old with GERD (defined by the treating physician), 41 parents of children 2.8 yrs old without GERD 75 children 9.17yrs old with GERD, and 40 children 9.17yrs old without GERD. Internal consistency was assessed by Cronbach’s alpha. Construct validity was assessed by comparing the PGSQ to global symptom questions and the Pediatric Quality of Life (PedsQL) subscales. Discriminant validity was assessed by comparing scores between participants with GERD vs without GERD.

**Results:** The PGSQ-P and PGSQ-C were analyzed separately. Exploratory Factor Analysis demonstrated four symptom subscales for the PGSQ-P (Extra- Esophageal Symptoms (8 items), Regurgitation (5 items), Sleep (2 items), and Heartburn (2 items)) and three symptom subscales for the PGSQ-C (Extra- Esophageal Symptoms (6), Regurgitation (2), Heartburn/ General Symptoms (7)). Both questionnaires also demonstrated an Impact scale (14 and 13 items, respectively) and a School scale (6 items). High to moderate internal consistency reliability was observed, ranging from 0.67 to 0.94 (Impact) for the PGSQ-P and from 0.67 (Regurgitation) to 0.94 (Impact) for the PGSQ-C. Construct validity between the PGSQ Regurgitation subscale and the global questions ‘taste throw-up’ and ’sick to stomach/ need to throw-up’ ranged from low to high with correlations of 0.82 and 0.79 for the PGSQ-C and 0.92 and 0.42 for the PGSQ-P respectively. Correlations between the PGSQ Heartburn subscale and the global question ‘hurt/ burning in chest’ were also moderate to high at 0.74 for the PGSQ-C and 0.64 for the PGSQ-P. Correlations between the PGSQ-P and the PGSQ-C were significantly higher than correlations between the PGSQ-P and the PedsQL subscales. Discriminant validity was assessed by comparing scores between participants with GERD vs without GERD.

**Conclusion:** The PGSQ-P and the PGSQ-C are reliable and valid psychometric tools for use in the assessment of GERD in children.

### P737
**EFFECT OF HIGH BODY MASS INDEX ON THE COURSE OF PEDIATRIC CROHN’S DISEASE**
M. B. Grifka, MD,1 S. Kugathasan, MD,1 J. Hyams, MD,1 T. Lerner, MS,5 N. Kohan, MA,1 J. Markowitz, MD,1 1. Pediatric IBD Collaborative Research Group, Hartford, CT; 2. Biosintics Unit, Feinstein Institute, North Shore-Long Island Jewish Health System, Manhasset, NY.

**Purpose:** The obesity epidemic in the US appears to be increasing the BMI of children with IBD such that a recent study has demonstrated that 10% of children with newly diagnosed CD are overweight or obese (Kugathasan, J Pediatr. 2007;151:523). As adipose tissue is an important source of inflammatory cytokines, we hypothesized that the course of children with high BMI would be more severe than that of children with average BMI.

**Methods:** Data were obtained from the Pediatric IBD Collaborative Research Group Registry, a prospective observational database enrolling children with newly diagnosed IBD since 2002 from 20 centers in the US and Canada. Subjects’ clinical and demographic information were prospectively recorded at time of diagnosis and quarterly. CD activity was assessed by physician’s global assessment (PGA). Children were classified by their BMI Z-score at diagnosis: high (≥+99, low < -99, average: -99 to +99). Severity of CD at diagnosis and over the course of the first year of treatment was assessed.

**Results:** Among 621 CD children (age ≥ SD 1.19 ± 2.7 yrs; 58% male) 63 (10%) had high BMI. M. Crohn’s average BMI and 239 (38.5%) low BMI. At diagnosis, 85% of those with low BMI had moderate/severe CD, compared to 63% with average BMI and 56% with high BMI (p<0.001). To determine whether high BMI affected the course of CD after diagnosis, a subgroup of high BMI subjects (n=58) were matched 1:1 by age, Tanner stage, extent of CD and PGA at presentation with average BMI subjects, and a paired analysis was performed. By 30 days after diagnosis, 78% of average BMI and 84% high BMI subjects had inactive/mild CD (p<0.06). Using a FL cutoff level of 60 mg, there were no differences in the proportions of subjects receiving steroids, immunosuppressives or infliximab or in rates of hospitalization or surgery (Table). There were also no differences in the time to start steroids, immunosuppressives or infliximab between groups.

**Conclusion:** Moderate/severe CD is most common in children with low BMI at diagnosis. Compared to those with normal BMI, high BMI does not appear to affect the severity or course of CD in children over the first year after diagnosis.
P739

CAUSTIC INGESTION IN CHILDREN: A CORRELATION BETWEEN SYMPTOMS AND ESOPHAGEAL INJURY?
B. Ricciardi, MD; P. Fornaroli, MD; N. de’Angelis, MD; F. Vincenzi, MD; V. Maffini, MD.

Methods: 39 patients (23 male, 16 female, mean age 3.3 years range 9 months-15 years) with accidental caustic ingestion referred to our Unit in the period between May 2006 and May 2007. All patients underwent heart, lung, chest and abdomen examination; an upper endoscopic exam was performed within the first 48 hours. The grading of oesophagitis was classified according to the endoscopic findings as "no injury," I (superficial erythema or macular hyperemia), IIa (grade I-IIb burns) (shallow linear and circular ulcers limited to the mucosa) and III (grade IIb and III burns) (ulcers penetrating the muscular or submucosal layer). Twenty-eight patients (71.8%) did not present any symptoms; sialorrhea occurred in 5 patients (12.8%); nausea and vomiting in 4 cases (10.3%); and abdominal pain in 2 cases (5.1%). Endoscopic examinations showed no injury in 14 cases (35.9%), grade I burns in 5 cases (12.8%), nausea and vomiting in 4 cases (10.3%) and abdominal pain in 2 patients (5.1%). Results: None of the patients required intensive care (i.e., shock, unstable vital sign, respiratory distress, or need for a respirator). Five of them (12.8%) had superficial oral ulcers without clinical symptoms. Twenty-eight patients (71.8%) did not present any symptoms; sialorrhea occurred in 5 patients (12.8%), nausea and vomiting in 4 cases (10.3%) and abdominal pain in 2 patients (5.1%). Conclusion: In our study the clinical presentation and the routine investigations after corrosive ingestion didn’t predict the extension and the degree of the oesophageal damage and the long lasting prognosis. None of the patients with severe esophageal lesions presented initial symptoms.

P740

FEASIBILITY AND APPLICATION OF 3-DIMENSIONAL ULTRASOUND FOR MEASUREMENT OF GASTRIC VOLUMES IN HEALTHY ADULTS AND ADOLESCENTS
M. Mannini, MD; M. D. Burton,1 D. Meizner,1 D. Eckert, RN,1 M. Callstrom, MD,1

Methods: The study included two healthy groups: A. 11 adults underwent SPECT and 3D-US simultaneously to measure 3D-US measurement of GV during fasting and postprandially. 3. Develop normative data of GV in 24 healthy adolescents. Results: Adult fasting and PP GV's by 3D-US and SPECT are shown in Fig. 1. Median delta (PP-fasting) GV was 444 (422-535 as 25th-75th interquartile range (IQR)) mL for 3D-US and 545 (486-564) mL for SPECT (p=0.15). There were larger interindividual coefficients of variation (COV) for GV by 3D-US (60.3% fasting, 21.3% PP) compared to SPECT (19% fasting, 9.2% PP). Intraradial VOI for two 3D-US measurements were 84% fasting and 44% average PP. Estimated GV's for the adolescent group (median, 25th/75th IQR) were: fasting 33 (18-53) mL, 30 min PP 330 (284-357) mL, and delta GV 281 (240-324) mL.

Conclusion: 3D-US is a promising method to measure GV accommodation to a meal. A large COV reflect the learning stage in development of this promising technique.

P741

PRE-ENDOSCOPY CANCER SCREENING USING A SELF-ADMINISTERED QUESTIONNAIRE HAS A HIGH YIELD FOR IDENTIFYING PATIENTS WHO QUALIFY FOR GENETIC COUNSELING
S. Jakab, MD; G. Vornovitsky, MD; V. Bunac, MD; C. J. Adelmann, MD; W. Hale, MD.

Methods: Patients presenting for outpatient gastrointestinal endoscopy (8/5/07 - 11/15/07) were asked, at the time of registration for the procedure, to complete a one-page questionnaire regarding personal/family history of CRC, cancer of uterus, ovaries, breast, stomach, small bowel, gallbladder, pancreas, kidney, or sweat glands, as well as previous genetic counseling referral. A higher risk for familial CRC and need for genetic counseling referral was indicated by the presence of one of the following criteria: 1) CRC in a first-degree relative; 2) CRC before age 50; 3) multiple relatives on the same side of the family with HNPCC (hereditary non-polyposis colorectal cancer) - related cancers; 3) more than one diagnosis of HNPCC-related cancers in the same individual; 4) rare or unusual tumors (sebaceous carcinoma or adenoma).

Results: 1,495 patients completed the pre-procedure questionnaire. There were 307 patients with a personal/family history of CRC: 27 – first degree relatives, 122 – second degree relatives. 54 patients had a personal/family history of CRC before age 50, and 50 patients had at least 2 persons with CRC on the same side of the family. Out of these 307 patients, 119 should have been referred for genetic counseling. Another 7 patients met the referral criteria without a personal/family history of CRC. Of all 126 patients, only 3 were previously referred for genetic counseling.

Conclusion: A simple pre-procedure questionnaire at the time of gastrointestinal endoscopy that includes discovery of prevalent genetic counseling referral.

P742

OUTCOME OF PATIENTS WITH INADEQUATE COLON PREPARATION ON MISSING COLORECTAL NEOPLASMS
S. V. Satia, MD, A. Madhota, MD, P. Gutaura, MD, V. Tran, MD; G. S. Raju, MD, FRCP, FACC, FASGE. Internal Medicine, University of Texas Medical Branch, Galveston, TX.

Methods: The study included two healthy groups: A. 11 adults underwent SPECT and 3D-US simultaneously to measure 3D-US measurement of GV during fasting and postprandially. 3. Develop normative data of GV in 24 healthy adolescents. Results: Adult fasting and PP GV's by 3D-US and SPECT are shown in Fig. 1. Median delta (PP-fasting) GV was 444 (422-535 as 25th-75th interquartile range (IQR)) mL for 3D-US and 545 (486-564) mL for SPECT (p=0.15). There were larger interindividual coefficients of variation (COV) for GV by 3D-US (60.3% fasting, 21.3% PP) compared to SPECT (19% fasting, 9.2% PP). Intraradial VOI for two 3D-US measurements were 84% fasting and 44% average PP. Estimated GV's for the adolescent group (median, 25th/75th IQR) were: fasting 33 (18-53) mL, 30 min PP 330 (284-357) mL, and delta GV 281 (240-324) mL.

Conclusion: 3D-US is a promising method to measure GV accommodation to a meal. A large COV reflect the learning stage in development of this promising technique.
significant neoplasia or "high risk" patients. The aim of our study was to compare the endoscopic findings between high definition (HD) and conventional colonoscopy (CC). The endoscopic findings included number, pathology and size of polyps. In addition we compared the percentage of patients with adenomas detected and the percentage of individuals classified as "high risk" based upon their adenoma characteristics, between those undergoing colonoscopy by HD versus CC.

Methods: We randomly selected 426 patients undergoing colonoscopy in each cohort (HD vs CC) and matched them by gender, age (+/- 5 yrs) and indication for colonoscopy. Conditional logistic regression was used to assess for differences in polyp detection rates and high risk classification between the two groups. Patients with an inadequate bowel preparation or incomplete colonoscopy were excluded. The number, size, location, and pathology of the polyps were recorded. High risk was defined as an individual with 3 adenomas or with an adenoma ≥ 10 mm in size or an adenoma with villous features or high grade dysplasia.

Results: The mean age of the 852 patients was 59.7 (+/- 12.3) years and 61.5% were males. The indication for the procedure was CRC screening in 39%, personal history of neoplasia in 28%, family history of neoplasia in 4% and symptoms in the remainder of the patients. A numerically greater percentage of subjects had polyps, adenomas and ≥ 3 polyps detected during HD colonoscopy than CC, but not statistically significantly so (See Table). HD colonoscopy did not result in the detection of smaller or less histologically advanced polyps than CC.

Conclusion: Enhanced imaging technology and wider field of view colonoscopy does not increase the detection of disruptive, unimportant lesions in the colon. In our cohort study, we found no evidence to suggest that high definition colonoscopes are superior to conventional colonoscopes in the detection of polyps of different sizes, histology or multiplicity. The adenoma detection rate and detection of subjects classified as "high risk" is similar between the two technologies.

Polyp and Patient Characteristics as Determined by High Definition vs Conventional Colonoscopy

<table>
<thead>
<tr>
<th>Subjects</th>
<th>High Def (%)</th>
<th>Conv. Colon (%)</th>
<th>p value</th>
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</thead>
<tbody>
<tr>
<td>w/Polyps</td>
<td>39.9</td>
<td>36.9</td>
<td>0.34</td>
</tr>
<tr>
<td>w/Adenomas</td>
<td>24.7</td>
<td>21.9</td>
<td>0.36</td>
</tr>
<tr>
<td>Classified as High Risk</td>
<td>29.0</td>
<td>25.2</td>
<td>0.23</td>
</tr>
<tr>
<td>w/3 polyps</td>
<td>12.2</td>
<td>9.4</td>
<td>0.16</td>
</tr>
<tr>
<td>Polyp Size</td>
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<tr>
<td>≤ 1.5 mm</td>
<td>70.1</td>
<td>74.1</td>
<td>0.37</td>
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<tr>
<td>1.6-9 mm</td>
<td>21.3</td>
<td>16.2</td>
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<td>≥ 10 mm</td>
<td>8.6</td>
<td>9.7</td>
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<tr>
<td>Polyp Pathology</td>
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<td>50.5</td>
<td>45.8</td>
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<tr>
<td>TVaCa</td>
<td>2.8</td>
<td>3.2</td>
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<tr>
<td>HP</td>
<td>35.9</td>
<td>40.0</td>
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</tr>
<tr>
<td>Other</td>
<td>10.8</td>
<td>10.9</td>
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</table>

P745

NON-MEDICAL COSTS OF COLORECTAL CANCER SCREENING USING COMPUTED TOMOGRAPHIC COLONOGRAPHY

E. McGregor, PhD1; J. Hildeman, MD, PhD2; S. J. Heitman, MD, Msc,1 P. Au, MA,1 A. I. Manus, MD, MSc,1 B. I. Manus, MD, MSc,2 E. McGregor, PhD1. 1. Colon Cancer Screening Centre, University of Calgary, Calgary, AB, Canada; 2. Division of Population Health & Information, Alberta Cancer Board, Calgary, AB, Canada.

Purpose: To estimate the non-medical costs of colorectal cancer (CRC) screening using computed tomographic colonography (CTC).

Methods: Consecutive individuals presenting for CRC screening at a Calgary community diagnostic imaging centre were recruited. Subjects completed a questionnaire including items on time-off work both for the subject and any accompanying caregiver, travel details and direct out-of-pocket expenses (bowl prep). Time costs were valued at Government of Canada wage rates. Travel costs included estimated costs for travel by car and actual parking costs and taxi and public transportation fares. Car user’s costs were calculated using a Canadian Automobile Association estimate of motoring costs per kilometre. Costs are in 2007 Canadian dollars.

Results: 132 of 325 subjects undergoing CRC screening with CTC between November 2007 and May 2008 consented to receive a questionnaire in the mail. Eighty subjects returned the questionnaire for an overall response rate of 25%. The mean age of the sample was 57.66 ± 11.48 years and 64% were employed. Thirty-four percent of the subjects required an accompanying caregiver. The non-medical costs (subject ± caregiver) averaged $154. The breakdown of subject ± caregiver time and travel costs is found in the table.

Conclusion: The non-medical costs of CRC screening with CTC are significant, but less than they are for colonoscopy ($308). These costs are important given that they may impact a person’s ability to comply with CRC screening. Furthermore, recent guidelines recommend their inclusion in economic evaluations.

Non-medical time and costs of colorectal cancer screening

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>95% confidence interval</th>
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<tr>
<td>Time (hrs)</td>
<td></td>
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<tr>
<td>Subject-receiving care + travel</td>
<td>2.8</td>
<td>(2.0, 3.6)</td>
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<tr>
<td>Companion</td>
<td>1.4</td>
<td>(0.5, 2.2)</td>
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<tr>
<td>Subject-additional time off work</td>
<td>0.9</td>
<td>(0.3, 1.5)</td>
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<tr>
<td>Companion-additional time off work</td>
<td>0.2</td>
<td>(0.1, 0.4)</td>
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<tr>
<td>Non-medical cost ($)</td>
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<tr>
<td>Subject time cost</td>
<td>57.50</td>
<td>(48.6, 74.4)</td>
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<tr>
<td>Companion time cost</td>
<td>27.70</td>
<td>(18.1, 45.3)</td>
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<td>Subject-additional time off work</td>
<td>17.60</td>
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<td>Companion-additional time off work</td>
<td>4.80</td>
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<tr>
<td>Travel</td>
<td>35.70</td>
<td>(9.9, 64.8)</td>
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<tr>
<td>Bowel prep</td>
<td>8.70</td>
<td>(7.5, 10.1)</td>
</tr>
<tr>
<td>Total costs ($)</td>
<td>153.60</td>
<td>(93.5, 213.9)</td>
</tr>
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</table>
P746
COLORECTAL CANCER RISK STRATIFICATION IN A COMMUNITY GASTROENTEROLOGY PRACTICE
B. McKeown, MD, B. Maceys, BSN, B. Biegle, Gastroenterology Associates, Alhambra, PA.
Purpose: Consensus recommendations ask that an individual patient's colorectal cancer (CRC) risk status be determined well before the earliest potential screening is done. This is generally not done and community data is limited. We initiated a CRC risk stratification program in a community based gastroenterology practice to establish individualized risk stratification with appropriate follow-up surveillance strategy in individuals felt to be at highest risk.
Methods: Patients with a diagnosis of CRC, 10 or more lifetime polyps, polyps prior to age 50, first, second or third degree family history of CRC or personal family history of genetic mutation were offered CRC risk assessment. Lifestyle and comorbid illness related risks were determined and patients were counseled regarding risk reduction. Three generation family histories were constructed and a pedigree analysis using modified Bethesda criteria determined if genetic testing was recommended. Informed consent was obtained and testing done in those who agreed. All patients were given CRC surveillance recommendations conforming to National Comprehensive Cancer Network (NCCN) guidelines.
Results: Sixty patients were referred in the first year. Referral indications were history of CRC, 17, 20 or more polyps, 5th family history CRC, 39, family history of HNPPC or FAP/MAP, 1. Some patients had more than one indication for referral. Fifty patients agreed to undergo the assessment. Nineteen patients were recommended to have genetic testing for known mutations. Ten declined testing, NCCN testing was recommended for 15, and seven declined. Two had positive tests with a variant mutation and a suspected deleterious mutation being found. One AFAP/MAP test was performed and was negative. Three patients declined AFAP/MAP testing. Using NCCN guidelines for surveillance, 10 patients were moved to more intensive colonoscopy regimens, three for annual colonoscopy, two every 1-2 years and five every 3-5 years. Conclusion: We conclude that there is a high participation rate by patients in CRC risk stratification in community gastroenterology practices. A strategy by discipline and possibly twenty percent of patients will be recommended for more intensive CRC surveillance programs.

P747
BASELINE KNOWLEDGE OF COLORECTAL CANCER SCREENING AND SURVIVAL GUIDELINES IN INTERNAL MEDICINE RESIDENTS: TO SCOPE OR NOT TO SCOPE
D.M. Richards, MD, K. K. Leung, MD, A. Madan, MD, FACGP Gastroenterology, University of Texas Health Science Center at San Antonio, TX.
Purpose: Studies have shown that physicians tend to refer patients for screening colonoscopy more frequently as compared to published guidelines. This may be due to lack of awareness of the current guidelines among referring physicians. We aim to assess the knowledge of current colorectal cancer (CRC) screening and survival guidelines from the American Cancer Society(ACS), US Multi-Society Task Force on Colorectal Cancer USMSTF), American Society for Gastrointestinal Endoscopy (ASGE) and American College of Radiology (ACR) in internal medicine residents at all training levels.
Methods: A ten question multiple-choice internet survey was developed based on the current guidelines published by the ACS, USMSTF, ASGE, and ACR. Questions focused on when to refer patients for screening/survival, preferred methods for screening/surveillance, and efficiency of screening/survival techniques. Survey was administered to residents currently in US internal medicine residency program during the 2007-08 academic year. Responses to the survey were subdivided according to the self reported post graduate year (PGY) of the respondents. Responses were analyzed and percentage of respondents selecting each answer was calculated.
Results: Total of 139 residents across all training levels (PGY-4) responded to the survey. Overall, 134 residents (94.6%) were aware of age of 50 years to initiate screening for average risk patients. Majority of residents (91.3%) chose colonoscopy as preferred method for screening/survival. PGY-1 residents less likely preferred colonoscopy as screening method as compared to PGY-4 (86% vs 95%). Almost 25% of PGY-3 & 35% of PGY-1 residents did not know to stop screening for colorectal cancer when the life expectancy is less than 10 yrs. Only 21% of residents knew to initiate screening at age 40 in patient with 1st degree relative with colon cancer. Survival colonoscopy for hyperplastic polyps at 1, 3, 5, and 10 yrs were recommended by 12%, 26%, 33% and 24% respectively. 47% of residents would repeat colonoscopy before 5 years in a patient with 1-2 adenomas < 1 cm in size. Half of PGY-3 level residents do not know the correct surveillance interval for patients who had curative resection of colon cancer. Regardless of PGY level, 73% residents did not know when to initiate screening patients with a history of Familial Adenomatous Polyposis
Conclusion: Current residents do not adequately know the current CRC screening guidelines and this can lead to unnecessary procedures, possible complications, increased backlog for colonoscopies, and increased national health care costs. Increased emphasis should be placed by training programs to better educate residents about current CRC screening and surveillance guidelines.

P748
MANAGEMENT OF SMALL POLYPS DETECTED BY SCREENING CT COLONOGRAPHY: PATIENT AND PHYSICIAN PREFERENCES
L. Shank, MD, L. Dyson, PhD, University of Texas Southwest, Dallas, TX.
Purpose: Appropriate management of small and medium sized polyps found on CT colonography (CTC) is highly controversial and will be critical not only to cancer outcomes but also to cost. We therefore aimed to understand patient and physician preferences for management of small polyps found on screening CTC.
Methods: Patients were given a validated handout and survey and asked to give their preferences for evaluation of a “pea-sized” polyp found on CTC. Using an internet survey, primary care physicians and gastroenterologists were queried about how they would manage a hypothetical 52-year-old patient of average colorectal cancer risk after finding a 5mm, 8mm, 12mm lesion on CTC screening. Survey reliability was assessed using Cronbach’s coefficient alpha.
Results: Of the 305 patient respondents, 95% desired to know if the polyp found on CTC was pre-cancerous, 86% stated they would request endoscopic evaluation, and 85% wanted polypectomy. Of the 277 primary care physicians, 71% would refer a 5mm sigmoid polyp for endoscopy: 86% for an 8mm polyp. 97% for a 12mm polyp, and 91% for three 5mm polyps. Of the 401 gastroenterologists, 83% would refer a 5mm sigmoid polyp for endoscopy. 96% for an 8mm polyp. 97% for a 12mm polyp, and 93% for three 5mm polyps. Overall, 75% of physicians indicated the fear of missing a pre-cancerous lesion would prompt referral for colonoscopy.
Conclusion: Both patients and physicians overwhelmingly preferred to follow up small polyps identified by CTC with endoscopy, suggesting that CTC screening programs in which polyps would not be removed may be unpopular and difficult to implement.

P749
POTENTIAL OVERUSE OF COLONOSCOPY FOR POLYP SURVEILLANCE
S. R. Kaptik, MD, T. Lyles, MD, F. Harris, MD, M. K. Ismail, MD, C. R. Tombazzi, MD.
Purpose: Patients with a diagnosis of CRC, 10 or more lifetime polyps, polyps prior to age 50, or three 5mm polyps on CTC. Survey reliability was assessed using Cronbach’s coefficient alpha.
Results: Of the 305 patient respondents, 95% desired to know if the polyp found on CTC was pre-cancerous, 86% stated they would request endoscopic evaluation, and 85% wanted polypectomy. Of the 277 primary care physicians, 71% would refer a 5mm sigmoid polyp for endoscopy: 86% for an 8mm polyp. 97% for a 12mm polyp, and 91% for three 5mm polyps. Of the 401 gastroenterologists, 83% would refer a 5mm sigmoid polyp for endoscopy. 96% for an 8mm polyp. 97% for a 12mm polyp, and 93% for three 5mm polyps. Overall, 75% of physicians indicated the fear of missing a pre-cancerous lesion would prompt referral for colonoscopy.
Conclusion: Both patients and physicians overwhelmingly preferred to follow up small polyps identified by CTC with endoscopy, suggesting that CTC screening programs in which polyps would not be removed may be unpopular and difficult to implement.

P750
IMPLEMENTATION OF A PATIENT-ORIENTED VISUAL DECISION AID FOR CRC SCREENING IN AN EFFORT TO INCREASE COMPLETED COLONOSCOPY RATES AMONG AN INNER-CITY POPULATION
S. Akerman, MD, R. Dihrimdau, DO, M. J. Sterling, MD, Z. S. Brels, MD, J. Herrera, MD, D. L. Doliner, MD, M. A. Menne, MPH, M. A. Akerman, BS, A. Natale-Pereira, MD, M. A. Moline, MD, C. Monif, Montefiore Medical Center, Bronx, NY; Gastroenterology, UMDNJ - New Jersey Medical School, Newark, NJ; 2. Internal Medicine, UMDNJ - New Jersey Medical School, Newark, NJ; 4. Medicine, Albert Einstein COM, Bronx, NY.
Purpose: To date 46 patients are enrolled, 24 randomized to the control and 22 to the intervention. We conclude that gender and race are important factors to consider when designing interventions. We have successfully shown our intervention promotes a 16% increase in appointments made when a physician staff with the proper education regarding colonoscopy procedures and screening. We have also shown our intervention promotes a 16% increase in completed colonoscopy rates (90% CI = -10.2% to 42.42%), with a Number Needed to Treat of 7.
Results: Data were quantified based on time interval in between the two colonoscopies and the various reasons for which they were repeated in that time interval. Please refer to data table. The colonoscopies repeated in all four time intervals were mostly for unspecified reasons. For the colonoscopies repeated for unspecified reasons, 78.4% were performed by the same endoscopist as the reason for earlier follow up was not rare and was categorized in the not specified reason. Conclusion: Despite the established guidelines, colonoscopies were repeated sooner mostly for unspecified reasons. This could partly be due to an open access to endoscopy system with patients referred too soon by their PCPs. In turn lets our ability to screen individuals without previous or recent colonoscopy. Potential reasons for divergence from practice guidelines should be studied further.

P751
PROPOSAL FOR NEW DIAGNOSTIC CRITERIA
H. pylori-negative subjects.
minder 3 days prior to the exam. Patients in the intervention group attended an educational session where they were read a pre-written script and shown a flip-chart (visual decision aid). The education included the risks of colon cancer, natural progression of colonic polyps, a de- scription and illustration of a colonoscopy, and its preparation. Similarly they would receive a phone call reminder 3 days prior to the exam.

Results: To date 46 patients are enrolled, 24 randomized to the control and 22 to the interven- tion groups. In the control group, 2024 patients (83.3%) scheduled the initial appointment at GI clinic only 9/20 (45%) kept the appointment and scheduled a colonoscopy. In the interven- tion group, 2241 patients (81.5%) scheduled the initial appointment, with 11/22 (61.1%) keeping the appointment and scheduling a colonoscopy. Of interest, to date all patients that have made appointments for colonoscopy have had them completed. The data provides for a 16.11% in- crease in completed colonoscopy rates (90% CI – 10.2% to 42.4%), with a Number Needed to Treat of 7.

Conclusion: This is an ongoing study, but based on the initial data there is a statistically signifi- cant difference between the groups. The effectiveness of the educational intervention is in helping patients maintain their appointment, thereby reducing the no-show rate in GI clinic. This low-cost intervention could be successfully implemented in an office setting by non-physi- cian staff with the proper education regarding colonoscopy procedures and scheduling. We have successfully shown our intervention promotes a 16% increase in appointments made when a visual decision aid is implemented to increase patient education regarding the procedure.

P751

DIFFERENCES IN COLORECTAL CANCER SCREENING RATES AMONG ETHNIC GROUPS


Purpose: Colorectal cancer is the most common cause of preventable cancer death in the United States. Despite recent decade, death rates from colon cancer have decreased due to the widespread implementation of colonoscopy/polypectomy. Unfortunately, many patients have not undergone this potentially life-saving procedure. Prior studies have shown that certain pa- tient groups face increased morbidity and mortality from colorectal cancer screening. In order to better understand the role of gender, age, language and ethnicity, the following study was performed.

Methods: All patients eligible for colorectal cancer screening seen during a 12 month period in a multi-ethnic clinic in Brooklyn, NY were studied. All patients were offered colorectal cancer screening by colonoscopy. Despite the multilingual nature of the clinic, translators were avail- able. Colonoscopy referrals were made to a Gastroenterology clinic where multilingual transla- tors were available. Outcome was whether a colonoscopy was performed.

Results: Two-thousand four hundred eighty seven patients eligible for colorectal cancer screen- ing were seen in the clinic during the period off study, mean age 65.9±17.9 years, 1531 female, 956 male patients 1105 were Caucasian, 631 Hispanic, 312 Asian, 199 African-American, 94 In- dian, 78 Middle-eastern, 59 other. Almost 30 languages were spoken, including English, Arabic, Bengali, Chinese, Creole, French, Hebrew, Russian, Spanish, Urdu, Vietnamese, Italian and Hindi. Of the 2487 patients referred for colonoscopy for colorectal cancer screening, 1642 (66%) completed the examination within 6 months of referral. Women were more likely to un- dergo colonoscopy compared to men (p=0.03). Of patients undergoing screening, 18/22 patients (81%) scheduled the initial appointment, with 11/18 (61.1%) keeping the appointment and scheduling a colonoscopy. Of interest, to date all patients that have made appointments for colonoscopy have had them completed. The data provides for a 16.11% in- crease in completed colonoscopy rates (90% CI – 10.2% to 42.4%), with a Number Needed to Treat of 7.

Conclusion: This is an ongoing study, but based on the initial data there is a statistically signifi- cant difference between the groups. The effectiveness of the educational intervention is in helping patients maintain their appointment, thereby reducing the no-show rate in GI clinic. This low-cost intervention could be successfully implemented in an office setting by non-physi- cian staff with the proper education regarding colonoscopy procedures and scheduling. We have successfully shown our intervention promotes a 16% increase in appointments made when a visual decision aid is implemented to increase patient education regarding the procedure.

P752

UTILITY OF INITIAL SCREENING COLONOSCOPY IN ELDERLY PATIENTS

S. R. Kapitik, MD, T. Lyles, MD, F. Harris, MD, M. K. Jamali, MD, C. R. Tumbhezai, MD, Gastroenterology and Hepatology, University of Tennessee, Memphis, TN.

Purpose: Despite increasing age and significant comorbidity, patients over the age of 75 are routinely referred for an initial screening colonoscopy. Patients and physicians often question the utility of a first ever colonoscopy in the elderly when no gastrointestinal symptoms exist. We investigated whether the endoscopic findings in individuals 70-80 and 80+ years of age warrant a recommendation to continue initial screening colonoscopies in these elderly popula- tions.

Methods: All colonoscopies performed at the Memphis Veterans Affairs Medical Center from January 1, 2006 through April 30, 2008 were retrospectively evaluated. Only outpatient screen- ing colonoscopies were included in the review. Exclusion criteria included prior colonoscopy, inpatient status, nursing home residence, and any colonoscopy performed for indications other than colorectal cancer screening (acute intestinal bleeding, iron deficiency, abdominal pain, constipation, diarrhea, and abnormal imaging findings). Advanced lesions were defined as any polyph containing villous or adenocarcinoma pathology. All patient data were obtained from the Computerized Patient Record System (CPRS) and the Computerized Patient Record System (CPRS) databases. Fisher’s exact tests were performed to determine statistical signif- icance and were calculated using Statistical Analysis System (SAS) software.

Results: A total of 463 patients were included in the study. When stratified by years of age, 463 patients were age ≤70, 124 were age ≤80, and 34 were age ≥80. The incidence of adenomas and advanced lesions in the age ≤70 group was 22.7% and 1.3%, re- spectively. In the age ≥70 group, adenomas and advanced lesions had increased to 32.4% and 3.2%, respectively. The age ≥70 group was older (70.8±8.4 years vs. 70.8±4 years, P<0.01). 17% of advanced lesions were adenocarcinomas in the age ≥70 group while 100% of advanced lesions were ade- nocarcinomas in the age ≥70 group. Conclusion: Elderly patients undergoing initial screening colonoscopy have significantly higher rates of adenomas and adenocarcinomas when compared to younger patients. Surpris- ingly, nearly 9% of patients older than 80 years were diagnosed with adenocarcinoma. These findings suggest that it is appropriate to perform an initial screening colonoscopy in elderly pa- tients 70 years and older, provided they are healthy enough to tolerate the procedure.
DIAGNOSIS OF EOSINOPHILIC ESOPHAGITIS AFTER PRIOR NISSEN FUNDOPLICATION FOR PRESumed “REFRACTORY GERD:” IMPLICATIONS FOR PREVENTION AND PATIENT MANAGEMENT

E. S. Dellon, MD, MPH; T. M. Farrell, MD; E. B. Boycemski, MD; N. J. Shaeber, MD, MPH. 1. Medicine; Division of Gastroenterology and Hepatology, University of North Carolina - Chapel Hill, Chapel Hill, NC; 2. Surgery, University of North Carolina - Chapel Hill, Chapel Hill, NC.

Purpose: Previous studies have shown that a small percentage of patients with symptoms of heartburn may have refractory gastroesophageal reflux disease (GERD) actually have eosinophilic esophagitis (EoE). The frequency of patients with presumed refractory GERD who undergo Nissen fundoplication but have EoE is unknown. The purpose of this study is to present a case series of patients with esophageal eosinophilia who underwent fundoplication and were subsequently found to have EoE.

Methods: We performed a retrospective analysis of the University of North Carolina (UNC) EoE clinicopathologic database which contains information on patients with esophageal eosinophilia from any cause from 2000-2007. Patients diagnosed with EoE after a prior Nissen were identified, as were other patients with high levels of esophageal eosinophilia and a prior Nissen. Cases of EoE were defined as having a 15 eosinophils per high-powered field (≥0.2mm2, eos/hpf) with at least one typical symptom (eg dysphagia, heartburn, or feeding intolerance) and with other causes of esophageal eosinophilia excluded. The UNC electronic medical record was reviewed to extract pertinent data.

Results: A total of 8 patients were identified who had a prior Nissen and high levels of esophageal eosinophilia. Of those, 4 patients (56 yo F, 38 yo M, 50 yo F, 8 yo M) met the diagnostic criteria for EoE for this study. All 4 had undergone Nissen prior to 2002. Their symptoms (dysphagia in 2/4, food impaction in 1/4, heartburn in 3/4, failure to thrive in 1/4) and esophageal eosinophilia (>50, 60, 50, and “innumerable” eos/hpf, respectively) persisted after the surgery. Time from Nissen to diagnosis of EoE ranged from 7-14 years. Despite their high esophageal eosinophilia (≥50, 60, 50, and “innumerable” eos/hpf, respectively) persisted after EoE treatment.

Conclusion: We have identified 4 patients with “refractory GERD” treated with Nissen fundoplication who were subsequently diagnosed with EoE. Therefore, a proportion of subjects undergoing this surgery for incomplete resolution of GERD symptoms appear to be undisagnosed cases of EoE. The proportion of PPI non-responsive subjects with EoE is unknown. However, the given rising prevalence of EoE, it may be prudent to obtain proximal and distal esophageal biopsies in such patients prior to performing anti-reflux surgery.

CLINICAL EVALUATION OF XP19986 AS A POTENTIAL TREATMENT FOR GERD

F Haft MD, R Lal, PhD, J. Sukbuntherung, PhD, W. Luo, MS, J. Tovora, BS, R. Blamenthal, MS, M. Lassautte, PhD, Z. Navhah, MS, K. C. Candy, PhD, XenoPort Inc., Santa Clara, CA.

Purpose: XP19986 is a prodrug of the R- isomer of the GABA-b agonist baclofen. XP19986 reduced the number of reflux episodes in GERD patients in a single-dose study. XP-B-049 with controlled release (CR2) capsules (Castell et al, Gastroenterology 2007, A-486). The purpose of the analysis was to link the efficacious concentrations from a Phase 2a single-dose GERD study (XP-B-049) with a multiple-dose tolerability study (XP-B-060) to predict efficacious doses that will be well tolerated in longer-term GERD studies.

Methods: In XP-B-049, patients with GERD received single oral doses of 10, 20, 40, and 60 mg XP19986 controlled release (CR2) capsules or placebo. A statistically significant reduction in total reflux episodes was seen 12 hours after dosing with XP19986 vs placebo. Exposure quartiles were determined based on R-baclofen exposures. The top three quartiles by Cmax showed fewer 12-hour total reflux episodes during XP19986 treatment than with placebo, defined by Cmax of 66 ng/mL. The average R-baclofen concentration for the highest quartile was 30 ng/mL. Thus, R-baclofen concentration range of 30 to 60 ng/mL was considered efficacious. Study XP-B-060 evaluated safety, tolerability and PK of XP19986 sustained release (SR) tablets after repeated once (QD) or twice daily (BID) dosing in healthy subjects. Four groups of subjects received repeated doses of XP19986 or placebo. Subjects were titrated to QD and BID regimens for 7 days each, and then tapered off. Doses were: Group 1: 30 mg QD and 30 mg BID; Group 2: 60 mg QD and 60 mg BID; Group 3: 90 mg QD and 90 mg BID; and Group 4: 120 mg QD. Steady-state XP19986 and R-baclofen concentrations were determined.

Results: In XP-B-060, XP19986 was well absorbed and rapidly converted to R-baclofen. R-baclofen exposures were proportional to XP19986 dose. Mean steady state Cmax for R-baclofen ranged from 69.2 to 250 ng/mL for 30 to 120 mg QD doses, and 132 to 275 ng/mL for 30 to 90 mg BID dose. Most adverse events were mild or moderate and transient, with headache, dizziness, somnolence and nausea occurring most frequently. One subject at the 120 mg QD dose had severe dysarthria and tremor associated with generalized weakness assessed as serious and resolved after discontinuation. All these events are known side effects of baclofen. Based on the efficacious concentration range from XP-B-049, multiple oral doses of 30 mg BID, 40 mg QD or 60 mg BID would achieve these levels.

Conclusion: Results from the XP19986 studies predict that a 30 mg BID, 40 mg QD or 60 mg QD dose would be efficacious and safe in future GERD studies.

ACCUacy AND UTILITY OF ENdOSCOPIC ULTRASOUND (EUS) IN CLINICAL STAGE T2NO ESOPHAGEAL CANCER

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Purpose: To identify the accuracy and utility of EUS in patients with clinically staged T2N0 esophageal and gastric cancer, and to determine the impact of EUS on patient management.

Methods: Data was retrospectively analyzed from endoscopic databases at 2 tertiary referral centers with expertise in esophageal cancer and endoscopic ultrasound. Patients clinically staged T2N0 esophageal cancer by EUS since 2003 were included. All procedures were performed using the latest generation Olympus EUM 160 radial echoendoscopes and 140 series linear array echoendoscopes supported by an Aloka processor. Procedures were performed by endosonographers with at least 2 years of experience at high volume esophageal cancer centers.

Results: Six patients at center one and ten patients at center two were found to have T2N0MX lesions by EUS and did not undergo neoadjuvant therapy prior to esophagectomy and pathologic staging (Table 1). Node staging accuracy was 33% at University of Chicago (Center 1) and 80% at University of Virginia (Center 2). Tumor staging accuracy was 50-66% at Center 1 and 91-95% at Center 2. Center 1 had a tendency to underestimate the tumor stage and Center 2 had a tendency to overestimate the tumor stage. EUS was able to correctly identify the patients who should go directly to surgery 33% of the time at Center 1 and 70% of the time at Center 2.

Conclusion: There is variable accuracy, particularly for node status, between two centers for patients who were clinically staged T2N0 esophageal cancer. The impact is significant since patients with small tumors and no known lymph node disease may forego neoadjuvant chemotherapy and proceed directly to surgery. Both expertise in EUS and diligence towards node status is necessary for accurate evaluation in patients with T2 disease. The difference in nodal accuracy between the 2 institutions may be secondary to the aggressiveness with which the endosonographer pursues lymph node cytology. We recommend that any nodes visualized with tumor free windows, regardless of size or imaging characteristics, undergo fine needle aspiration for cytologic staging correlation in this group of patients.
TOLERABILITY OF AMBULATORY ESOPHAGEAL pH MONITORING USING A NASALLY PLACED pH CATHETER VS. BRAVO pH CAPSULE

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Purpose: In this study, we aimed to compare the tolerability of ambulatory esophageal pH monitoring using a nasally placed pH catheter versus endoscopically placed Bravo pH capsule.

Methods: The results of 103 records reviewed, traditional catheter-based intrasinal pH monitoring was performed in 53 patients (53% male, 68% Caucasian, 21% African American, 11% other ethnicities). The mean age of those undergoing catheter-based intrasinal pH monitoring was 43 +/-12 years vs. 44 +/-14 years for those undergoing Bravo pH monitoring (p=0.791). In the traditional catheter-based intrasinal pH monitoring 50% reported that they were comfortable or slightly uncomfortable. Compared to 86.6% of those undergoing Bravo pH monitoring (p<0.0001). Significantly more patients undergoing the catheter-based intrasinal pH monitoring reported difficulty monitoring diaphragmatic reflux compared to the Bravo pH monitoring (52.8% vs. 8.1%, p<0.0001). Difficulty eating was reported more frequently in patients with the catheter-based intrasinal pH monitoring compared to those undergoing Bravo pH monitoring (93.4% vs. 45% p<0.0001). The percent of usual food intake was similar in both groups of patients (catheter-based intrasinal pH monitoring group 81 +/-3% vs. 82 +/-3% in the Bravo pH monitoring group p=0.946). The percent of usual symptoms was significantly less in the catheter-based intrasinal pH monitoring group compared to the Bravo pH monitoring group (53% +/-5% vs. 78 +/-4.6% p<0.0001).

Conclusion: Our study indicates that the Bravo pH capsule is safe and better tolerated than traditional catheter-based intrasinal pH monitoring however, the Bravo is unable to measure non-acid reflux.

P762

ONCE DAILY ESOMEPRAZOLE VERSUS TWICE DAILY Lansoprazole for GERD: A DOUBLE BLIND RANDOMIZED CROSS-OVER STUDY

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Purpose: Approximately 25% of patients taking first generation proton pump inhibitors (PPIs) take more than one per day. Previous pharmacodynamic studies have shown that the once daily dosage strategy increases intragastric pH control to target >4.0 from approximately 12 to 16 hrs. Once daily esomeprazole has been previously shown to achieve intragastric pH control comparable to bid dosing of lanoprazole yet a clinical correlation of this observation has not been shown.

Methods: The primary objective of this study was to evaluate esomeprazole once/day as non-inferior to twice daily lansoprazole using a computer randomized double blind cross-over design. Secondary objective was evaluation of ancillary medication use (antacids). Patients with typical and uncomplicated gastroesophageal reflux disease (GERD) who were well controlled on established bid dosing were recruited from a busy clinical gastroenterology practice. All entry patients continued on blinded bid lanoprazole 30-60mg before breakfast and dinner or began esomeprazole 40mg with a dummy placebo for the second dose. After 3 months, patients returned to baseline bid lanoprazole for 1 mo and then at month 4 crossed over to the second arm of randomization. Primary objective assessment was maintenance of normal range of GERD symptom score (IHRLQ score <1). All patients had baseline and exit symptom scores at entry and exit from the study.

Results: 41 patients were screened but 6 “well controlled” patients did not have IHRLQ <1. A total of 35 patients were randomized 29 patients (18 M, 17F) completed the trial: age: mean 59.1 +/- SE: 3.9 years, duration of lansoprazole use 19.5 +/-5 mo., BMI:30.1 +/-0.6. All patients exited occurred in the first arm of randomization: reasons cited: exacerbation of symptoms (2 lansoprazole, 1 esomeprazole) nausea (1 lansoprazole), moved from area (1), exacerbation of preexisting coronary artery disease (1). There were no significant changes in BMI from entry to exit. The difference in IHRLQ scores (at 3 and 7 mo) was compared for each treatment arm compared to baseline with 2-tailed p-value is .1153 denoting non-significance. There was no difference in ancillary use of antacid use which was provided and usage tabulated at monthly study visits. No patient had evidence of erosive esophagitis at baseline or at month 7 exit from the study.

Conclusion: Patients with typical and uncomplicated GERD who were well controlled on established bid dosing were recruited from a busy clinical gastroenterology practice. All entry patients continued on blinded bid lanoprazole 30-60mg before breakfast and dinner or began esomeprazole 40mg with a dummy placebo for the second dose. After 3 months, patients returned to baseline bid lanoprazole for 1 mo and then at month 4 crossed over to the second arm of randomization. Primary objective assessment was maintenance of normal range of GERD symptom score (IHRLQ score <1). All patients had baseline and exit symptom scores at entry and exit from the study.

Results: Of the 103 records reviewed, traditional catheter-based intrasinal pH monitoring was performed in 53 patients (53% male, 68% Caucasian, 21% African American, 11% other ethnicities). The mean age of those undergoing catheter-based intrasinal pH monitoring was 43 +/-12 years vs. 44 +/-14 years for those undergoing Bravo pH monitoring (p=0.791). In the traditional catheter-based intrasinal pH monitoring 50% reported that they were comfortable or slightly uncomfortable. Compared to 86.6% of those undergoing Bravo pH monitoring (p<0.0001). Significantly more patients undergoing the catheter-based intrasinal pH monitoring reported difficulty monitoring diaphragmatic reflux compared to the Bravo pH monitoring (52.8% vs. 8.1%, p<0.0001). Difficulty eating was reported more frequently in patients with the catheter-based intrasinal pH monitoring compared to those undergoing Bravo pH monitoring (93.4% vs. 45% p<0.0001). The percent of usual food intake was similar in both groups of patients (catheter-based intrasinal pH monitoring group 81 +/-3% vs. 82 +/-3% in the Bravo pH monitoring group p=0.946). The percent of usual symptoms was significantly less in the catheter-based intrasinal pH monitoring group compared to the Bravo pH monitoring group (53% +/-5% vs. 78 +/-4.6% p<0.0001).

Conclusion: Our study indicates that the Bravo pH capsule is safe and better tolerated than traditional catheter-based intrasinal pH monitoring however, the Bravo is unable to measure non-acid reflux.

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NEOADJUVANT THERAPY

**Borderline T stage reported prior to available pathologic data

Center 1: Patients 1-6; Center 2: Patients 7-16

Table 1

<table>
<thead>
<tr>
<th>Age-Sex</th>
<th>EUS Stage</th>
<th>Pathologic Stage</th>
<th>Histology</th>
</tr>
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<tbody>
<tr>
<td>Patient 1</td>
<td>70-M</td>
<td>T2N0</td>
<td>Adenocarcinoma</td>
</tr>
<tr>
<td>Patient 2</td>
<td>71-M</td>
<td>T2N0</td>
<td>Adenocarcinoma</td>
</tr>
<tr>
<td>Patient 3</td>
<td>66-F</td>
<td>T2T3N0**</td>
<td>Adenocarcinoma</td>
</tr>
<tr>
<td>Patient 4</td>
<td>71-M</td>
<td>T2N0</td>
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</tr>
<tr>
<td>Patient 5</td>
<td>70-M</td>
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<td>Squamous cell carcinoma</td>
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<tr>
<td>Patient 6</td>
<td>64-M</td>
<td>T2N0</td>
<td>Squamous cell carcinoma</td>
</tr>
<tr>
<td>Patient 7</td>
<td>79-M</td>
<td>T3N0</td>
<td>Adenocarcinoma</td>
</tr>
<tr>
<td>Patient 8</td>
<td>80-M</td>
<td>T2N0</td>
<td>Adenocarcinoma</td>
</tr>
<tr>
<td>Patient 9</td>
<td>72-M</td>
<td>T1/T2N0**</td>
<td>Squamous cell carcinoma</td>
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<td>Patient 10</td>
<td>44-M</td>
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<td>Adenocarcinoma</td>
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<tr>
<td>Patient 11</td>
<td>74-M</td>
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<tr>
<td>Patient 12</td>
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<tr>
<td>Patient 13</td>
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<tr>
<td>Patient 14</td>
<td>71-M</td>
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<tr>
<td>Patient 15</td>
<td>75-M</td>
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<tr>
<td>Patient 16</td>
<td>77-M</td>
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<td>Adenocarcinoma</td>
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</table>

Poster Abstracts — Tuesday, October 7
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RELATIONSHIP BETWEEN MAINTENANCE OF HEALED EROSIIVE ESOPHAGITIS AND PERCENT TIME WITH INTRAGASTRIC pH<4

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Purpose: The relationship between intragastric pH and healing of erosive esophagitis (EE) is well recognized (Digestion 1992;51 Suppl 1:59-67; Aliment Pharmacol Ther 2007;25:67-128). We sought to examine the relationship between maintenance of healed EE (remission) and percent time pH<4, by performing an exploratory analysis of data from 4 published studies on maintenance of healed EE with esomeprazole in relation to pharmacodynamic findings.

Methods: Endoscopically defined EE remission data at 6 mo were obtained from 4 similarly designed double-blind, randomized controlled trials using esomeprazole 20 mg (n=337) vs pantoprazole 20 mg (n=338) (Aliment Pharmacol Ther 2005;22:803-11); esomeprazole 20mg (n=615) vs lansoprazole 15 mg (n=609) (Aliment Pharmacol Ther 2003;17:333-41), and esomeprazole 20 mg (n=180) and 40 mg (n=174) vs placebo (n=171) (Aliment Pharmacol Ther 2001;15:927-35, Am J Gastroenterol 2001;96:27-34). EE remission rates were compared against independent 24-h intragastric pH data for the proton pump inhibitors (PPIs) and placebo using a regression model that accounted for sources of variability. EE remission rates for esomeprazole 20 mg and 40 mg were pooled across the studies.

Results: Data concerning 6-mo remission rates were available for 4515 patients (62% men). Overall, there was a significant relationship (p<.0001) between remission of EE at 6 mo and percent time pH<4 (Figure).

Conclusion: This analysis provides new insight and expands the data on the association of pH and healing of EE, in that long-term remission of healed EE is also related to the extent of acid control in a 24-h period.

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MANOMETRIC CHARACTERISTIC OF WAVES IN THE ESOPHAGEAL BODY IN TYPE 2 DIABETIC PATIENTS ACCORDING TO THE BASAL MORNING GLYCEMIA

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Purpose: Recent studies referred there is the possibility of existing an influence of acute glycemia on the esophagus’ motor activities and the other parts of gastrointestinal tracts. Other investigators reflect that an influence could occur when relating to the same fact. Our objective is to have a say in the knowledge of this phenomenon.

Methods: The esophageal body’s motor activity was studied by stationary manometry with 6-channel catheter in 25 type 2 diabetic patients aged between 44 and 81 years old (mean age 58.52 years old) with different glycemic levels in fast. We have compared the manometric characteristics of esophageal waves between diabetics with glycemia equal or lower than 7.0 mmol/l and above 7.0 mmol/l.

Results: The percentual distribution of esophageal waves in both groups (glycemia<7.1 mmol/l glycemia>7.0 mmol/l) was peristaltic waves (84,980,81); no transmitted waves (4,57/16,3); retransmitted waves (84,980,17); simultaneous waves (4,57/16,3). When relating to the waves amplitude, glycemia>7,0 mmol/l was: peristaltic waves (84,9/80,1); no transmitted waves (4,5/16,3); retransmitted waves (84,9/80,1); simultaneous waves (4,5/16,3). When relating to the waves’ amplitude, glycemia>7,0 mmol/l was: peristaltic waves (84,9/80,1); no transmitted waves (4,5/16,3); retransmitted waves (84,9/80,1); simultaneous waves (4,5/16,3).

Conclusion: Negative SI defined as >50% (i.e. at least half of the patients reporting almost daily symptoms), and positive SI is a good predictor in patients whose reflux symptoms will respond to fundoplication. Surprisingly, there was frequent disagreement between the SI and SAP. Further outcome studies are needed.

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BRAVO pH CAPSULE PLACEMENT UNDER DIRECT VISION WITH ULTRASLIM GASTROSCOPE

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Purpose: The commonly used procedure for intragastric reflux disorders. Successful placement of the BRAVO pH capsule is critical for obtaining reliable results. Failure of attachment of the BRAVO pH capsule to the esophageal mucosa or early detachment may result in an unsuccessful study. The purpose of this study was to determine whether Ultralum gastroscope compared to regular gastroscope facilitates the placement of Bravo pH capsule and reduces the procedure time.

Methods: Records of Bravo pH capsule placement of 30 patients under direct vision by GIF 160 gastroscope (outper diameter, 8.6 mm) Group 1 and of 30 patients under direct vision by ultralim XP 160 (outer diameter, 5.9 mm) Group 2 were reviewed. The mean (range) ages were 50 (28-81) and 54 (16-79) years respectively. The male to female ratios were 2:7:5 for both groups. All patients in Group 1 and all but 2 patients in Group 2 received sedation with Propofol. After endoscopic examination was completed, the scope was withdrawn proximal and the selected site of Bravo pH capsule placement (6 cm above the gastroesophageal junction). Bravo delivery catheter was then inserted through the mouth and the deployment was performed following standard protocols. After the deployment was confirmed, delivery system was withdrawn and the esophagus was checked for mucosal injury as scope was withdrawn. Five patients in Group 1 and 4 patients in Group 2 had gastric biopsy.

Results: The placement was successful and the data capture was satisfactory for all patients in both groups. Five patients in Group 1 and 4 patients in Group 2 had gastric biopsy. The mean procedure time was decreased by 11.9 (standard deviation [SD]; 2,8) minutes for Group 1 to 6.4 [SD; 1,9 ] minutes for Group 2 (P<0.0001). No patients had chest pain, dysphagia or other serious procedure-related complications except two patients in Group 1 who had persistent sore throat.

Conclusion: Placement of Bravo pH capsule under direct vision can be easily accomplished by using Ultralum gastroscope. The slim scope facilitates the deployment and reduces the procedure time almost in half. It may also cause less sore throat. In selected cases, an Ultralum gastroscopy even may be performed without sedation.

Comparison of regular gastroscopy with Ultralum gastroscopy

<table>
<thead>
<tr>
<th>Group</th>
<th>Scope</th>
<th>Number</th>
<th>M/F</th>
<th>Age, yrs</th>
<th>Sedation</th>
<th>Biopsy</th>
<th>Procedure time, min</th>
<th>Complications</th>
</tr>
</thead>
</table>
| 1     | GIF 160 (8.6 mm) | 30      | 27.5 | 50(20-81) | 30       | 5      | 11.9±2.8          | 2 ( sore throat)
| 2     | XP 160 (5.9 mm) | 30      | 27.5 | 58(4-76)  | 28       | 4      | 6.4±1.9           | 0             |
Conclusion: Although some studies indicate that up to 30% of patients with Mallory-Weiss tear may require surgical intervention, our study indicates otherwise. All actively bleeding patients in our study (11 out of 35) were effectively controlled with endoscopic intervention. Hence, we conclude that active bleeding from Mallory-Weiss tear can be effectively controlled with endoscopic intervention and recourse to surgical intervention is not warranted.

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PROSPECTIVE EVALUATION OF 48-HOUR ESOPHAGEAL PH-MONITORING BY THE WIRELESS BRAVO CAPSULE: EFFICACY, SAFETY, TOLERANCE AND LIMITATIONS

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Purpose: Esophageal pH monitoring is the gold standard for the diagnosis of gastroesophageal reflux disease (GERD). This prospective study aimed to assess the Bravo capsule performance, tolerability, safety and limitations; to monitor the day-to-day variability in acid exposure in 48-h pH-monitoring; and to evaluate the relationship between acid reflux and the presence of hiatus hernia or endoscopic esophagitis (EE).

Methods: A total of 84 patients (44 men & 40 women, mean age 43.3±14 years) with persistent reflux-like symptoms underwent Bravo capsule placement for 48-h pH-monitoring from October 2006 to April 2008 at KSFSH&RC using the worldwide standardized technique. Only 20 patients (23.8%) were on proton-pump inhibitors at the time of study. Clinical, endoscopic, and pH data were prospectively collected and analyzed. All participants were encouraged to continue their normal daily activities without any dietary restrictions, and record periods of food intake, recumbent position, and any symptoms including heartburn, chest pain, or regurgitation, in a diary.

Results: Bravo pH-monitoring for 48-h was successful in 78 (92.4%) patients, and failed in 6, due to early capsule detachment (n=3), capsule technical failure (n=2), and receiver intake, recumbent position, and any symptoms including heartburn, chest pain, or regurgitation, in a diary.

Conclusion: Wireless esophageal pH-monitoring is technically feasible, safe, well-tolerated, and efficient technique in diagnosing acid reflux, but the problems of early capsule detachment and mechanical failure require some improvement in capsule technology. Extending the monitoring period from 24 to 48-h improves the diagnostic yield of GERD. There was no significant correlation between acid reflux and presence of hiatus hernia or EE.

ENDOSCOPICALLY SUSPECTED ESOPHAGEAL METAPLASIA (ESEM) IS ASSOCIATED WITH THE COMPLICATIONS OF HIATUS HERNIA, RETREAT ESOPHAGITIS AND SEVERE GASTRIC MUCOSAL ATROPHY IN JAPANESE PATIENTS WHO UNDERWENT EGD

I. Matsumoto, MD; H. Suzuki, MD; D. K. Hirata, MD; M. Ikewada, MD; Y. Saito, MD; M. Ph. D; T. Hibi, MD, Ph. D; Division of Gastroenterology and Hepatology, Department of Internal Medicine, Keio University School of Medicine, Tokyo, Japan.

Purpose: Barrett’s esophagus is a known risk factor to develop lower esophageal adenocarcinoma in Western countries. Endoscopic finding suggestive of Barrett’s esophagus is defined as ESEM (endoscopically suspected esophageal metaplasia). The objective of this study was to examine the associations between the incidence of ESEM and upper gastrointestinal complications in Japanese patients.

Methods: The authors conducted a case-control study within 4947 patients (male 2655, female 2292) who underwent esophageagastroduodenoscopy (EGD) in Keio University Hospital between Nov 2007 and Apr. 2008. Among them, 527 patients (356 men and 171 women, mean age 65 years) were diagnosed ESEM (10.7%). Patients with ESEM (cases n=527) were age-, gender-matched to patients without ESEM (controls: n=527). ESEM cases and controls were examined in terms of other upper GI endoscopic findings, such as gastric mucosal atrophy, hiatus hernia, reflux esophagitis, peptic ulcers, gastric cancer, and past distal gastrectomy. Reflux esophagitis was diagnosed according to the Los Angeles criteria. Endoscopic evaluation of gastric mucosal atrophy was classified into three groups (mild: C1, C2, moderate: C3, O1, severe: O2, O3) according to the criteria by Kimura and Takekuma.

Results: When cases and controls were compared, severe atrophic gastritis, hiatus hernia, and reflux esophagitis were positively associated with ESEM (odds ratio[OR] 1.81, 95% confidence interval[CI] 1.08-3.04; OR 3.23, 95% CI 2.41-4.32; OR 2.20, 95% CI 1.25-3.84, respectively), while mild atrophic gastritis was inversely associated with ESEM (OR 0.75, 95% CI 0.57-0.93). No differences among groups were shown in the complication of peptic ulcer disease, gastric cancer and of past distal gastrectomy.

Conclusion: Results suggest significant associations between the complications of hiatus hernia, reflux esophagitis, and severe gastric mucosal atrophy, and the risk of ESEM in Japanese outpatient population.


Table. Mean ISD was significantly higher in GERD compared to controls (p = 0.043). Although ISD was numerically higher for GERD compared to FH as well as FH compared to controls, these differences were not statistically significant (type II error is possible).

<table>
<thead>
<tr>
<th></th>
<th>Number of patients</th>
<th>Mean age</th>
<th>No. patients with esophagitis</th>
<th>Mean ISD (µm)</th>
<th>p versus controls</th>
<th>p versus FH</th>
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<tbody>
<tr>
<td>CONTROLS</td>
<td>8</td>
<td>45</td>
<td>0</td>
<td>0.26</td>
<td>-</td>
<td>0.054</td>
</tr>
<tr>
<td>FUNCTIONAL HEARTBURN (FH)</td>
<td>7</td>
<td>43</td>
<td>0</td>
<td>0.39</td>
<td>0.054</td>
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<tr>
<td>GERD</td>
<td>9</td>
<td>46</td>
<td>2</td>
<td>0.81</td>
<td>0.043</td>
<td>0.14</td>
</tr>
</tbody>
</table>

ISD = intercellular space distance
CHRONIC ESOPHAGITIS DISSECANS SUPERFICIALIS - A RARE CAUSE OF ESPHAGEAL STRICTURES AND DYSPHAGIA

D. Estores, MD,1 H. Worth Boyce, MD,1 D. Coppola, MD,1 J. Messina, MD,1. 1. Center for Esophageal and Swallowing Disorders, University of South Florida, Tampa, FL.

Purpose: Chronic esophagitis dissecans superficialis (CED) is a rare condition characterized by sloughing of esophageal mucosa, dysphagia and certain microscopic (immunohistochemical and histologic) features. There are less than 10 cases of CED described in the medical literature. At the USF Center for Esophageal & Swallowing Disorders (USF-CESD) we present 2 cases of CED diagnosed in 1999 & 2006.

Methods: We identified 2 cases of CED at the USF-CESD (out of more than 6,500 patients).

Results: Both patients share common features: both are females (ages 78 and 67 years); a history of chronic dysphagia; no history of caustic substance ingestion nor of any systemic autoimmune disease; and both had complicated strictures with erythema, friability and sloughing of the esophageal mucosa present on endoscopy. One patient had symptomatic response to dilation therapy. Biopsies under light microscopy show detached fragments of squamous epithelium. There were some inflammatory cells seen. Eosinophils are rare (<1/hpf). There were no microorganisms or evidence of viral infection. An immunohistochemical stain for ICAM-1 was strongly positive in specimens from one patient (a criterion for CED according to Ponsot et al.)

In this patient the diagnosis of CED is based on endoscopic appearance and exclusion of other mucosal diseases. Immunofluorescence tests for the detection of IgM and IgG were negative in both.

Conclusion: The entity of CED is a rare form of chronic esophagitis with characteristic endoscopic and microscopic features which should be considered in the differential diagnosis of chronic dysphagia. Dilation therapy may be of benefit for patients with CED presenting with esophageal strictures.

World Literature Review of CED Cases

<table>
<thead>
<tr>
<th>Authors</th>
<th>Age</th>
<th>Sex</th>
<th>Diameter of Strictures (mm)</th>
<th>Direct or Indirect (yes)</th>
<th>ICAM-1</th>
<th>Esophageal Location</th>
<th>Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ponsot et al.</td>
<td>55 F</td>
<td>20</td>
<td>5</td>
<td>Positive</td>
<td>Positive</td>
<td>Detached fragments of squamous epithelium</td>
<td>Dilation</td>
</tr>
<tr>
<td>Ponsot et al.</td>
<td>74 F</td>
<td>1</td>
<td>1</td>
<td>Positive</td>
<td>Detached fragments of squamous epithelium</td>
<td>Dilation</td>
<td></td>
</tr>
<tr>
<td>Ponsot et al.</td>
<td>61 M</td>
<td>2</td>
<td>2</td>
<td>Positive</td>
<td>Lesions between 20 and 30 cm</td>
<td>Dilation</td>
<td></td>
</tr>
<tr>
<td>Ponsot et al.</td>
<td>61 M</td>
<td>5</td>
<td>6</td>
<td>Positive</td>
<td>Diffuse ulcer, erosion</td>
<td>Dilation</td>
<td></td>
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<tr>
<td>Ponsot et al.</td>
<td>75 M</td>
<td>2</td>
<td>3</td>
<td>Positive</td>
<td>Lesions between 20 and 30 cm</td>
<td>Dilation</td>
<td></td>
</tr>
</tbody>
</table>

In all specimens examined, no deposit of immunoglobulin (IgG, IgM or IgA) or complement fragment C3 was detected by immunofluorescence.

*This patient had cutaneous lichen planus with no oral involvement, biopsies are negative for immunoglobulins (IgG, IgM or IgA) which rules out esophageal lichen planus.
**This patient had been on chronic diclofenac oral therapy, no stains for ICAM-1 antibodies and immunoglobulins (IgG, IgM or IgA) were reported.

Endoscopic image of the esophagus illustrating sloughing of mucosa and translucent membrane.

Width of open biopsy forceps is 8 mm indicating severity of stricture.

RESOLUTION OF CRICOPHARYNGEAL BAR WITH BOTOX INJECTION COMBINED WITH ESOPHAGEAL DILATION

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Purpose: A 68 year-old Caucasian male with history of GERD complained of chronic dysphagia progressing from solids, including pills, to some liquids. Barium swallow revealed a cricopharyngeal bar (Figure 1). He was evaluated in the interdisciplinary swallowing disorders clinic by gastroenterology, otolaryngology, and speech pathology. He did not respond to large caliber bougie and was subsequently treated with botulinum toxin (Botox), 50 Units, injected into the cricopharyngeus, using fluoroscopic and EMG monitoring. His dysphagia improved after treatment and he was able to tolerate a puree diet and liquids, although still experienced some difficulty with some solid food, including meat. A repeat barium swallow, while revealing some retention at the vallecula, showed that the cricopharyngeal bar had disappeared (Figure 2), with unrestricted passage of a 12.5 mm barium tablet.

Methods: Case report

Results: Case report

Conclusion: Case report

Figure 1. Cricopharyngeal bar on barium swallow

Figure 2. Resolution of cricopharyngeal bar on barium swallow
FIRST USE OF THE EVOLUTION® ESOPHAGEAL STENT IN THE U.S.
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Purpose: The Evolution® stent from Cook Medical is the first esophageal stent with a controlled release delivery system that allows deployment and recapturability with precision. Using a trigger-based introducer a proportional length of the stent is deployed or recaptured with each squeeze. The nitinol stent has an internal and external silicone coating, designed to resist tumor ingrowth. We present to first use of the Evolution® stent in a patient with esophageal cancer in the U.S.

Methods: A 70 year-old male with known stage IV esophageal cancer presented with symptoms of progressive dysphagia and weight loss despite palliative chemotherapy. Two months prior to admission the patient was found to have a 8 cm circumferential obstructing mass in the distal esophagus and underwent placement of a covered metal esophageal stent. Repeat upper endoscopy showed tumor progression as well as significant tumor ingrowth at both the proximal and distal uncovered portions of the prior stent.

Results: A 25mm x 15cm Evolution® stent was carefully placed under fluoroscopic guidance, overlapping the prior stent as well as areas of tumor ingrowth. The total procedure time was twelve minutes. Proper positioning was confirmed using endoscopy and fluoroscopic images. After successful placement there was immediate symptomatic improvement and the patient was able to tolerate a modified diet.

Conclusion: We present the first use of the new Evolution® stent in the U.S. in a patient with esophageal cancer. This new delivery system allows for a more precise deployment and recapturability. The novel dual-sided silicone coating may prevent future tumor ingrowth. The Evolution stent is a promising tool in the management of esophageal cancer.

Endoscopic/Fluoroscopic Images

SOCIODEMOGRAPHIC DISPARITIES IN THE USE OF CATHETER-FREE ESOPHAGEAL pH TESTING
A. Sum, MD, S. Uppalapati, MD, J. Kon, MD, J. Richter, MD, F. Friedenreich, MD, MS Medicine/Gastroenterology, Temple University, Philadelphia, PA.

Purpose: Literature on reflux disease in African Americans (AA) is scant. Temple Hospital is unique in that we serve a local community which is predominantly AA and impoverished, as well as a wealthy tertiary care referral population. Our purpose was to compare the presentation and evaluation of white and AA patients with chronic reflux symptoms to our hospital.

Methods: We reviewed the records of all patients endoscopically evaluated for chronic reflux between 1/06 and 8/07. We identified individuals without erosions whether they subsequently underwent a Bravo pH capsule study (off PPI) to clarify reflux status. Patients were thus classified as either: Erosive esophagitis (EE); Bravo Negative (BN); or Bravo Positive (BP). Our unit now rarely orders catheter-based pH studies and therefore these were not studied. The patient’s zip code was used to estimate median household income.

Results: A total of 550 patients with chronic reflux underwent endoscopy. There were n=295 (53.6%) diagnosed with EE. Of the remaining 255, n=133 (52.2%) underwent pH testing (BN=68; BP=65;0) to confirm reflux. Patients with EE were significantly older (53±16) than those who were BN (47±15) or BP (47±16) (P=0.003). BMI overall mean 27.3 ± 6.8 did not differ between groups or between AA and whites. Patients with EE were significantly poorer (median income 32,600 USD) than those who underwent BRAVO testing (56,400 USD; P<0.001). Males were more likely to have EE (82% vs 58%), while females were more likely to be EE (-) and categorized as either BN or BP (P<0.001). Univariate analysis also revealed that beta blockers, diabetes, and tobacco use were associated with EE. By logistic regression, tobacco use (OR=8.1; P=0.006) and AA race (OR=5.0; P=0.002) were associated with having either EE or a BP result. Overall, 83.9% of pH studies were performed in whites while only 7.4% of AA underwent pH testing. Only 11.5% of patients who underwent pH testing did not have commercial insurance. There were no pH studies in patients with city-supplied insurance or no insurance.

Conclusion: Tobacco use, and AA race were strongly associated with erosive esophagitis/positive pH test. Results suggest an access limitation to catheter-free esophageal pH testing in the AA community. At Temple payment for the capsule is usually out-of-pocket because it is not covered by most major insurance plans (however the EGD portion usually is covered). This limitation precludes its widespread use for patients living in poverty.

GATORADE IS A GOOD SUBSTITUTE FOR NORMAL SALINE IN MULTICHANNEL INTRALUMINAL IMPEDANCE AND MANOMETRY
J. Dowd, MD, Z. S. Chao, MD, O. Deen, MD, R. Rockett, LPN, A. Hila, MD.

Purpose: Multichannel intraluminal impedance and manometry (MII-EM) is a method evaluating esophageal motility and bolus transit. Patients swallow 5ml of normal saline during their swallow assessment. Due to the taste of normal saline, patients quite often complain. Normal saline is typically chosen as the liquid challenge medium for swallowing because of its high electrolyte contents which is needed for good electrical conductance for the MI-EM part of the test. Gatorade is also rich in electrolytes, thought less than normal saline. The aim of this study was to evaluate the usage of Gatorade as a substitute for normal saline in MII-EM.

Methods: 15 patients (3 males; 12 females) scheduled for esophageal function testing were studied with an MII-EM catheter 4 impedance measuring segments (5, 10, 15 and 20 cm above LES (lower esophageal sphincter)) and 5 solid state pressure transducers (within the LES and 5, 10 and 15 cm above LES). Each subject was given 10 swallows of 5ml of normal saline and 10 swallows of 5ml of Gatorade. The studies were assessed and results were compared using PRISM statistical software.

Results: In the normal saline study, 14 patients had normal manometry and 1 patient had nutcracker esophagus. In the Gatorade study, 12 patients had normal manometry, 2 patients had ineffective esophageal motility and 1 patient had nutcracker esophagus. The patient with nutcracker esophagus had the same diagnostic using both saline and Gatorade. Thus there is an 87% concordance between the two studies. All the normal saline as well as the Gatorade studies had complete bolus transit, as defined by at least 80% complete swallow on MII. Both studies had a statistically significant correlation in distal esophageal amplitude (p<0.001, Pearson r=0.95) and total bolus transit time (p=0.001, pearson r=0.92).

Conclusion: This initial study indicates that Gatorade may be a good substitute to normal saline in MII-EM as it provides similar results. Furthermore, it is more palatable for most patients. Further testing will be needed to confirm these results.
CHARACTERISTICS OF THE ELECTROGASTROGRAM: ENDOSCOPIC MANEUVERS OF THE STOMACH DEMONSTRATE PHYSIOLOGIC INJURY DURING STRESS

Purpose: The proctagoglandin system plays an important role in the protecting the gastric mucosa against injury. Critically ill patients are at increased risk of developing stress-related gastric mucosal lesions. The levels of proctagoglandins in gastric mucosa in stressed animals have been studied with results demonstrating that proctagoglandin biosynthesis is inhibited in the gastric mucosa in rats exposed to stress. The proctagoglandin in gastric lesions in patients with stress have not been studied. The aim of this study was to determine the proctagoglandin levels in human gastric mucosa in patients undergoing physiological stress.

Methods: Patients undergoing EGG in physiologically stressed states, ICU inpatients, were compared to “non-stressed” patients presenting for EGD at the Ambulatory Surgical Center at The Emory Clinic. These “non-stressed” patients lived at home, were relatively healthy, and were not on oxygen. All patients signed written consents before endoscopy. Biopsy samples were obtained for proctagoglandin analysis from the gastric antrum (about 2 cm above the pylorus, on the greater curvature). Samples were immediately frozen via liquid nitrogen and then thawed and stored at -70°C.

Results: Of 80 patients undergoing EGG, 46 had a stress event (emergency surgery, trauma, sepsis, multiple organ failure, and severe dehydration) and 34 were healthy controls. The mean age of the stressed patients was 62 ± 16 years, while the mean age of healthy controls was 55 ± 16 years (p < 0.05). A significant difference in the stress group was noted for the serum cortisol levels (862 ± 300 vs. 172 ± 40 ng/dL, p < 0.01). The mean proctagoglandin concentration in the stress group was 1.5 ± 0.5 ng/g, while in the healthy controls it was 0.8 ± 0.3 ng/g (p < 0.05).

Conclusion: Proctagoglandin levels are significantly lower when compared to those patients not undergoing physiological stress.

RESIDENT PHYSICIANS’ COMFORT WITH MANAGING GASTROPARESIS AT THE COMPLETION OF INTERNAL MEDICINE RESIDENCY

Purpose: Nutrition instruction has been reported to have limited emphasis in residency training. Physicians’ familiarity with gastroparesis and nutrition issues is important. Effective nutritional support can decrease morbidity and hospitalizations in patients with refractory gastrointestinal disease. This study evaluated internal medicine resident physicians’ comfort with gastroparesis management and the effectiveness of various teaching modalities.

Methods: An anonymous survey addressing core gastroenterology topics was distributed to all PGY-3 internal medicine resident physicians at an urban university medical center. Information was collected about the benefit of various teaching modalities during residency training and resident physicians’ comfort level with gastroparesis management. The teaching modalities evaluated included attending rounds, autopsy conference, didactic rounds, direct patient care (inpatient and outpatient), grand rounds, individual reading, journal club, morning report and noon conference. Information was obtained on whether resident physicians participated in a gastroparesis elective during training. A database was developed. Statistical analysis was performed using Chi-square tables with statistical significance set at p < 0.05.

Results: Twenty of 29 (69%) completed surveys were returned. Care of hospitalized patients, individual readings and didactic rounds were the most beneficial teaching modalities for teaching gastroparesis management. Care of outpatients was the least beneficial teaching modality. Care of hospitalized patients was superior (p = 0.0001) to outpatient care as a teaching modality for managing gastroparesis. 70% of resident physicians who completed a gastroparesis elective felt more emphasis on gastroparesis was needed during training. Only 90% of resident physicians reported comfort with gastroparesis management.

Conclusion: Nutrition instruction during residency may be underemphasized. Care of hospitalized patients was the most beneficial teaching modality for learning about gastroparesis. However, most resident physicians felt uncomfortable managing gastroparesis upon completion of their training. Educational initiatives should be developed to improve gastroparesis teaching and nutrition education.

ENDOSCOPIC MANEUVERS OF THE STOMACH DEMONSTRATE PHYSIOLOGIC CHARACTERISTICS OF THE ELECTROGASTROGRAM: INTRAOPERATIVE SEROSAL EGG RECORDINGS, WHEN PROVOKED BY PHYSIOLOGIC MANEUVERS, SHOW REPRODUCIBLE CHARACTERISTICS IN GASTRIC ELECTRICAL ACTIVITY

Purpose: The aim of this study was to determine the qualitative and quantitative characteristics of gastric electrical activity (EGG) in the stomach during maximal insufflation during endoscopy.

Methods: Intraoperative serosal EGG recordings, when provoked by physiologic maneuvers, show reproducible characteristics in gastric electrical activity. EGG recordings of the rectum and ileum were performed sequentially for at least five minutes during the following periods: stomach partial inflation during endoscopy (baseline=Base), endoscopic maximal insufflation(R1), desufflation (R2), after seromuscular electrode placement but prior to abdominal closure, EGG recordings were performed for at least five minutes.

Results: Intraoperative serosal EGG recordings, when provoked by physiologic maneuvers, show reproducible characteristics in gastric electrical activity. EGG recordings of the rectum, on the greater curvature. Samples were immediately frozen via liquid nitrogen and then thawed and stored at -70°C.

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EVALUATION OF CLARITHROMYCIN-RESISTANT RATE FOR HELICOBACTER PYLORI IN JAPAN (1985-2007)

Purpose: A triple therapy which consists of amoxicillin (AMP), clarithromycin (CAM), and a proton pump inhibitor (PPI) [PPAC] has been commonly used for the first eradication regimen of Helicobacter pylori (H. pylori) in Japan. CAM-resistant H. pylori is one of the major causes of failure to eradicate this organism. The aim of this study was to evaluate the CAM-resistant rate for H. pylori in Japan.

Methods: All patients were underwent upper gastrointestinal endoscopy with biopsies for the diagnosis of H. pylori infection using the culture at Kyorin University Hospital, from 1985 to 2007. Patients who had received prior H. pylori eradication therapy were excluded from this study. The susceptibility to CAM was tested by Dry Plate Test. H. pylori isolates were considered resistant when the minimal inhibitory concentration (MIC) of CAM was ≥2 µg/mL.

Results: In 1985, CAM-resistant rate for H. pylori was 0% (0/32). In 1995 and 2000, CAM-resistant rate for H. pylori was 17.9% (5/28) and 8.1% (6/74), respectively. From 2005 to 2007, CAM-resistant rate for H. pylori was 17.2% (5/29), 26.6% (6/22), 35.7% (10/28), every year, respectively.

Conclusion: Recently, the CAM-resistant rate for H. pylori was more than 30% in this study. The eradication rate for PPIAC regimen will decrease further in the near future in Japan.

EVALUATION OF TWO COMMERCIAL ENZYME IMMUNOASSAYS FOR DETECTING IGG AND IGA ANTIBODIES TO HELICOBACTER PYLORI IN JAPAN

Purpose: Although the diagnostic utility of serologic detection of IgG antibodies to H pylori is well established, the usefulness of IgA-based tests is less well documented. The aim of this study was to evaluate two commercially available ELISAs both for IgG and IgA. This might be useful for the diagnosis of H pylori infection in Japanese population with high prevalence of atopic gastritis and intestinal metaplasia.

Methods: A total of 149 patients underwent upper endoscopy, endoscopic U/S-urea breath test, rapid urease test, and histology. A patient was considered to be infected with H pylori when at least two of the three applied. Dye endoscopy with metilblue dye was performed in 111 patients to detect intestinal metaplasia. ELISA testing was performed using the EPI HIM-CAP IgG and PP-CAP IgA assays and ELI Agen H pylori IgG and IgA assays.
Results: Of 149 patients, 81 were H. pylori positive and 68 were H. pylori negative. Sensitivity was 94.8, 92.2, 94.8, and 97.5% for HM-CAP IgG, PP-CAP IgA, ElAgen H. pylori IgG, and IgA, respectively. Three of 81 H. pylori-positive patients was IgA positive and IgG negative. In- testinal metaplasia was significantly found more often in the H. pylori positive group than in the H. pylori negative group (17.4%). Of 49 H. pylori positive patients with intestinal metapla- sia, the values of HM-CAP IgG and Autace IgG titers were less than the cutoff value in three (7.0%) and four (8.2%) patients, respectively. PP-CAP IgA antibodies were detected in two of three patients with a negative HM-CAP IgG result, and ElAgen H. pylori IgG and IgA antibodies were detected in all 16 infected patients with intestinal metaplasia, whereas only one of five patients with a positive HM-CAP result and ElAgen H. pylori IgG was detected in one of four patients with an ElAgen H. pylori IgG negative result.

Conclusion: Although the sensitivity of the two IgA-based tests is very low, a conjunctival IgA ELISA can be of additional diagnostic value in some patients who had severe atrophic gastritis with intestinal metaplasia.

P782

NIGHT TIME pH HOLDING TIME: WHAT IS HIDDEN BY THE % OF TIME pH ≤ 4?

C. Wang, MD, W. Yuan, MD, PhD, Y. Chen, MS; R. Hunt, MD, FRCP, FACG, AGAAG.

Department of Medicine, Mc Master University, Hamilton, ON, Canada.

Purpose: Delayed release (DR)-PPIs are commonly used for reflux patients with night-time symptoms but the effect on acidity after midnight is seldom reported. We explored the intra- gastric secretion instead of esophageal (EUSG), by post hoc analysis of intragastric pH data from two of our recent trials.

Methods: Data from trials with two new antisecretory drugs [STU: Na (n=31) and AGN 904 (n=12)] with healthy volunteers (HV) in EUSG and under ESO40mg. The pattern of single and multiple 24-h intragastric pHmetry on day 5, were combined by the method of individual participant data meta-analysis. Mean percent time (% for 24h (0700-0700), day (0700-1900), night (1900- 0700), and midnight (0000-0700) periods for pH ≤ 4, ≤ 3, and ≤ 2 were measured respectively. 24h pHmetry. Random effect or fixed effect was used when significant or non significant heterogeneity was seen between studies, respectively.

Results: At pH ≤ 4, mean percent time was 69.76 (95% CI 64.00-75.49) for midnight, 58.07 (49.86-66.33) for night, 21.50 (18.32-24.67) for day, and 39.96 (34.40-45.33) for 24h. At pH ≤ 3, mean percent time was 59.33 (52.76-65.97) for midnight, 45.47 (40.51-50.53) for night, 13.60 (11.24-15.96) for day, and 29.69 (26.58-32.79) for 24h. At pH ≤ 2 level, mean percent time was 41.67 (34.74-48.61) for midnight, 30.65 (25.38-35.92) for night, 6.57 (5.08-8.06) for day, and 18.72 (15.76-21.68) for 24 h (table). All mean % time for the midnight period for pH ≤ 4, ≤ 3, & ≤ 2 was significantly longer than for 24h, daytime and night-time periods (p<0.05).

Conclusion: ESO40mg in HV, results in ~40% of the 24 hrs and 58% of the night-time with pH ≤ 4. For midnight, pH ≤ 4 for 70% of time, and pH ≤ 3 was ~60% of time and up to 40% of time pH ≤ 2. Thus, after midnight there is a marked increase in intragastric acidity (1 unit pH change associated with a 10 fold change in H+ ion) if pH falls from 4 to 2). Simply reporting the nocturnal pH 4 holding time may not reflect this high acidity after midnight which may be problematic in patients who reflux. These data emphasize the need for optimal control of nocturnal acidity.

Table: Meta-analysis combining two trials data weighting by variance of mean

<table>
<thead>
<tr>
<th>Mean % (95%CI)</th>
<th>24 h (0700-0700)</th>
<th>Day (0700-1900)</th>
<th>Night (1900-0700)</th>
<th>Midnight (0000-0700)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH ≤ 4</td>
<td>39.96 (34.60-45.33)</td>
<td>21.50 (18.32-24.67)</td>
<td>58.07 (49.86-66.33)</td>
<td>69.76 (64.00-75.49)</td>
</tr>
<tr>
<td>pH ≤ 3</td>
<td>29.69 (26.58-32.79)</td>
<td>13.60 (11.24-15.96)</td>
<td>45.47 (40.41-50.53)</td>
<td>59.33 (52.76-65.97)</td>
</tr>
<tr>
<td>pH ≤ 2</td>
<td>18.72 (15.76-21.68)</td>
<td>6.57 (5.08-8.06)</td>
<td>30.65 (25.38-35.92)</td>
<td>41.67 (34.74-48.61)</td>
</tr>
</tbody>
</table>

All data were analyzed with fixed effect except * with random effect model

Disclaimer - Dr. Hunt: Consulting or speaker’s Bureau: AstraZeneca, Nycomed, Schering, Sidem/Steba Biotech Research support: Nycomed, Schering, Sidem/Steba Biotech

P784

ASSESSMENT OF PATTERN OF ANTIMICROBIAL RESISTANCE IN PATIENTS (HELVICOBACTER PYLORI POSITIVE) OF DYSPEPSIA

R. K. Jain, MD, DM (gastroenterology), V. K. Sharma, MD, V. M. Malhotra, MD. Dept of Medicine, Gandhi Medical College, Bhopal, MP, India.

Purpose: Helicobacter pylori eradication is successful in 80% to 90% of the cases. Helicobacter pylori eradication rate varies in different parts of the world. This may be related to the regional difference in anti-microbial resistance that affects the outcome of therapy. In present study, our aim is to assess the pattern of antimicrobial resistance in patients (Helicobacter pylori positive) of dyspepsia.

Methods: 60 cases (15 -50 years), with history suggestive of dyspepsia more than 4 weeks duration were included. Each patient underwent upper GI Endoscopy and gastric biopsy for rapid urease test and culture. Isolated bacteria were analyzed for their levels of antibiotic susceptibility to Metronidazole, Tinidazole, Ofloxacin, Clarithromycin, Amoxicillin, Ciprofloxacin and Tetracycline. The pattern of single and multiple resistance were analyzed.

Results: out of 60 cases rapid urease test was positive in 38 cases and culture was grown in 26 cases. The antibiotic resistance of Helicobacter pylori in culture positive cases showed, 84.6% resistant to Metronidazole, 38.5% to Tinidazole, 7.6% to Ofloxacin, 32.4% to Amoxicillin, 3.8% to Tetracycline, 19.2% to Clarithromycin, 11.5% to Tinidazole and 3.8% to Ciprofloxacin.

Conclusion: Antimicrobial resistance of Helicobacter pylori is rapidly changing in different geographical areas and needs to define the resistance pattern in particular geographical area. This will help to improve result of treatment.
BIOPSY PROVEN HELICOBACTER PYLORIS IS NOT ASSOCIATED WITH INCREASED PREVALENCE OF ATRIAL FIBRILLATION

G. Mustafa, MD, S. Awad, MD, K. Ong, MD, J. Khan, MD, S. Nori, MD, F. Shaikh, MD
Internal Medicine, The Brooklyn Hospital Center, Brooklyn, NY.

Purpose: Helicobacter pylori infection (H Pylori) is recognized as one of the most common chronic bacterial infection in the world. Recently studies have demonstrated the indirect link between persistent atrial fibrillation (AF) and H Pylori. Chronic H pylori infection increases the serum CR reactive protein (CRP) concentration which is thought to be a likely risk factor for AF. The aim of this study is to investigate the association of atrial fibrillation and biopsy-proven H pylori infection and prevalence of persistent AF in patients without demonstrable structural heart disease, hypertension (HTN) and diabetes mellitus (DM).

Methods: In this retrospective study, a total of 953 consecutive patients (18-95) who underwent an EGD at The Brooklyn Hospital Center (TBHC) between Jan 2007 to Dec 2007 were studied. We reviewed demographics, EGD reports, histology, and co-morbidities of the patients. AF status was extracted from the hospital discharge summaries, medical records from previously admitted patients, diagnostic codes for AF and the electrocardiographic data base system of TBHC. Persistent AF is defined as non self-limited and sustained AF. Patients with structural heart diseases, HTN, DM were excluded. Data analysis was conducted by using the Fisher’s exact test for categorical variables and the Mann-Whitney U test for continuous variables.

Results: Among 953 patients 376 failed to meet the inclusion criteria and were excluded from the study. Of the remaining group, 192 patients (age 64.8 ± 8 years) had positive history for H pylori (males 48%, females 52 %). We compared this group to 184 age-matched patients (age 66.3 ± 27) who were negative for H pylori (males 45%, females 50 %). Persistent AF was present in 4 out of 192 patients with positive H pylori and 6 out of 184 patients with negative H pylori histology. There were consequently no significant differences between patients presenting with AF and the presence of H pylori infection. (p = 0.698).

Conclusion: Our data indicates that there is no significant association between persistent AF and active biopsy-proven H pylori disease, as had been shown in previous studies. This lack of relationship needs to be confirmed in further studies.

THE UTILIZATION OF INTRA VENOUS PROTON PUMP INHIBITORS (IVPPI) IN AUGIB

This research was supported by an industry grant from Depomed, Inc.

Purpose: The utilization of IVPPIs for prophylaxis in upper gastrointestinal tract injury rates has been studied in numerous studies in various patient populations. However, little of this work has been done in a real world setting. The aim of this study is to evaluate the indications and prescribing patterns of IVPPI in a real world setting.

Methods: The study was conducted from January 2007 to December 2007 at one university hospital. The data was collected prospectively. Medical indications for IVPPI prescription were evaluated. IVPPI use was defined as IVPPI therapy for at least five days in a patient admitted to the hospital with AUGIB for whom IVPPI was ordered. Matched controls were defined as patients admitted for less than one week with similar indications for IVPPI use.

Results: 604 patients received IVPPI, 467 in the AUGIB group and 137 in the controls. During the study period only 4 subjects died in the AUGIB group. The utilization rate of IVPPI in the AUGIB group was 77.2%, in the control group 10.1%. The main indication for IVPPI use was prophylaxis for stress-related AUGIB particularly in intensive care units. PROP use was associated with a 25% reduction in bleeding complications in this study.

Conclusion: Our study suggests that inappropriate utilization of IVPPI is frequent. Utilization of IVPPI therapy for an inappropriate indication was more common than inappropriate doses and duration. Vagility in utilization of IVPPI therapy according to evidence-based guidelines may be cost-effective and more appropriate.
P790

PII DOSING PATTERNS FOR RECENTLY BLEEDING GASTRODUODENAL ULCER DISEASE: A SINGLE CENTER EXPERIENCE

G.S. Jensen, MD, R. Aziri MD, W. Peterson, MD, J. Levine, MD. Division of Gastroenterology, Hepatology, U of Colorado Health Sciences Center, Aurora, CO.

Purpose: Studies have demonstrated equivalent healing rates in patients receiving standard (20mg) or double dose omeprazole taken for uncomplicated gastrointestinal ulcer disease (GD). Many experts also recommend standard dose, once daily omeprazole or equivalent for non-acute, recently bleeding GD. We sought to determine PPI dosing patterns for recently bleeding GD within our center, to determine the prevalence of PPI prescribed at discharge hospital. Exclusion criteria: prior h/o GD, h/o GERD/esophagitis, Zollinger-Ellison syndrome, GI malignancy, confirmed or suspected intestinal metaplasia of esophagus, positive/indeterminate H. pylori testing. Ascertainment of PPI type and dose was made from discharge summary or, when unavailable, endoscopy reports.

Results: 383, 209 and 57 subjects with recently bleeding gastric, duodenal and dual location ulcers were identified, respectively, over the 5 year study period. Of these, 39, 31 and 10, respectively, were prescribed PPIs at discharge in excess of standard dosing (see table). 95% of subjects prescribed PPIs with supratherapeutic dosing were placed on a twice-daily schedule. Among the entire study cohort, 50% were on standard dose, 17% had higher risk status at time of endoscopy. In cases of active bleeding, patients were discharged no sooner than 24 hours from the time of endoscopy. There was no significant trend from year to year in the number of patients receiving PPIs in excess of standard dosing (χ²<0.01). In the majority of cases no temporal endpoint of therapy was given at the time of PPI prescription.

Conclusion: A university hospital, the majority of patients with recently bleeding GD were discharged on PPI dosages in excess of that generally considered sufficient for ulcer healing. These data build upon the growing recognition of inappropriate PPI usage in a variety of practice settings. A more rational approach to PPI dosing for GD may have many beneficial consequences including significant cost savings.

<table>
<thead>
<tr>
<th>PPI</th>
<th>Dose</th>
<th>Du</th>
<th>Gl</th>
<th>Du + Gl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omeprazole</td>
<td>&gt;20mg PO qd</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Omeprazole OTC</td>
<td>&gt;20mg PO qd</td>
<td>0</td>
<td>0</td>
<td>3</td>
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<td>Esomeprazole</td>
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<td>10</td>
<td>4</td>
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<td>Lansoprazole</td>
<td>30mg PO bid</td>
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<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Pantoprazole</td>
<td>40mg PO bid</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Various</td>
<td>Standard</td>
<td>10</td>
<td>12</td>
<td>0</td>
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</table>

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H. PYLORI AND GASTRIC MUCOSAL INJURY IN ASYMPTOMATIC PATIENTS - A RETROSPECTIVE ANALYSIS

A. B. Manhadi, MD, E. S. Coronel, MD, D. Eliah, MD. Division of Hepatology, University of Miami, Miami, FL; 2. Department of Medicine, University of Cuenca, Cuenca, Ecuador; 3. Medicine, Division of Gastroenterology, University of South Florida, Tampa, FL.

Purpose: H. pylori is a gram negative helical bacteria commonly associated with peptic ulcer disease, gastritis, gastric cancer, and MALT. However, H. pylori may also occur in up to 70% of patients without GI symptoms. We examined a population of healthy asymptomatic patients in Ecuador to determine the prevalence of gastric injury associated with H. pylori infection.

Methods: A retrospective chart review was performed in a private hospital in Cuenca, Ecuador. From nearly 2,000 endoscopic records from 2001-2007, we identified 92 asymptomatic patients. Inclusion criteria included healthy patients aged 30-80 years who went voluntarily for preventive checkup. Exclusion criteria included history of GI symptoms or chronic illness, and tobacco, alcohol, NSAID or PPI usage. Patients underwent upper endoscopy and rapid urease testing (Clo-test) to evaluate the presence of definitive gastric ulceration or erosions, and the presence of H. pylori. Erythema and gastritis were not included. Outcome variables included presence of gastric injury and presence of H. pylori infection. Calculations included relative risk and chi-square test with Yates correction.

Results: 92 patients were included and exclusion criteria, 13 patients were excluded as Clo-test results were not available. Of 79 asymptomatic patients, 61 (77%) patients showed signs of gastric mucosal injury with 13 (21%) Clo-test positive. 18 asymptomatic patients showed no mucosal injury (22%) Clo-test negative. Mucosal injury was not significantly associated with H. pylori infection (RR 0.98, CI 95% 0.73-1.32, p=0.93). The prevalence of H. pylori infection decreased from 43% (9 of 21 subjects) in those aged 30-39 years, to 8% (1 of 12 subjects) in ages 70-79 years, but the effect of age did not reach statistical significance. The prevalence of gastric mucosal injury increased from 62% (13 of 21 subjects) in those aged 30-39 years, to 100% (12 of 12 subjects) in ages 70-79 years. Gender was not significantly associated with infection of H. pylori.

Conclusion: In this study of asymptomatic subjects the rate of gastric mucosal injury is higher than previously reported and is not significantly correlated to H. pylori. This could reflect environmental or historical factors that need to be investigated in this population. Weaknesses of this study include the reliance of visualization rather than histology to diagnose gastric injury and the small sample size. However, it is clear that injury is related to age and not related to gender. It is unclear from our study which patients developed symptoms over time, but this will be further explored.

P792

THE UTILITY OF SPYGLASS CHOLEDOCHOSCOPY FOR EVALUATION OF SUSPECTED POST-LIVER TRANSPLANT STRUCTURES

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Purpose: Anatomastic (AS) and non-anatomastic biliary stuctures (NAS) frequently occur after liver transplantation. Endoscopic biliary cannulation and transpapillary stone extraction is a common cause of endoscopic retrograde cholangiopancreatocopy (ERCP) failure in these patients. Direct visualization of the biliary anatomastic junction achieved with choledochoscopy during ERCP may enhance diagnostic accuracy and technical success but experience is limited. The aim of this study is to determine the efficacy and safety of choledochoscopy during ERCP with suspected post-LT structure.

Methods: Between 7/07 and 3/09, 38 consecutive ERCPs with SpyGlassTM choledochoscopy (Boston Scientific, MA) were performed by a single interventional endoscopist (RDY) for suspected biliary structure based on laboratory values, radiographic studies, or liver biopsy. Clinical features as well as post-ERCP outcomes were retrospectively reviewed. Results: Eighteen LT recipients with mean age of 56.9 ± 6.8 years underwent 35 ERCPs with choledochochoscopy. Fifty-six percent were male, 78% had chronic HCV as the indication for LT, 94% had duct-to-duet anastomosis and the median time from LT to ERCP was 4.1 months (1.1 - 43.5 months). Pre-procedure scores for NAS and AS were documented in 285 IUL (4.1180 IUL). Structure cannulation and direct inspection of the anastomastic junction were achieved in all the cases. Of 35 procedures, 83 were identified in 10 cases (29%) and NAS in 3 (6%). Endoscopic interventions for biliary structure included balloon dilation in 92% of the cases, stent placement in 75%, sphincterotomy in 42% and ampillary dilation in 8%. Unanticipated biliary stones or debris was visualized in 7 cases (20%) with choledochochoscopy, which were not detected on initial fluoroscopy, leading to subsequent stone extraction. Peri-procedural complications included moderate pancreatitis (n=1) and mild hemorhage (n=1).

Conclusion: Choledochochoscopy with assistance of SpyGlass choledochochoscopy was successful in 100% of the cases while procedural complications rates were acceptable at 6%. Direct visualization of the biliary tract improves technical success, diagnostic accuracy and complements endoscopic management of patients with suspected post-LT structures.

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THE IMPACT OF OVERTUBE ASSISTED ENTEROSCOPY (OAE) FOR THERAPEUTIC ENDOSCOPIC RETROGRADE CHOLANGIOGRAPHY (ERC) IN ROUX-EN-Y ANATOMY

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Purpose: Usually, ERC is successful >90% of the time, but that rate decreases in the presence of post-operative altered intestinal anatomy, usually limited by the length of the afferent loop. Overtube assisted enteroscopy (OAE) using single or double balloon overtubes, and more recently spiral overtube, allow visualization and endoscopic intervention of significantly more small bowel than previous commonly used deep enteroscopy methods. We hypothesized that OAE allows successful performance of ERC in patients with post-surgical anatomy changes.

Methods: A retrospective analysis was performed at a single, high volume tertiary care endoscopy center. Patients scheduled for ERC with post-surgical upper GI anatomy from March 2004 through May 2008. Type of surgery and ERC success rate were reviewed. Clinical characteristics, indication for the procedure, and successful therapeutic-endoecopic interventions were reviewed for patients who had an ERC with OAE.

Results: 18 patients were prospectively captured. 3 patients had a Billroth-II (B-II) anastomosis (1 gastric CA, 1 PUD, one metastatic disease); the other 15 patients a Roux-en-Y (R-Y) anastomosis (10 gastric bypass, 4 gastric neurosis, 1 PUD in a known inflammatory bowel disease). Of the 18 patients, 3 were male and the mean age of the group was 58 ± 15 years. 15 (83%) patients underwent enteroscopy via the overtube, 3 via ERCP (1 patient with R-Y, 2 patients who failed to enter via the overtube). Overall, ERC was successful in all 18 patients (100%). 1 patient had a bile leak (10%) that required surgical intervention (1 patient with R-Y anastomosis and 1 patient with a known inflammatory bowel disease). The overall success rate of OAE was 100% in our experience. No procedural, equipment or patient related complications were noted.

Conclusion: Overtube assisted ERC is successful in a patient with previous post-surgical anatomy. OAE allows visualization of the entire small bowel, and therapeutic biliary interventions can be performed successfully in this challenging group of patients.

Overtube Assisted Endoscopic Retrograde Cholangiography in Roux-en-Y Anatomy

<table>
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<tr>
<th>Sex</th>
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<th>Anatomy</th>
<th>Surgery</th>
<th>Indication</th>
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<tr>
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<td>ReY</td>
<td>GBP</td>
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<td>SB</td>
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<td>56</td>
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<td>GBP</td>
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<td>SB</td>
<td>60 min</td>
<td>Lapateryotomy</td>
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</table>
 RELATIONSHIP BETWEEN ULTRASONIC GALLBLADDER INVOLVEMENT AND OTHER MAJOR LABORATORY PARAMETERS IN A COHORT OF ADULT SRI LANKANS SUFFERING FROM NON EPIDEMIC DENGUE INFECTION

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Purpose: To study the relationship and clinical implications of gallbladder (GB) involvement in non epidemic dengue infection affecting adult Sri Lankans as it occurs in both epidemic and non epigenic proportions in Sri Lanka and until the serological proof is available it is diagnosed and managed mainly on clinical features supplemented by hematological parameters whereas ultrasound scanning of the abdomen is seldom used as a diagnostic tool or a predictor of severity of dengue infection and ultrasonic GB involvement with its implications are described in few studies but its affection in non epidemic dengue has not been elucidated before.

Methods: Clinical notes of 64 adult Sri Lankans, suspected of having non epidemic dengue infection, subsequently serologically proven, admitted to the principal author’s unit at Sri Jayawardeneperuma General Hospital, Kotte, Sri Lanka were retrospectively analyzed. All the patients had undergone ultrasound examination of the gallbladder between 3rd to 7th day of illness. A repeat scan was performed between 14th to 21st day of illness. We also used the cut-off point of significant gall bladder wall thickness (GBW) at ≥ 3.5 mm as in other published studies.

Results: 53 out of 64 patients had dengue IgM positivity with D2 infection. Male: female sex ratio was 45:8. Mean age of presentation was 33±6.2 SD yrs with an age range of 12–69 yrs. All the patients had clinical symptoms of dengue fever and acute hepatitis. 89% had SGPT >100 U/L while 83% had SGOT >100 U/L. Similarly out of 29 patients with GBW <3.5 mm, 13 had GBW <3.5 mm and 16GBW ≥ 3.5 mm with SBG <100 U/L while 8 had SBG <100 U/L. Similarly out of 29 patients with GBW <3.5 mm, 13 had GBW <3.5 mm and 16GBW ≥ 3.5 mm with SBG <100 U/L while 8 had SBG <100 U/L. None had any clinical signs or complications related to GB involvement with ultrasonic resolution within two weeks of onset of fever.

Conclusion: GB involvement was subclinical in all. GB wall thickening was a reliable supplementary diagnostic feature in non epidemic dengue infection. Haemoconcentration and haemolysis appeared to be the predominating factors contributing to GB wall thickness.

P977 THE RATE OF POST ERCP PANCREATITIS IN LIVER TRANSPLANT PATIENTS COMPARED TO NON TRANSPLANT PATIENTS: A SINGLE CENTER EXPERIENCE

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Purpose: Acute pancreatitis remains the most common and serious complication of endoscopic retrograde cholangiopancreatography (ERCP). It is estimated based on various studies that the rate of post-ERCP pancreatitis ranges between 5.0% and 30.0%. Based on observation alone, liver transplant patients were felt to have lower rate of post-ERCP pancreatitis. The purpose of this study is to investigate the rate of post-ERCP pancreatitis in liver transplant patients in comparison to non-transplant patients. Currently there are no studies that specifically address this issue.

Methods: All patients who had ERCP following orthotopic liver transplant from January 1998 to December 2006 were identified. Similar number of ERCPs done in non-transplant patients during the same time period were selected for comparison. Patient’s charts were reviewed to identify the demographics, ERCP findings, past history of pancreatitis, and history of prior sphincterotomy. Also included were interventions such as sphincterotomy, pancreatic or biliary stent placement, and pancreatic duct injection. Post-ERCP pancreatitis was defined as a clinical syndrome of abdominal pain and elevation of pancreatic enzymes greater than twice the upper limit of normal requiring hospitalization for more than 24hrs.

Results: A total of 400 patients were identified, 200 in each group. In the transplant group there were more Caucasians (75% vs. 44%), less previous history of pancreatitis (0% vs. 8%), and sphincterotomies performed (26%, vs. 57%). The rate of post-ERCP pancreatitis in the transplant group was 4.5% (95% CI, 2.1-8.3) as compared to 12.5% in the non transplant group (95% CI, 8.3-17.9) [p<0.01]. Multivariate analysis showed patients in the non-transplant group were 3 times more likely to have post-ERCP pancreatitis as compared to the transplant group (95% CI, 3.0-13.1; 95% p<0.01).

Conclusion: Post ERCP pancreatitis is significantly less common in liver transplant patients which supports our clinical observation. Caucasians were found to have a higher risk of post-ERCP pancreatitis in comparison to African Americans. Further prospective studies to confirm this conclusion and to investigate the mechanism are indicated.

P978 THE USE OF ENDOSCOPIC ULTRASOUND AND FINE NEEDLE ASPIRATION (EUS-FNA) TO DIAGNOSE PANCREATIC ADENOCARCINOMA AND THE POTENTIAL ROLE OF GENDER ON PROGNOSIS

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Background: Pancreatic adenocarcinoma is the fourth leading cause of cancer related mortality and second only to colorectal cancer as a cause of digestive related cancer death. Observational data from within our institution suggest that males tend to present with more poorly differentiated pancreatic adenocarcinoma than females and therefore may have a worse prognosis. The purpose of this study is to investigate gender differences between pancreatic adenocarcinoma.

Methods: This is a retrospective study of patients who have undergone EUS-FNA of pancreatic adenocarcinoma from 1992-2007, with a post procedure diagnosis of pancreatic adenocarcinoma. 246 patients were collected using the Scott & White electronic database. Technical parameters, stage at presentation, tumor size, and length of survival were recorded. Of the 246 patients, 130 were males and 116 were females.

Results: Among the 246 patients, 70% of females were males. Of 130 males, 34% presented with well differentiated adenocarcinoma versus 13% of women. Males were also noted to present at earlier stage compared to women (stage I, II, III, IV; 5%, 25%, 19%, 49% vs. 15%, 27%, 17%, 41%). Both cell type and later stage of presentation correlated with shorter survival.

Conclusion: Based on this data, men presented with more poorly differentiated adenocarcinoma than women. Those with more poorly differentiated cell type were also noted to have a shorter survival period.

P979 PREDICTING EARLY ORAL FEEDING IN PATIENTS WITH ACUTE PANCREATITIS: A SIX YEAR RETROSPECTIVE SINGLE CENTER EXPERIENCE

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Purpose: Evaluate the outcome of early oral feeding in patients admitted with acute pancreatitis.

Methods: A total of 197 patients from consecutive patients admitted with an ICD-9 diagnosis of acute pancreatitis were analyzed retrospectively from 2001-2007. All charts were reviewed for Ranson’s score at admission and 48 hrs and SOFA score daily for the first 5 days. The total maximum SOFA score was calculated summing the highest scores for all six systems. Organ dysfunction was considered as SOFA score of 1 or 2 points and organ failure as a SOFA score of 3 or more. The pattern of feeding was recorded for all patients. Outcomes of acute pancreatitis, such as...
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**ENDOSCOPIC MANAGEMENT OF PANCREATIC FLUID COLLECTIONS: A SINGLE CENTER EXPERIENCE**

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**Purpose:** Surgical drainage of symptomatic pancreatic fluid collections (PFC) has been the traditional gold standard of treatment. However, endoscopic drainage has been widely used over the last decade and has challenged surgery. The aim of this study is to evaluate the outcome of endoscopic drainage and to identify characteristics that predict successful endoscopic drainage of PFC.

**Methods:** Our endoscopic database was utilized to identify all the patients who underwent endoscopic drainage of symptomatic PFC between January 2002 and April 2008. A procedure was considered successful if endoscopic drainage was achieved without the requirement for any other procedures. Treatment failure was defined as failure of the PFC to resolve or recurrence of the PFC after endoscopic treatment for which additional treatment modalities were required or procedure related death. Wilcoxon rank sum tests and Fisher’s exact tests were used. Results: A total of 33 patients (22 men, 11 women, median age 49 years) underwent endoscopic drainage. The median diameter of the collection was 7.8 cm (Range 3.2-19). The median time from the onset of pancreatitis and the drainage was 26 days (13-165). All patients required endoscopic ultrasonogram (EUS) to identify the drainage site. All patients with PFC in the tail required EUS (100%). The cyst could not be accessed in seven patients (21.2%). All 26 patients who had access to the cyst and underwent endoscopic drainage had successful resolution of the collection with a median time of resolution of 47 days (Range: 7 to 136). In one patient, the collection had a papillary appearance. In seven patients, the PFC could not be accessed because of inability to access the cyst required surgery. The PFC was accessed transmurally in 19 patients (15 stomach, 3 duodenum, 1 esophagus) and transpapillary in 7 patients. One of the 26 patients who underwent successful drainage later died of a pulmonary embolus. The patient underwent surgical exploration for a presumed cholangiocarcinoma. At surgery, there was no evidence of metastatic disease. The gallbladder was distended and inflamed and the CBD was dilated proximally and distally had thickened walls. Core biopsies of the bile ducts showed inflammatory changes and a cholecystectomy and hepatico-jejunostomy were performed. Histopathological exam showed chronic inflammatory changes with fibrosis and plasmymphocytic infiltrate; bile duct tissue stained positive for IgG4. Serum markers for ISD included anti- Carbonic Anhydrase and serum IgG4 levels were within normal limits.

**Conclusion:** Isolated dominant bile duct strictures in the naive patient are common due to malignancy. However, as in our patient, ISD mediated bile duct inflammation leading to stricture formation must now be considered. It can be isolated without associated autoimmune pancreatitis and may not have elevated serum IgG4 levels. This diagnosis is usually made on biopsy after a surgical procedure. If diagnosis can be made pre-operatively, biliary obstruction may be treated medically with corticosteroids and possibly endoscopically and avoid surgery. Steroids will be necessary for inducing remission and resolution of symptoms post biliary stenting endoscopically.

**Conclusion:** IgG4 cholangiopancreatitis is part of the spectrum of ISD and must be considered in any patient with biliary stricture, even in the absence of pancreatic pathology and normal serum IgG4 value.

**P801**

**RELATIONSHIP BETWEEN SEVERITY OF PANCREATITIS AND COMPLEXITY OF ERCP**

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**Purpose:** Background: Pancreatitis is the most common complication of ERCP, with a higher incidence in those undergoing complex endotherapy. However, it is not known if a relationship exists between the severity of post-ERCP pancreatitis and the technical complexity of the procedure. Aim: Examine the relationship between the severity of post-ERCP pancreatitis and technical complexity of ERCP.

**Methods:** Methods: Retrospective study of all patients who underwent ERCP and developed post-ERCP pancreatitis over a 5-year period (2002-2007). Data on ERCP complications were collected prospectively and graded per consensus criteria. Technical complexity of ERCP was graded per ASGE quality assessment criteria.

**Results:** Results: Eighty-one (mean age 45.8 yrs, range [6-79]; 52 females) of 2202 patients (3.6%) generated post-ERCP Pancreatitis. Grade I included 30 patients (37%); grade II 32 patients (37.3%) and grade III 48 patients (59.3%). Although the incidence of post-ERCP pancreatitis was significantly higher following more complex procedures (grade 1, 2.29% vs grade II/III, 5.29%; p<0.001), there was no significant correlation between the technical complexity and severity of pancreatitis (r = 0.03). Multivariable analysis performed using logistic regression identified that the odds of severe pancreatitis for females was 2.07 (95% CI 1.01-4.19; P = 0.049) when adjusted for age, race and procedural complexity.

**Conclusion:** Conclusion: Although the incidence of post-ERCP pancreatitis was higher following high-grade complexity procedures, there was no correlation between the severity of pancreatitis and procedural complexity.

**P802**

**OBSTRUCTIVE JAUNDICE SECONDARY TO IGG-4 BILIARY STRICATURE WITH NORMAL SERUM IGG4 AND NORMAL PANCREAS IMAGING**

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**Purpose:** New onset obstructive jaundice in a middle aged individual is usually malignant in etiology. IgG-4 Systemic Disease (ISD) is composed predominantly of autoimmune pancreatitis and cholangitis, both of which can present with obstructive jaundice. We report a patient with obstructive jaundice and a biliary stricture secondary to ISD with normal serum IgG4 levels and normal pancreas imaging on radiologic studies.

**Methods:** Case Report: 64 y/o man presented with 4 days of painless jaundice and weight loss over the preceding 2-3 months. He had no abdominal pain or back pain, denied any drug use and was on no medications. His physical examination was unremarkable except for scleral icterus. Labs included a total bilirubin 14mg/dl (nml<1.3) and direct of 10mg/dl (nml<3.0), AlkPhos of 47 IU/L (nml<130) and ALT 20 IU/L (nml<50), AST 122 IU/L (nml<35), CA 19.9: 505/ml/ml (nml<37). RUQ US showed a dilated proximal common bile duct, without cholelithiasis or cholecytitis. Abdominal CT showed a 1.1cm CBD with biliary tree dilatation and no evidence of choledocholithiasis. MRCP demonstrated that in the mid CBD ~4cm proximal to the ampulla an obstructing tumor with an abrupt tapering of the CBD at the level of obstruction. The patient underwent surgical exploration for a presumed cholangiocarcinoma. At surgery, there was no evidence of metastatic disease. The gallbladder was distended and inflamed and the CBD was dilated proximally and distally had thickened walls. Core biopsies of the bile ducts showed inflammatory changes and a cholecystectomy and hepatico-jejunostomy were performed. Histopathological exam showed chronic inflammatory changes with fibrosis and plasmymphocytic infiltrate; bile duct tissue stained positive for IgG4. Serum markers for ISD including anti- Carbonic Anhydrase and serum IgG4 levels were within normal limits.

**Conclusion:** Isolated bile duct strictures in the naive patient are common due to malignancy. However, as in our patient, ISD mediated bile duct inflammation leading to stricture formation must now be considered. It can be isolated without associated autoimmune pancreatitis and may not have elevated serum IgG4 levels. This diagnosis is usually made on biopsy after a surgical procedure. If diagnosis can be made pre-operatively, biliary obstruction may be treated medically with corticosteroids and possibly endoscopically and avoid surgery. Steroids will be necessary for inducing remission and resolution of symptoms post biliary stenting endoscopically.

**Conclusion:** IgG4 cholangiopancreatitis is part of the spectrum of ISD and must be considered in any patient with biliary stricture, even in the absence of pancreatic pathology and normal serum IgG4 value.

**P803**

**FOCAL DILATION OF THE MAIN Pancreatic Duct (MPD), EARLY VS. NEW VARIANT OF INTRADUCTAL PAPILLARY MUCINOUS NEOPLASIA (IPMN)?**

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**Purpose:** Main duct variant of IPMN is associated with diffuse involvement of the main pancreatic duct and advanced pathologic features including malignancy. Isolated cystic dilation of the main pancreatic duct has not been described and may represent a variant/early IPMN with malignant potential. Recognition of this new finding can lead to better diagnosis and can affect patient management.

**Methods:** We report our experience at Georgetown University Hospital. From January 2003 to November 2008, 5 patients referred for further evaluation of pancreatic cysts seen on MRI or CT was noted. Focal cystic dilatation of the MPD was noted on Endoscopic Ultra- sound (EUS), Endoscopic Retrograde Pancreatography (ERCP), or a combination of the 2 modalities. Aspiration of fluid from cystic lesions was sent for cytology and CEA in select cases. 4 patients underwent surgical resection. Pathology was reviewed for evidence of advanced features such as high grade dysplasia (HGD) or carcinoma.

**Results:** 5 cases of isolated dilation of the MPD were diagnosed by EUS alone in 1 case, ERCP alone in 1 case, and in combination of the two modalities in 3 cases. Findings were correlated with radiographic imaging. Cystic dilation was located in the head of the pancreas in 4 cases and in the body/tail region in the fifth case and varied in size from 8.6 mm in diameter. 4 of 5 cases were noted to have a patentulous papilla by endoscopy with 2 cases with mucinous material arising from the ampulla. Aspiration of the fluid by EUS or ERCP revealed CEA levels of 135 (35 to 505 mcg/dL). 4 of 5 patients underwent surgical resection with final diagnosis of IPMN confirmed pathologically. All surgical specimens were without evidence of HGD or carcinoma. The fifth patient was not deemed a surgical candidate secondary to other medical comorbidities.

**Conclusion:** Focal cystic dilation of the MPD may represent early presentation of main duct IPMN vs. a new variant that demonstrates malignant potential. Further study into this entity is necessary for further classification of this potential subtype.

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**ABSTRACTS**
DIAGNOSIS, ANTIBIOTIC PROPHYLAXIS, AND NATURAL HISTORY OF PANCREATIC CYSTIC NEOPLASMS: IS IMMEDIATE SURGERY NECESSARY?  
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Purpose: Immediate surgery for benign cystic pancreas (serous cystadenoma, pseudocyst) and potentially malignant/malignant (PMM) cysts (muscular cystadenoma, IPMN, mucinous cystadenocarcinoma) remain difficult. The purpose of this study was to: 1) determine the value of endoscopic ultrasound (EUS) and Fine Needle Aspiration, tumor markers, and cyst fluid viscosity 2) determine the risk of infections following a single dose of antibiotics 3) determine the natural history of pancreatic cystic neoplasms with conservative management.

Methods: In the pathology diagnosis for pancreatic cystic neoeplasms were retrospectively analyzed. Cyst characteristics on EUS, serum and cyst fluid tumor markers, cyst fluid viscosity, infectious complications, and malignant transformation with conservative management were recorded. Cyst wall thickness was subjective and not directly measured. Fluid viscosity was measured by placing 1 drop between the index finger and thumb and measuring the maximum length of stretch “string sign”

Results: Seventy-nine patients were included. The presence of septations (P = 1.0) and calcifications (P = 0.66) were not significant. However, the presence of thick walls (>5 of 9 patients, 100%) or intracystic growth (6 of 9, 100%) were associated with PMM cysts, P = 0.035 and 0.042 respectively. Cyst fluid CA 19-9 had a median of 1.0 in benign cysts and 471.1 ng/mL in PMM cysts (P < 0.0001). Cyst fluid CA 19-9 was not statistically significant (P = 0.22). Neither serum CA 19-9 nor CEA was useful in evaluating pancreatic cysts (P = 0.68 and P = 0.31 respectively). Increased cyst fluid viscosity was associated with PMM cysts. Mean string sign was 0 mm in benign cysts and 4 mm in PMM cysts (P = 0.0001). Thirty-eight patients received a single pro-procedure dose of levofloxacin (levof) 500mg IV. The remaining patients were administered a different antibiotic, dose, or duration. None of the patients who received a single dose of levofloxacine developed wound infection. One patient who received a single dose of cefazolin developed a fever of 39.3°C. Of the 50 patients with PMM cysts, 18 without confirmed malignancy did not have surgery within 6 months of diagnosis due to co-morbidities and were treated conservatively. Only two of 18 (11.1%) developed worrisome changes on imaging and underwent surgical resection after a mean of 22 months.

Conclusion: The presence of a thick cyst wall or intracystic growth, elevated cyst fluid CA 19-9, and a “string sign” were characteristic of PMM cysts. Single pre-procedure doses of levofloxacin adequately prevented infectious complications. 10.5% patients with a PMM cyst managed conservatively ultimately required surgical resection.

P805

DIAGNOSTIC CHALLENGES IN PANCREATIC Masses: A STUDY COMPARING PREOPERATIVE DIAGNOSIS AND POST-OPERATIVE PATHOLOGICAL DIAGNOSIS IN PATIENTS WITH PANCREATIC Masses

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Purpose: Although a variety of different modalities exist (CT, MRI, EUS, and FNA) for the diagnosis of pancreatic masses, the preoperative diagnosis of benign or malignant pancreatic masses remains a challenge. The purpose of this study was to compare preoperative clinical diagnosis to post-operative pathological diagnosis of pancreatic masses at a tertiary care medical center.

Methods: A list of patients undergoing procedures for pancreatic masses in 2004 done at Emory University Hospital was obtained. A retrospective analysis was performed to collect and compare differentiating between benign and post-operative pathological diagnosis.

Results: 144 patients had pancreatic surgery for pancreatic masses during the study period. Most of these patients had malignant diseases on post-operative pathology, such as: pancreatic adenocarcinoma/T1/T2 (44.6%), endocrine tumor of the pancreas (7%), pancreatic endocrine carcinoma (6%) and cholangiocarcinoma (4%), etc. 1 patients whose preoperative differential diagnosis was malignancy, showed no malignancy at the time of post-operative pathology.

Conclusion: Based on this study, pancreatic malignancy is over-diagnosed in patients with pancreatic masses prior to surgery. It is a challenge to precisely differentiate benign pancreatic masses from malignant ones despite the employment of modern diagnostic modalities, such as CT, MRI, EUS, and FNA. These test all have varying sensitivities and may be operator dependent. Combining PET scan to preoperative diagnostic techniques may add more data to this dilemma in the future.

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OSTEOCLASTIC/PLEOMORPHIC GIANT CELL TUMORS OF THE PANCREAS: A REPORT FROM THE EMORY UNIVERSITY EXPERIENCE

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Purpose: To evaluate patients with giant cell tumors of the pancreas and compare results to other gastrointestinal location.

Methods: Retrospective chart review of 5 patients with giant cell tumors of the pancreas at our institution from January 2011 to May 2011. EUS FNA was performed with fine needle aspiration, imaging, lab tests, EUS findings including FNA, clinical course/survival and pathology.

Results: 5 patients (2F,3M) age range 59-81 years (mean 70.2 years). None were smokers. None had history of alcohol or previous pancreatic cancer. On presentation 2 had painless jaundice, 1 had polymyalgia rheumatica, 2 had epigastric pain. 3 pts had pleomorphic histology, 1 had osteoclastic histology. 1 had both subtypes. Location: 4 head, 1 body. On EUS tumors were large (mean diameter 47mm, range 20-70mm) 4/5 were in the pancreatic head and 1 was in the body. All tumors had heterogeneous echotexture. No patients had any vascular involvement. 3/5 had malignant adenopathy on EUS/FNA, 2/5 had metastases at presentation. CT was concordant with EUS in all patients. Mean CA19,9 was 276. Three pts died at a mean of 12.3 weeks from diagnosis. 2 pts are alive, 13 and 18 months from diagnosis with osteoclastic histology.

Conclusion: We believe this is the largest cohort of patients with giant cell tumors of the pancreas ever identified at a single center, and all by EUS FNA. Giant cell tumors of the pancreas have unique clinical, endoscopic, and cytological features. The risk factors for these lesions may be different from those associated with pancreatic adenocarcinoma. Tumors were non-smokers and nondrinkers. Tumors were without vascular involvement, large, and heterogeneous. In contrast to prior data, most had malignant adenopathy at the time of diagnosis. Some giant cell tumors may carry a more favorable prognosis than pancreatic adenocarcinoma. Awareness and recognition of these differences can affect patient care.

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PERCENTAGE DECREASE IN TOTAL SERUM BILIRUBIN AFTER ERCP

THERAPY FOR OBSTRUCTIVE JAUNDICE IS SIMILAR FOR MALIGNANT AND BENIGN CAUSES

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Purpose: 1) To compare the mean total serum bilirubin levels prior to ERCP in malignant vs. benign causes of biliary obstruction. 2) To compare the average percentage decrease in total serum bilirubin levels after a therapeutic ERCP.

Methods: The medical records of all patients who underwent therapeutic ERCP for obstructive jaundice at LLUMC between 1/1/2002 and 12/31/2008 were reviewed. Only patients with bilirubin levels ≥2 mg/dL prior to ERCP who had follow-up bilirubin levels for ≥2 days after ERCP were included in the final analysis. Patients variables included age, gender, length of follow-up, and malignant vs. benign causes of obstruction.

Results: A total of 453 patients who underwent a therapeutic ERCP for obstructive jaundice. Those with a pre-ERCP bilirubin level ≥2 mg/dL had a mean follow-up of 12.2 weeks. Of these 477 were malignant (50.8%) and 124 had a benign cause of biliary obstruction. (See table)

Conclusion: 1) The mean total serum bilirubin levels were significantly higher in the setting of malignant (≥10 mg/dL) vs. benign (<10 mg/dL) causes of biliary obstruction. 2) After therapeutic ERCP the percentage decrease in total serum bilirubin level is expected to be the similar in malignant vs. benign causes of obstructive jaundice.

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EUS-GUIDED TRUCUT BIOPSIES MAY ENABLE THE DIAGNOSIS OF LYMPHOEPITHELIAL CYSTS OF THE PANCREAS (CASE REPORT)

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Purpose: Lymphoepithelial cysts (LEC) of the pancreas are rare benign lesions with a minimal clinical presentation due to the location and lack of mucosal involvement. Showalter et al. reported that 8 of 12 patients with LEC had diabetes mellitus, 5 were women, 4 presented with endoscopic ultrasound (EUS) or magnetic resonance cholangiopancreatography (MRCP).

Methods: A 56-year-old male without history of pancreatic cancer presented with complaints of epigastric pain and abdominal distention. Initial laboratory data were unremarkable. several endoscopic procedures were performed, including a standard EUS, showing a 4 cm cyst in the tail of the pancreas. A biopsy was performed using a 22 gauge Trucut needle and EUS guidance. The final pathology was benign lymphoepithelial cysts.

Results: The patient went on to have a laparotomy and distal pancreatectomy with a frozen section diagnosis of benign lymphoepithelial cysts. The patient was discharged free of symptoms after 1 week of follow-up. EUS-guided Trucut biopsy may serve as a useful tool in the diagnosis of LEC of the pancreas.

Conclusion: EUS-guided Trucut biopsy can help establish the diagnosis of LEC of the pancreas.
Harindhanavudhi, Ali, MD

Purpose: Gastropancreatic stromal tumor (GIST) is the most common nonneoplastic tumor that usually occurs in the stomach or small intestine. However, they can be found in other intra-abdominal organs. Pancreatic GIST is extremely rare with only a few cases reported in the literature. We describe the case of a pancreatic GIST that prompt the practitioner to be aware.

Conclusion: A 63-year-old woman presented with increasing fatigue and generalized weakness without gastrointestinal symptoms. Her past medical history included hypertension and pancreatitis. The pancreatic mass was found by CT scan when she presented with flank pain 4 years prior. However, the patient refused surgery at that time. Physical examination revealed a healthy woman with soft systolic murmur but otherwise unremarkable. Laboratory data revealed a low Hb of 4.9 g/dL, MCV 86.1 fL. She received 4 units of blood transfusion. Abdominal CT scan demonstrated an 11 cm by 16 cm cystic mass at the pancreatic body that had increased in size compared with the 6 cm cystic mass from the previous CT scan. Endoscopy was normal. Colonoscopy revealed diverticulosis and a large sigmoid polyp. Endoscopic ultrasound (EUS) demonstrated a large complex cystic structure arising at the pancreatic body characterized by hypoechoic cysts within the cyst consistent with a hematomata. FNA was performed and thick bloody fluid was obtained which was found to have an amylase of 20,891 units/L. Cytology revealed a spindle cell lesion. Immunohistochemistry studies were positive for muscle specific actin, smooth muscle actin and CD34 but negative for CD117. Eventually, the patient underwent exploratory laparotomy that revealed a cystic mass arising from the pancreatic body. Drainage of cyst with cystojejunostomy and biopsy of cyst wall was performed. Histologically, the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field and immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field. Immunophenotyping stain was strongly positive for CD34 and CD117. All of these supports the diagnosis of the tumor composed of spindle cells with mitotic rate <5 per 50 high power field.

Conclusion: Pancreatic GIST is an uncommon solid tumor of the pancreas. It is usually asymptomatic because of the location and lack of mucosal involvement. Showalter et al. reported that most of the tumors were low grade and was diagnosed incidentally from imaging. This case demonstrated an Ewing sarcoma arising from the pancreas which presented with severe anemia due to pseudoaneurysm formation and hemorrhage within the GIST. Although these are uncommon pancreatic GIST should be included in the differential diagnosis of cystic and solid masses of the pancreas.

MRCP AS A DIAGNOSTIC STUDY FOR PLEUROPANCREATIC FISTULA

Methods: Two case reports of PF presenting at a tertiary care hospital successfully diagnosed by non-invasive MRCP are presented

Results: CASE REPORT 1: A 46 yr old African-American male with history of alcoholism presented with 2 month history of progressive dyspepsia and cough. Chest X-ray showed bilateral pleural effusions. Thoracentesis revealed pleural fluid with an exudative pattern. CT thorax/abdomen revealed bilateral pleural effusions (right) greater than left but no fistula was identified. MRCP was performed that confirmed the clinical suspicion of PF revealing discontinuity in pancreatic ductal wall with formation of fistulous tract with pleural cavity. Patient was initially managed conservatively with bowel rest, reintubation and parenteral nutrition. ERCP was eventually performed and a stent was placed in the pancreatic duct 27 days into hospitalization. Symptoms improved with resolution of PF that was confirmed with repeat MRCP two weeks later. CASE REPORT 2: A 52 yr old Caucasian female with history of hepatitis C and chronic pancreatitis presented with abdominal pain. CT scan revealed a small pleural effusion, left larger than right. MRCP was performed revealing a tortuous fluid signal tract from anterior wall of pancreatic duct to the left pleural cavity. The patient was managed conservatively with parenteral nutrition and subcutaneous sandostatin therapy. Two weeks later a repeat MRCP showed near closure of the fistula and her symptoms completely resolved.

Conclusion: 1-PF is an unusual complication of chronic pancreatitis that presents a diagnostic dilemma for physicians. 2-The reported accuracy of ERCP in diagnosing fistulas is highly variable. 3-ERCP Panoperator dependent technique associated with 1 to 7% risk of procedure related pancreatitis. 4-MRCP is based on the acquisition of T2 weighted images, which can provide an overview of the fistulous tract appearing as a high signal intensity structure. 5-MRCP usually does not require sedation or contrast material and is less invasive relative to ERCP. 6-MRCP is considered the initial study of choice to diagnosis PF. 7-Recent development of new MRI techniques with higher resolution can more clearly demonstrate the relationship of the fistulous tract to the pancreatic duct.

HYPERTRIGLYCERIDEMIA INDUCED SEVERE PANCREATITIS WITH MULTI SYSTEM ORGAN FAILURE: IS EARLY PLASMAPHERESIS THE ANSWER?

Methods: Case Report: A 25 y/o Hispanic woman with no significant past medical history presented to ED with severe pain in abdomen, nausea and vomiting. Upon examination, she was in distress, afibrile and had tenderness in epigastric region with no evidence of xanthelasma or eruptive xanthomas. Laboratory analysis revealed a lipemic sample, markedly elevated TG 9720, and undetectable high density lipoprotein. Her only lipid fractions WBC was 16.1 and Lipase 783. She was started on an Insulin drip to stimulator her lipoprotein lipase for her hypertriglyceridemia. Aggressive fluid management, analgesics, imipenem-cilastin were started and she was admitted to the ICU. Her hospital stay was complicated by Multi System Organ Failure including acute renal failure requiring hemodialysis, mechanical ventilation and intra-abdominal abscesses. Plasmapheresis played a pivotal role in improving her clinical as well as laboratory condition. Patient was discharged home on fenofibrate, metformin and followed as outpatient.

Conclusion: Treatment of hypertriglyceridemia induced pancreatitis includes nil per oral, insulin drip (with or without heparin) and plasmapheresis. Plasmapheresis is an emerging method of decreasing the toxic chyloïmicron fraction, triglyceride and plasma proteases. It improves blood and plasma flow rates and perfusion to vital organs and also helps to avoid pseudo lab value which could be misleading in patient management. There has been no independent study to prove the effectiveness of plasmapheresis. Most of the data is extracted from case reports. Piolot et al reported successful use of plasmapheresis, which reduced the levels of TGs by 65-70%. In one case report, the outcome after plasmapheresis was dependent on the timing of its initiation. Our case thus emphasizes the importance of plasmapheresis for hypertriglyceridemia induced pancreatitis and emphasizes the need for randomized controlled trials evaluating its timing and use.
SUCCESSFUL TRANS-PAPILLARY DRAINAGE OF A HEPATIC HYDATID CYST: A NOVEL APPROACH

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Purpose: Hydatid cystic disease, caused by the larval form of Echinococcus, commonly affects the liver. When symptomatic, these cysts rupture and cause intraperitoneal leakage, infection, or biliary obstruction and when enlarged, produce mass effect. Definitive treatment of obstructive jaundice due to rupture is Endoscopic Retrograde Cholangiopancreatography (ERCP) and sphincterotomy. We would like to report a case of a trans-papillary drainage of a hydatid cyst.

Methods: An 82 year old male with chronic hydatid liver cysts treated with ERCP and sphincterotomy, presented with fever, generalized pruritus, and dark urine for one week. Laboratory work revealed elevated liver enzymes and bilirubin. A CT scan showed a septated cyst in the right lobe and intrahepatic dilatation. ERCP revealed a cyst causing external compression of the intrahepatic ducts. We selectively cannulated and irrigated the cyst using hypertonic saline to kill off remaining scolices to avoid anaphylactic reaction. After clearance of the fluid with an occlusion balloon, gentamycin was used for irrigation.

Results: A repeat CT scan showed a decrease in the size of the cyst with improving intrahepatic dilatation. Irrigation and drainage of the cyst were performed without complication.

Conclusion: Among the complications of hydatid disease, cyst rupture into the biliary tract occurs in 5-25%. ERCP with sphincterotomy is needed to treat obstructive jaundice caused by debris after a cyst rupture. A study reports an 86% success rate with endoscopic treatment for hydatid cysts. Treatment with anti-hydatid agents is without endoscopic intervention. Literature review reveals that our approach is one of the few reported cases for a trans-papillary drainage of a hydatid liver cyst without the need for stenting or nasobiliary drainage. By managing cystic rupture with ERCP and sphincterotomy along with medical therapy, we avoid the need for surgical or percutaneous approaches. ERCP with sphincterotomy and medical therapy is a safe and effective approach to treat complications of hydatid cystic disease. Our case is unique in that we successfully drained a hepatic hydatid cyst using a trans-papillary approach via ERCP.

IMMUNOGLOBULIN G4 (IgG4)-HEPATOPATHY IN A CASE OF SCLEROSING CHOLANGITIS MIMICKING PRIMARY SCLEROSING CHOLANGITIS (PSC)

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Purpose: A 51-year-old healthy male presented with a 1-month history of painless jaundice and weight loss. Serum bilirubin was 21.9 (direct 15.4); Alk phos 432, ALT 82 and AST 113. MRI showed a 22 x 13mm T2-hyperintense mass in the head of the pancreas with narrowing of the intrapancreatic portion of the CBD, and intrahepatic and intrahepatic biliary dilatation. ERCP showed a stricture in the distal CBD and irregular intrahepatic ducts suggesting sclerosing cholangitis. Ductal brushing was negative for malignancy and a biliary stent was placed. EUS-guided biopsy showed chronic pancreatitis and a serum IgG4 was elevated suggesting autoimmune pancreatitis. Prednisone was started, and jaundice and pancreatic mass resolved in 6 weeks. Liver tests normalized at 3 months, the stent was removed and steroid was stopped. Six months later, liver tests were again abnormal with bilir. 2.9, Alk phos 299, ALT 104 and AST 90. He did not have any symptoms of cholangitis. MRCP showed diffusely irregular intrahepatic ducts but no filling defect or stricture in the CBD. The pancreas and pancreatic duct were normal. A liver biopsy showed interface hepatitis with focal lymphocytes and plasma cells (Image 1) with portal fibrosis (stage 1-2). There was mild bile duct damage (Image 2) with cholangiolar proliferation. Special stain revealed an increased number of IgG4 plasma cells >25/hpf (normal<5/hpf) consistent with IgG4-hepatopathy. Steroid was restarted and tapered as the enzymes improved. He was maintained in remission with immunomodulator therapy. IgG4-related sclerosing cholangitis should be suspected in biliary strictures associated with increased serum IgG4 and abnormal pancreas, and is potentially treatable. IgG4-hepatopathy has emerged as a unique entity in the umbrella of IgG4-related sclerosing diseases and is steroid responsive.
**P816**

**EXPRESSION OF CD30 IN CELIAC SPRUE**

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**Purpose:** Cluster of Differentiation 30 (CD30), is a type I transmembrane glycoprotein of the TNF receptor superfamily. Expression of CD30 is normally seen in about 15 – 20% of normal CD3+ T and NK cells. CD30 also is expressed at increased levels in neoplasms of lymphoid origin as well as in several transformed T and B cell lines. CD30 expression has also been reported in refractory sprue. Our working hypothesis is that CD30 is expressed at increased levels in small bowel biopsies of patients with Celiac Sprue compared to normal intestinal tissue. If true, therapy with anti-CD30 might be a useful adjunct in the treatment of Celiac Sprue patients who have CD3+ biopsies from small intestine mucosa. Aim: To determine expression of CD30 in small bowel biopsies of patients with Celiac Sprue compared with a normal control group.

**Methods:** Retrospective pilot study in patients who underwent small bowel biopsies by upper endoscopy which were suggestive of Celiac Sprue as well as a matched number of normal control biopsies. A total number of forty biopsies were collected (twenty with Celiac Sprue and twenty controls) and were stained for CD30. A pathologist was blinded for the review of slides.

**Results:** The duodenal biopsies of the control and study cases revealed no staining of the intrapithelial lymphocytes by CD30. Occasional lymphoid cells within the lamina propria were reactive with CD30 in both groups. No staining differences were observed between the two groups.

**Conclusion:** Lymphocytes in the lamina propria of patients with early Celiac Sprue are not associated with the cascade of CD30 immunologic events. Our results suggest that expression of CD30 in Celiac Sprue is not present early in the course of this disease, but an unknown event triggers the expression of this receptor later on, when the disease is considered as refractory Sprue and/or lymphoma.

**P817**

**IS VIDEO-ASSISTED TEACHING BETTER IN LONG-TERM RETENTION OF LEARNING**

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**Purpose:** To analyze the results of lecture-room teaching compared to Video-assisted teaching in medical students. The students were assessed at the end of the lecture on intestinal hernia by multiple choice questions. This group was then assessed 3 months later and the same number of students was reassessed.

**Results:** There was no significant difference in correct response score at day 1, 94% lecture-room-teaching vs 97% Video-assisted-teaching but at 3-months the correct response score was 56% lecture-room-teaching vs 78% Video-assisted-teaching and at 6-months the correct response score was 44% lecture-room-teaching vs 73% Video-assisted-teaching. The Staff reduced time for queries with in one hour of teaching time. This group was similarly reassessed.

**Conclusion:** Video-assisted teaching minimizes staff input, maximizes knowledge dispersion and helps in long term retention of learning.

**P818**

**CAPSULE ENDOSCOPY: EFFECT OF BOWEL PREPARATION ON IMAGE QUALITY, SMALL BOWEL TRANSIT AND COMPLETION RATE**

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**Purpose:** There is no consensus about the use of bowel cleansing prior to capsule endoscopy (CE). A significant number of procedures performed following the manufacturer guidelines of clear liquids and fasting result in poor visualization, and inability to image the entire small bowel. This study examined the effect of bowel preparation on image quality, small bowel transit (SBT) and complete passage through the small bowel.

**Methods:** We retrospectively analyzed 156 consecutive capsule endoscopies performed between 6/1/07 and 5/31/08 at our facility. 5 cases were excluded due to retention in stomach, esophagus and unreadable data. 92 patients followed the manufacturer guidelines of clear liquids and fasting (CF) and did not receive bowel cleansing. 59 patients received bowel preparation with 45ml of sodium phosphate or 2L polyethylene glycol on the previous evening (BP).

**Results:** The indications for capsule endoscopy were obscure overt gastrointestinal bleeding (n=30), obscure occult bleeding (n=30), abdominal pain (n=15), crohn’s (n=22), celiac disease (n=6) and others (n=4). 21 (23%) of CF and 3 (5%) of BP patients had poor bowel visualization (p=0.014), due to residual opaque intestinal fluid and solid debris. The rest, 77% of CF and 95% of BP patients were noted to have adequate visualization. Cecum was not reached in 15 (16%) of CF and 5 (10%) of BP patients (p=0.28). SBT was 244 min in CF and 235 min in BP patients (p=0.53).

**Conclusion:** Bowel preparation for capsule endoscopy improves the quality of small bowel visualization. It demonstrates no statistical difference in small bowel transit time and passage into cecum, though a greater percentage of patients with preparation had complete exams of the small bowel. Bowel preparation should be routinely considered for capsule endoscopy.
Garenne, France; 2. Pharsight Corp., Montreal, QC, Canada; 3. Rigshospitalet, Copenhagen, Denmark; 4. NPS Pharmaceuticals, Bedminster, NJ.

Conclusion: Teduglutide is an analog of native human GLP-2, a naturally occurring peptide secreted predominantly in the distal intestine. With enhanced biological properties, teduglutide increased mucosal mass by increasing villus height and crypt depth in animal studies. Teduglutide is currently under evaluation as a drug candidate for the treatment of intestinal dysfunction such as short bowel syndrome (SBS). The following study assessed the pharmacokinetic and pharmacodynamic (PK/PD) correlation between teduglutide and cirrhotic, an endogenous non-peptide amino acid and biomarker of remnant small intestinal enterocyte functional mass in SBS using PK/PD modeling techniques.

Methods: Eighty-three PN-dependent SBS patients were randomized and dosed to placebo or 0.05 or 0.1 mg/kg/day of teduglutide for a 24-week treatment period. This was followed by either 4 weeks of follow up off drug or entry into a study extension. Teduglutide and cirrhosis plasma concentrations were measured every 4 weeks. PK/PD correlations were evaluated using an Emax model, with the maximum effect on cirrhotic driven by the cumulative exposure and duration of treatment with teduglutide.

Results: As compared to baseline, mean cirrhotic levels at Week 24 following placebo, 0.05 and 0.1 mg/kg/day teduglutide increased by 7.9%, 49% and 132%, with p-values of 0.1297, 0.001, and 0.001, respectively. Table presents cirrhotic percent relative level to normal (i.e., physiologic value of 33 mmol/L). In the Emax model, the maximum predicted effect of teduglutide was a 142% increase in cirrhotic level compared to baseline. The exposure of teduglutide associated with 50% of the maximum effect was 20 mg/mL. An exposure-response relationship was observed, with a clear maximum effect on cirrhotic driven by the cumulative AUC of teduglutide.

Conclusion: A clear PK/PD correlation was observed between cumulative exposure of teduglutide as demonstrated in the Emax model and significant increases in plasma cirrhotic as noted at week 24. These results suggest that cirrhotic may be used as a surrogate marker of increased enterocyte functional mass in SBS patients treated with teduglutide.

Air Pollutants IQR Day Before Admit aOR (95% CI)* 5-Day Average aOR (95% CI)*
O3 (ppb) 0.98 (0.91-1.05) 1.01 (1.01-1.02) 1.10 (1.01-1.13) 1.17 (1.03-1.33)
NO2 (ppb) 11.7 0.98 (0.91-1.05) 1.00 (1.00-1.01) 1.08 (1.03-1.14) 1.29 (1.10-1.58)
SO2 (ppb) 1.01 0.95 (0.91-0.99) 1.01 (1.00-1.02) 1.07 (1.05-1.09) 1.13 (1.09-1.17)
PM10 (μg/m³) 1.01 0.97 (0.94-1.00) 1.01 (1.00-1.02) 1.03 (1.01-1.05) 1.07 (1.05-1.09)
CO (ppm) 0.99 (0.95-1.03) 1.00 (1.00-1.01) 1.00 (1.00-1.01)
PM2.5 (μg/m³) 4.0 1.01 (0.98-1.04) 1.01 (1.00-1.04)

*Odds ratio adjusted for temperature and humidity.

GASTROINTESTINAL COMPLICATIONS IN PATIENTS SUPPORTED WITH VENTRICULAR ASSIST DEVICES
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Purpose: To analyze 16 viable balloon enteroscopy (DBE) procedures at a single tertiary referral center by a single operator.

Methods: A total of 137 consecutive patients between March and 2004 and December 2007, 71 males and 66 females with a mean age of 63.2 ± 14.2 years (range 17 to 89 years), underwent 161 DBE procedures, 128 oral route and 33 anal route. Twenty-one patients had undergone both anal and oral approaches. Indications included gastrointestinal bleed (n = 100, 71%), abdominal pain (n = 11, 16%), IBD (n = 3), diverticulosis (n = 21), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestinal pseudo-obstruction (n = 3), cancer tumor (n = 12), adenoma (n = 3), CRC (n = 1), chronic intestine...
CORRELATION OF HYDROGEN BREATH TEST TO CLINICAL RESPONSE AFTER ANTIBIOTIC TREATMENT

X Fan, MD, MS, L. Scott, MD, J Sellin, MD. Gastroenterology, University of Texas Medical Branch, Galveston, TX.

Purpose: The gold standard to diagnose small intestinal bacterial overgrowth (SIBO) has been the quantitative culture of luminal fluid from small intestine. However, these are difficult to perform and thus various breath tests have been proposed as noninvasive tests for SIBO. Hydrogen breath tests (HBT), using glucose or lactulose, are the most commonly used tests for SIBO. The definition used for positive hydrogen breath tests varies in different studies; a rise of hydrogen within 90, 120 or 180 minutes has been defined as positive tests. Our goal is to study the correlation of diagnostic criteria of lactulose HBT to the response rate with antibiotics treatment.

Methods: 1. HBTs were performed following standard protocol of UTMB motility lab. 2. A total of 50 lactulose HBT results were reviewed. 13 patients were excluded from further study due to significant methane producing (more than 5 ppm), later finding of metastatic ovarian cancer, and lack of documentation or unable to contact. Three patients did not receive any anti-biotic treatment were also excluded from the study. 3. HBTs were reviewed for peak hydrogen rise, double peak pattern, response to antibiotic treatment via charts review or patients contact. Many patients received antibiotic treatment other than rifaximin in this study such as leviquan, flagl, ciproflloxacin, tetracycline, amoxicillin, clindamycin. Patient response to antibiotic treatment was graded as symptoms resolved, improved, no change or worsening.

Results: A total of 34 patients were included in this study, 28 patients (82%) were female, and 22 patients (65%) were Caucasian. As shown in table 1, a rise of 20 ppm or more hydrogen in ≤90 minutes correlated with best response rate with antibiotic treatment including complete disappearance of symptoms after treatment in 3 patients. A peak rise after 120 minutes correlated with poor antibiotic treatment response rate including worsening of symptoms in one patient after treatment. Double pattern was found only in 6 patients, which correlated with 50% response rate with antibiotics treatment.

Conclusion: An early rise of hydrogen peak 20 ppm or more correlated with better response rate with antibiotics treatment. A double peak pattern is not commonly seen in lactulose HBT, and correlation with treatment response is only 50%.

Correlation of HBT and clinical response after antibiotic treatment

<table>
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<th>Number of patients</th>
<th>Symptoms resolved</th>
<th>Symptoms improved</th>
<th>No change in symptoms</th>
<th>Symptoms worsening</th>
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<td>1</td>
<td>3</td>
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<tr>
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REFRACTORY LYMPHOCYTIC ENTERocolITIS AND TUMOR NECROSIS FACTOR ANTAGONIST THERAPY

G. Arai, MD, M. Domonetz, MD, T. M. Bayless, MD, Z. Chen, MD, F. M. Giardello, MD. Gastroenterology & Hepatology, Johns Hopkins University School of Medicine, Columbia, MD.

Purpose: Case series of two patients with severe watery diarrhea due to lymphocytic enterocolitis that responded to treatment with TNF antagonist therapy.

Methods: We present two patients with lymphocytic enterocolitis and severe watery diarrhea and malabsorption that improved with treatment on tumor necrosis factor antagonists.

Results: A 71 year old female presented to the Johns Hopkins Hospital with history of increasing watery diarrhea over two months. She complained of fatigue, decreased appetite, and abdominal bloating. She was afebrile, had postural hypotension, and a tympanic abdomen with diffuse tenderness and hyperactive bowel sounds. Stool studies for pathogens were negative and stool collection revealed steatorrhea (ecal fat 9%±24%). Duodenal mucosal biopsies showed prominent chronic inflammatory changes of the lamina propria with architectural distortion of the villi (see Figure 1A). There were moderate amounts of intraepithelial lymphocytes and some flattening of the villi. Colonoscopy biopsies showed similar findings with prominent lymphocytes of the lamina propria, intraepithelial lymphocytes, and widening of the spaces between the crypts due to the inflammatory process (see Figure 2A). These findings were consistent with lymphocytic enterocolitis.

Conclusion: In refractory cases not responding to steroids or other empiric therapies there is little literature or guidance concerning additional therapies. Therefore, TNF-α antagonists were tried at our center with good response. Infliximab, a chimeric human-murine immunoglobulin monoclonal antibody to TNF-α, inhibits pro-inflammatory cytokines. This agent has been shown to work on fibroblasts, neutrophils, T-cells, and B cells, with decrease in lymphocyte population. Adalimumab, a human monoclonal antibody directed against TNF-α has been used for rheumatoid arthritis and more recently for Crohn’s disease. In both of our patients, we used TNF-α antagonist to eliminate the diarrhea with dramatic improvement in small bowel and colonic inflammation.

NITAZOXANIDE FOR THE EMPIRIC TREATMENT OF PERSISTENT DIARRHEA


Purpose: Persistent diarrhea is a common complaint of patients presenting to family practitioners, internists, and gastroenterologists. The differential diagnosis is complex, and the variety of tests applicable to these patients can be overwhelming. Accurate diagnosis is elusive, as there are many causes of persistent diarrhea, many of which are infectious in origin. A successful trial with an antibiotic for treatment of enteric pathogens would potentially be a successful trial with an antibiotic for treatment of enteric pathogens. Furthermore, NTZ has a placebo-like safety profile, and malabsorption that improved with treatment on tumor necrosis factor antagonists.

Methods: A multi-center chart review was performed on patients treated with NTZ from April 2008 to April 2008 with complaints of persistent diarrhea (>14 days) of unknown etiology. Patients were excluded if they had a known infectious cause of diarrhea such as Clostridium difficile or bacterial overgrowth. Efficacy was measured as patient reported complete resolution of diarrhea or satisfactory improvement of symptoms by the end of therapy. Follow-up evaluations were made either via office visits, or telephone interview. Nineteen patients met the inclusion criteria for review.

Results: Of the 19 patients treated with NTZ, 14 were available for follow-up. Diarrhea was resolved in 11 (85.7%) of these patients, and one patient was non-compliant and one patient showed a positive lactulose breath test prior to treatment. This left a total of 11 patients for the final analysis. The range of NTZ used was 500 mg BID-TID from 5-10 days, with the median dose and duration of therapy being 1000 mg/day × 7 days Overall, 10(83.3%) of the patients studied had a resolution of diarrhea, with 6 of the patients having a complete response, and 4 of the patients having satisfactory improvement. Of the two non-responders, one patient was later diagnosed with microscopic colitis which responded to prednisone, and the other was determined to have diarrhea secondary to radiation therapy. One patient who complained of GI distress while on NTZ had to discontinue therapy, but still had a complete response. Otherwise, NTZ was well-tolerated.

Conclusion: Nitazoxanide appears to be a safe and effective alternative for the empiric treatment of persistent diarrhea. More studies are necessary to confirm these results.

ASSOCIATION BETWEEN CD4 COUNT AND CANDIDA SP. COLONIZATION

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Purpose: To examine the association between CD4 count and Candida sp. colonization.

Method: Cross sectional study, to find association of CD4 and intensity of Candida sp colonization. Bivariate and multivariate analysis performed.

Results: From 100 patients, showed significant different of mean intensity of Candida sp colonization and CD4<20 had a 4.5 times greater risk of increase Candida sp colonization. Multivariate analysis showed that CD4 had significant correlation with Candida sp colonization.

Conclusion: Association of CD4 and intensity of Candida sp colonization exist; CD4 <26 had a 4.5 times greater risk of increase colonization. Different of mean intensity of Candida sp colonization among various clinical data. Significant different of mean intensity of Candida sp colonization and CD4.

ASSOCIATION BETWEEN CD4 COUNT AND CANDIDA SP. COLONIZATION INTENSITY BY STOOLS’ CULTURE OF AIDS PATIENTS

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Purpose: To study the association between CD4 count and Candida sp colonization in AIDS patients.

Method: We evaluated 11 of 24 patients with stool culture positive for Candida sp. A logistics regression model with presence of diabetes as the dependent variable, only age (OR: 1.04 ± 0.01, P ≤ 0.005, 95% CI 0.03 – 0.61 p value 0.009). Low baseline platelet count was the only significant independent factor associated with Candida sp. colonization.

Conclusion: Hypertension and diabetes are independent risk factors for Candida sp. colonization in AIDS patients.
P831 DRUG-INDUCED INTRAHEPATIC CHOLESTASIS/VANISHING BILE DUCT SYNDROME SECONDARY TO THIORIDAZINE: A CASE REPORT AND A REVIEW OF THE LITERATURE

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Purpose: To present a case of drug-induced intrahepatic cholestasis/vanishing bile duct syndrome secondary to Thioridazine, an antipsychotic medication.

Methods: A 61 year-old-male presented with five days of progressive jaundice with rust-colored urine and right upper quadrant tenderness. A liver biopsy illustrated extensive portal fibrosis with mild inflammation, decreased number of bile ducts and cholestasis, consistent with a drug reaction. All medications were reviewed, only to find that the patient had been taking Thioridazine all along at home. Thioridazine was discontinued and liver function tests returned to normal.

Results: The patient had no history of alcohol abuse, parenteral drug use or prior liver disease. He had been taking enalapril, HCTZ, levothyroxine, thioridazine and risperidone for 15 years. He was pretreated for atrial fibrillation with rapid ventricular response. A liver ultrasound was normal. CT scan of the abdomen demonstrated hepatosplenomegaly. Amiodarone was discontinued on the next day of admission with continued worsening of liver chemistry. Further investigations including viral hepatitis serology, autoimmune hepatitis markers, antinuclear antibody and a test for alpha-1 antitrypsin deficiency were all negative. A liver biopsy was performed to elucidate the cause of cholestasis. The biopsy illustrated extensive portal fibrosis with mild inflammation, decreased number of bile ducts and cholestasis, consistent with a drug reaction. All medications were reviewed, only to find that the patient had been taking Thioridazine all along at home. Thioridazine was discontinued and liver function tests returned to normal.

Conclusion: Thioridazine has been reported in association with the use of antipsychotic medications. Historically, the prototype for this type of disorder is chlorpromazine. Our case illustrates that other medications in this group may lead to cholestasis and the rather unusual vanishing bile duct syndrome and cholestasis, consistent with a drug reaction. All medications were reviewed, only to find that the patient had been taking Thioridazine all along at home. Thioridazine was discontinued and liver function tests returned to normal.

P832 POST-OPERATIVE JAUNDICE AFTER VATS PROCEDURE: A CASE REPORT SERIES OF THREE PATIENTS

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Purpose: Video-assisted thoracoscopic surgery (VATS) is a routine procedure performed in patients requiring lobectomy, and has proven superior to open lobectomy. We report the first described cases of three patients who developed post-operative jaundice after VATS surgery and placement of bupivacaine On-Q pump for pain control.

Methods: The use of bupivacaine as an analgesic during maternal anesthesia may be related to short-term cholestasis and/or development of cholestasis due to increased biliary flow. The observed effects appear to result from mitochondrial uncoupling, up-regulation of iron and copper transport across the mitochondrial membranes and inhibition of potassium channels. The effects on the liver circulation have also been shown to be dose dependent, with more side effects related to higher bupivacaine concentrations.

Results: In our study, ultrasound guidance through the On-Q pump has become common practice and has proven to be a safe and effective adjunct in postoperative pain management after thoracotomy and VATS A continuous infusion of 0.25% bupivacaine at 4 mL/h through the On-Q elastomeric infusion pump was used post operatively and was stopped within 72 hours. Patients returned 2-3 weeks after VATS procedure with complaints of jaundice and loss of appetite. Their laboratory work was significant for AST and ALT elevation up to 5 times the upper limit of normal, alkaline phosphatase up to 5-10 times, and elevation of bilirubin up to 6.3 mg/dL with a direct component, consistent with a cholestatic pattern; however there was no ultrasound evidence of cholelithiasis or biliary sludge. A liver biopsy showed intrahepatic cholestasis, moderate, with mild and focal pericholangitis, consistent with cholestatic drug toxic reaction. Liver flow studies revealed normal flow within hepatic and portal veins. CT scan of the abdomen was normal in all three patients. Patients did not have chronic liver disease and their liver enzymes returned to baseline: 3 months after procedure with conservative management. Work up of the elevated liver enzymes did not reveal any etiology of the cholestatic liver disease.

Conclusion: We describe the first reported cases of painless jaundice caused by the use of bupivacaine in the On-Q pump. Since such side effects have been previously reported in the literature only in an animal model and when used in epidural anesthesia, we advise caution in using high concentrations of bupivacaine in the On-Q pump. Further studies are currently being conducted to assess the safe and effective dose of bupivacaine to use as an adjunct to the general anesthesia.

P833 GENDER BASED DIFFERENCES IN TREATMENT OF CHRONIC HEPATITIS C (CHC)

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Data: Data about gender based differences in response rates to treatment of CHC is limited. The aim of our study was to evaluate the gender based differences in predictors of early viral response rates and hematological abnormalities in patients with CHC infection.

Methods: Over a period of 4 years, we reviewed the records of all patients with CHC who were started on treatment with weight adjusted pegylated interferon and ribavirin. Demographic, sociological and laboratory data were collected. Insulin resistance was defined as a triglyceride (TG)/high density lipoprotein (HDL) ratio ≥ 3. Early virologic response (EVR) was defined as log10 HCV RNA level reduction of at least 2.0 logs or HCV RNA negativity by week 12. Patients were defined as having hematological abnormalities if they had the presence of thrombocytopenia, neutopenia, anemia or a combination of the above.

Results: Of the 152 patients, 73(48%) of the patients were males. On univariate analysis in males, nonwhite race was a significant predictor associated with an AST/ALT ratio ≥ 3 (OR=0.03), TG/HDL > 3 (p=0.05). Genotype 1 infection (p=0.02) and higher age (p=0.04). On multivariate analysis, insulin resistance was the only factor significantly associated with an EVR in males (OR=2.13, 95% CI 0.04, 0.009). Race/ethnicity status was the only factor significantly associated with hematological abnormalities in males (p=0.01). On univariate analysis in females, EVR was associated with Genotype 1(p=0.02) and Nonwhite Race (OR=8.09, 95% CI 0.04, 0.009) was the only factor significantly associated with EVR in multivariate analysis. None of the factors were significantly associated with hematological abnormalities in females.

Conclusion: Insulin resistance is a significant predictor of EVR in CHC infection in males while in females nonwhite race is the most significant predictor of EVR.
P836
THE USE OF ENTECAVIR FOLLOWING LIVER TRANSPLANTATION: PILOT SAFETY AND TOLERABILITY DATA
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Purpose: We performed a retrospective review to assess the safety and tolerability of Entecavir (ETV) following liver transplantation. ETV was safe and tolerable over a median follow-up period of 10 months.

Methods: Our institution performed 492 adult liver transplants between February 1995 and July 2006. 68 (14%) out of 492 patients were transplanted for hepatitis B virus (HBV) related hepatic decompensation. Excluded from our analysis were 6 patients who died prior to discharge. Post-transplant management data were available for 60 (97%) of the remaining patients. Standard post-transplant immunosuppression was instituted, and all patients received hepatitis B immune globulin (HBIG). A total of 9 patients, consisting of 7 men and 2 women (ages ranging between 39 and 72, median 61 years), received ETV and were monitored closely for development of recurrent HBV alloantigen infection, alloantigen rejection, and medication side effects over median post-transplant duration of 10 months (range 4 to 18 months).

Results: Table 1 summarizes post-transplant antiviral treatment regimens, both immediately post-transplant and at the end of follow-up period. Four (4) patients were started on ETV 0.5 mg daily, and an additional 5 patients were switched to ETV due to suspicion of adefovir (ADV) -induced renal insufficiency. In the ETV group (n=4), 1 patient developed an episode of acute cellular rejection (ACR), and 1 patient developed recurrent hepatocellular carcinoma (HCC), but all 5 remained alive and negative for HBV surface antigen at the end of follow-up.

Conclusion: Based on our limited experience, ETV is safe and well-tolerated in post-transplant patients. Primary prophylaxis with ETV (plus HBIG) is effective in preventing recurrent HBV alloantigen infection up to a median treatment follow-up of 10 months. We recommend a larger clinical trial to confirm the safety, tolerability and efficacy of ETV in post-transplant populations.

Table 1: Post-Transplant HBV Treatment

<table>
<thead>
<tr>
<th>TREATMENT</th>
<th>N (initial)</th>
<th>N (final)</th>
<th>Clinical Resistance Rate</th>
<th>Side Effect Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETV + HBIG</td>
<td>4</td>
<td>9</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>LAM + HBIG</td>
<td>31</td>
<td>28</td>
<td>12.9% (4/31)</td>
<td>0%</td>
</tr>
<tr>
<td>ADV + HBIG</td>
<td>10</td>
<td>9*</td>
<td>0%</td>
<td>55.6% (5/14)</td>
</tr>
<tr>
<td>HBIG Only</td>
<td>15</td>
<td>14</td>
<td>N/A</td>
<td>0%</td>
</tr>
</tbody>
</table>

* A total of 14 patients were treated with ADV + HBIG, but 5 were switched to ETV due to renal insufficiency.

Disclosure: Dr. Ahmed - Consultant, Speakers Bureau and Research Grant from Bristol-Myers Squibb and Gilead.

P837
DEPRESSION AND QUALITY OF LIFE ASSESSMENTS IN HCV GENOTYPE-1 PATIENTS TREATED WITH EITHER CONSENSUS INTERFERON (CIFN) AND RIBAVIRIN (RBV) OR PEGYLATED INTERFERON ALFA-2B (PEG IFN) AND RIBAVIRIN
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Purpose: Standard therapy for chronic HCV infection is interferon (IFN) in combination with RBV. Previous studies have demonstrated significant rates of depression with this therapy; sometimes necessitating dose reduction or cessation of treatment. Our objective was to evaluate rates of depression and quality of life in subjects who were randomized to CIFN 15 mcg three times a week and RBV or weekly Peg IFN/RBV (150mcg/0.5 ml).

Methods: This was a prospective, multicenter, randomized trial. All subjects were diagnosed with chronic HCV genotype 1 and were naive to treatment. Three scales were used to measure depression and quality of life: the Beck Depression Inventory-II (BDI-II), the Center for Epidemiological Studies Depression Scale (CES-D), and the Hepatitis Quality of Life Questionnaire (HQLQ). All questionnaires were administered at baseline and at treatment weeks 12, and 24 and 24 weeks after cessation of treatment.

Results: A total of 96 patients (47 CIFN/RBV and 49 Peg IFN/RBV) were enrolled in the study. Complete data was analyzed in 26 pts in the CIFN/RBV group and 33 pts in the Peg IFN/RBV groups. The two groups were similar in baseline demographics and clinical variables. The BDI-II and CES-D scores significantly increased from baseline in both treatment groups at weeks 1 to 3, (P<0.001) but returned to baseline 24 weeks after cessation of therapy. HQLQ analysis significantly decreased (P=0.001) from baseline in both groups at weeks 12 and 24 but returned to baseline after cessation of therapy. Compared to the CIFN/RBV group, patients in the Peg IFN/RBV group had a greater decrease in quality of life during treatment (P=0.029).

Conclusion: The antiviral response in both groups was similar (37% and 42% for CIFN/RBV and Peg IFN/RBV respectively). There was a statistically significant increase in depression scores and decrease in quality of life in both groups during therapy.

P838
THREE CASES OF ACUTE HEPATISIS IN PATIENTS TAKING HYDROXYCUT® BODYPUBLISHING SUPPLEMENT
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Purpose: Herbal supplements, in particular those containing green tea (Camellia sinensis), have been linked to acute hepatitis. To this point, there have been three reports of acute hepatitis in patients taking HydroxyCut®, a particular herbal bodybuilding formulation. We present three additional cases of acute hepatitis in patients taking HydroxyCut® recently seen at our institution.

Methods: All patients were male active duty service members serving in overseas locations. All had been taking HydroxyCut® at the dose recommended on the product label for 60-90 days prior to the onset of their symptoms (patient #2 had intermittently taken HydroxyCut® for 60-90 day intervals during the past 2-3 years). Case details are summarized in Table 1. All patients developed malaise, jaundice, and pruritus with additional symptoms as noted in Table 1. None of the patients developed fever, peripheral eosinophilia, or other extra-hepatic manifestations of Acute Hepatitis. In each case, the other causes of acute hepatitis were excluded. All patients were evaluated with liver biopsy.

Results: All three of these cases are considered as “probable” medication-related hepatitis by the CIOMS/RUCAM scale. The hepatotoxic effects of HydroxyCut® appear to occur in an idiosyncratic manner. This series substantially adds to the growing body of literature showing the potential hepatotoxicity related to HydroxyCut® and demonstrates the heterogeneous effects that can result from herbal products, in regard to the degree of hepatocellular damage and histologic findings.

Conclusion: Physicians need to remain vigilant for adverse effects of HydroxyCut® and other herbal products. This series of cases, as well as the previously reported cases, has led us to suggest that alternative bodybuilding supplements should be offered to service members in deployed locations.

Table 1: Case Details

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (years)</th>
<th>Duty station</th>
<th>Other medication use</th>
<th>Other than hepatitis</th>
<th>Biopsy results</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient 1</td>
<td>23</td>
<td>Iraq</td>
<td>Tocerone bodybuilding supplement</td>
<td>Acetaminophen</td>
<td>Acute hepatitis with cholestasis and early bridging fibrosis</td>
<td>Supportive</td>
</tr>
<tr>
<td>Patient 2</td>
<td>25</td>
<td>Germany</td>
<td>None</td>
<td>None</td>
<td>Steatosis without inflammatory cell infiltrate</td>
<td>Supportive</td>
</tr>
<tr>
<td>Patient 3</td>
<td>25</td>
<td>Iraq</td>
<td>None</td>
<td>None</td>
<td>Moderate cholestasis with eosinophils</td>
<td>Corticosteroids</td>
</tr>
</tbody>
</table>

P839
PREDICTORS OF LONG TERM OUTCOME FOLLOWING TRANSSEGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT (TIPS)
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Purpose: MELD score was devised as a predictor of mortality following TIPS, and has also been shown to predict mortality after orthotopic liver transplant. Recently, observations from our program demonstrated that the presence or absence of diabetes mellitus is a predictor of post-TIPS mortality independent of MELD score. However, whether or not this is true for post-TIPS mortality is unknown.

Methods: We retrospectively reviewed all TIPS procedures performed at Stanford University Medical Center between January 2000 and December 2005. Clinical data on MELD score and the presence or absence of diabetes mellitus was available for 189 procedures.

Results: Demographic characteristics were similar for the diabetic and non-diabetic group, except that the diabetic group was older. In a multivariate model including age, BMI, MELD...
score, and diabetes mellitus, the only significant predictor of mortality was MELD score (HR = 1.17, p < 0.01). However, there was a trend towards an increased risk of mortality among diabetics (HR = 1.92, p < 0.1). Furthermore, if patients who died in the first year following TIPS were excluded, diabetic patients had decreased survival compared with non-diabetic patients (log-rank statistic = 4.70, p = 0.03).

Conclusion: Diabetes mellitus may be a predictor of median and long-term mortality in post-TIPS patients. Prospective studies are needed to confirm our observation.

Demographic Characteristics

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Number of patients (n)</th>
<th>Mean age (years)</th>
<th>Mean BMI (kg/m²)</th>
<th>Mean MELD</th>
<th>Pre-TIPS gradient</th>
<th>Post-TIPS gradient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic Absent</td>
<td>159</td>
<td>42.6</td>
<td>27.5</td>
<td>15.5</td>
<td>18.1</td>
<td>6.9</td>
</tr>
<tr>
<td>Diabetic Present</td>
<td>54</td>
<td>53.0</td>
<td>30.3</td>
<td>13.6</td>
<td>18.3</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Predictors of mortality (multivariate model)

<table>
<thead>
<tr>
<th>Variable</th>
<th>HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MELD Score (1 pt increment)</td>
<td>1.17 (1.11 - 1.24)</td>
</tr>
<tr>
<td>Diabetes (Yes vs No)</td>
<td>1.92 (0.77 - 4.85)</td>
</tr>
<tr>
<td>Age (1 year increment)</td>
<td>1.002 (0.97 - 1.02)</td>
</tr>
<tr>
<td>BMI (1 point increment)</td>
<td>1.023 (0.96 - 1.09)</td>
</tr>
</tbody>
</table>

P841

MANAGEMENT CHALLENGES IN SICKLE CELL HEPATOPATHY

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Purpose: Sickle cell hepatopathy (SCH) encompasses a wide range of hepatic dysfunction. Cirrhosis is seen in 28% of patients at autopsy (1). To date SCH remains a major management challenge and carries a high morbidity and mortality (32%) (2). The treatment options and indications for liver transplantation (LT) remain unclear. To date experience is limited and outcome in LT in SCH is not ideal and mortality could be high (3). Aim: To identify the determinants of selecting management option in patients with SCH.

Methods: Three cases of severe SCH were identified over the last 5 years (2003-2006). The diagnosis of SCH was made on basis of clinical, radiological and biochemical data (Table). Records on these patients were analyzed with particular attention to treatment, response to therapy and outcome.

Results: Mean age was 25 ± 10.4 years. Median MELD was 32. Two out of 3 patients had cirrhosis of liver with portal hypertension. All patients had received exchange transfusion with packed Hb S < 25%. However, 2 patients with cirrhosis of liver did not show appreciable response to exchange transfusion. Both patients were given the option of LT. One patient refused LT and died within 6 months with the complications of SCH. Patient who underwent LT had post-operative complications of hepatic artery thrombosis and sub-segmental hepatic infarct. These complications were managed with hepatic artery angioplasty and stenting along with red cell exchange transfusions. Patient is alive and maintained on exchange transfusion. Patient with sickle cell intrahepatic cholestasis without cirrhosis of liver recovered with supportive care and exchange red cell transfusion and was discharged within 3 weeks with normalization of liver chemistry and coagulation parameters.

Conclusion: Initial treatment of patients with SCH involves red cell exchange transfusion to maintain Hb S < 25%. Patients with SCH and cirrhosis of liver not responding to exchange transfusion should be evaluated for LT provided no other organ dysfunction is present. After LT, patients with SCH are at risk of thrombotic episodes and should be continued on red cell exchange transfusions to keep Hb S < 25%. Patients with sickle cell intrahepatic cholestasis without cirrhosis tend to recover with exchange transfusion.

Conclusion: Sickle cell disease is a chronic condition that causes significant morbidity and mortality. LT is considered as a treatment option for patients with SCH. However, LT is associated with significant mortality and morbidity. Further research is needed to evaluate the long-term outcomes of LT in patients with SCH.

P842

HEPATITIS C VIRUS RESPONSE TO PEGYLATED INTERFERON AND RIBAVIRIN AT A NURSE-MANAGED RURAL VETERANS AFFAIRS CLINIC

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Purpose: Hepatitis C virus (HCV) is becoming a widely recognized pathologic entity, especially in the veteran population. Veterans enrolled in a veteran population. Veterans enrolled in a midwest veterans hospital represent a rural population, with the prevalence of hepatitis C presumably mirroring that of urban VAs. Data has been published to fully evaluate HCV RNA sustained viremic response (SVR) and early viremic response (EVR) in a rural-based VA hospital using pegylated interferon and ribavirin. The aim of this study was to evaluate the SVR and EVR rates for rural veterans undergoing HCV treatment through a nurse-managed clinic.

Methods: After IRB approval, the rural VA database was searched retrospectively from year 2000 to 2008, to identify veterans who underwent HCV treatment with pegylated interferon and ribavirin. SVR was defined as a decline in the serum HCV RNA load greater than or equal to 2-logs or clearance of the virus by week 12. Categorical variables were compared by Fisher’s exact test and chi-square test. Continuous variables were compared by parametric tests. Comparisons were made by univariate and multivariable analysis.

Results: Search identified a total of 395 patients with HCV Treatment was completed by 113 patients, with complete data available on 95 patients. The mean age was 49.3 ± 5.9 years. 89 men and 66 women were enrolled in the study. The mean body mass index (BMI) was 31.3 ± 5.9 (SD). 35 patients had genotype 1, 44 had genotype 4, and 16 had genotype 3. The SVR for genotype 1 was 52.8% for all patients, 30.7% for non-responders, and 61.5% for relapsers. In these genotype 1 patients, 70.5% of patients with SVR had EVR, while 91% of non-responders and 95% of relapsers had EVR. Among genotype 2, SVR was noted in 78.57%, 0 non-responders, and 14.28% relapsers. In genotype 2 patients, 63.64% of SVR patients had EVR, while no EVR was noted in non-responders and 37.5% for relapsers. Among genotype 3, EVR was seen in 87.5% of patients with SVR, 9.1% of non-responders, and 100% of relapsers.

Conclusion: Rural midwestern veterans with Hepatitis C have similar age and SVR rates as those in urban VA hospitals. The SVR rate for genotype 3 was 50% in the VA population which more likely represents a genotype 3 response rate. Therefore genotype 3 veterans will need to be treated more like genotype 1 and treatment for 12 months may be needed to achieve SVR. With 100% of the genotype 3 relapsers achieving an EVR, a longer duration of treatment may be more efficacious.
WHAT IS THE DIFFERENCE BETWEEN HEPATITIS C VIRUS PATIENTS WITH SUSTAINED Virologic RESPONSES VERSUS RELAPSEs TO STANDARD TREATMENT AT A RURAL VETERANS AFFAIRS CLINic? J. K. Seelam, MBBS, M. P. C. P., F. C. P., Y. A. Abbas, F. C. P., FAPC, FACC, F. A. C. P., S. Nagi, MBBS, M. Yakoob, MBBS, PhD, W. Jafri, FRCP, FACP, FACG. 1. Medicine, Imam Medical Centre, Jacobabad, Pakistan; 2. Medicine, The Aga Khan University, Karachi, Pakistan. Purpose: There is global decline in the prevalence of hepatitis D infection. However there are still pockets of high prevalence in Pakistan. The aim of our study was to estimate the prevalence of hepatitis D in HBsAg (hepatitis B surface antigen) positive patients visiting liver clinic. Methods: The patients who visited the two liver clinics, one in Karachi and the other in Jacobabad, from October 2007 to March 2008, having positive HBsAg, were included in the study. These patients were screened for HBV DNA by PCR, anti-HDV and HDV RNA by PCR. Clinical status of the patients was evaluated by examination, routine biochemical tests and ultrasound. Results: Total numbers of patients included in the study were 362 comprising of 151 patients from the clinic in Jacobabad and 211 from Karachi. The patients ranged from 4 to 70 years of age (mean age 29.75 ± 11.27). Out of the total patients 287 (62%) were male. Ninety seven (26.8%) were the residents of Jacobabad (22.7% ) and Karachi (75.5%). Jaffarabad 35 (9.7%) Naseerabad 26 (7.2%) Kashmore 23 (6.4%) Quetta and remaining from the other parts of the country mainly from the provinces of Sindh and Balochistan. All the patients were screened for HDV antibody out of which 212 (58.6%) tested positive for the antibody. Total 65 anti-HDV positive patients were screened for the HDV RNA by PCR out of which 30 (46.2%) tested positive for the virus. Three hundred and forty (340) patients were screened for HBeAg out of which 71 (20.9%) tested positive for HBeAg. Three hundred and seven patients were screened for HBV DNA by PCR out of which 88 (28.7%) tested positive for the virus. The frequency of positive HDV antibody was 69.23% in Kashmore, 67% in Jacobabad, 65.4% in Jaf- farabad, 65.21% in Quetta, 60% in Naseerabad, 56.58% in Karachi, 58.33% in other areas of Balochistan and 60.71% in other areas of Sindh. Conclusion: This data show extremely high prevalence of hepatitis D in the referred patients from some pockets of Southern Pakistan. Effective preventive measures are the need of time. Pakistan may be considered as the area of highest HDV prevalence around the globe.

The prevalence and significance of autoantibodies in patients with nonalcoholic fatty liver disease. Autoimmune hepatitis is refractory to standard therapy with prednisone and azathioprine in 20% of patients. For the last decade, investigators have explored alternative immunosuppressant drugs in AIH, including budesonide, cyclosporine, tacrolimus, and mycophenolate mofetil (MMF). Methods: A retrospective analysis was performed in 16 patients with AIH, immune cholangitis, and overlap syndromes between AIH, primary biliary cirrhosis (PBC), and primary sclerosing cholangitis (PSC). MMF was used in lieu of azathioprine on account of patients’ intolerance to azathioprine (7 patients), or disease that was refractory to treatment with prednisone and azathioprine (6 patients), or the perceived potency of MMF, compared to azathioprine (3 patients). Results: The median duration of treatment with MMF was 23.1 months (range 1.4-94.9). With initiation of MMF, ALT decreased from a median of 81.5 U/L (range 9-767) to 42.5 U/L (range 16-350) [P = 0.03]. Prednisone dose decreased from a median of 10 mg (range 0-40) to 2.5 mg (range 0-40) [P = 0.01]. Twelve of the 16 patients (75%) had a good response to treatment, including 3 of the 6 patients who had previously been refractory to treatment with prednisone and azathioprine. Five patients (31%) achieved biochemical remission, here defined as a reduction in the ALT from greater than to less than twice normal. This included 2 patients with classical AIH, 2 patients with AIH-PBC overlap syndrome, and one patient with AIH-PSC overlap syndrome. Seven additional patients (44%) were maintained in biochemical remission. Among the 12 responders, 8 patients experienced ALT normalization. Partial prednisone withdrawal was achieved in 6 and complete withdrawal was achieved in 3 patients. Two patients had an incomplete biochemical response to MMF, with liver chemistries remaining greater than twice normal. Two patients experienced treatment failure, with worsening of liver chemistries while treated with MMF. MMF was tapered well in all but one case, who discontinued the drug on account of paresthesias. A significant but not clinically relevant reduction in WBC was noted during MMF treatment, from 8.2 thousand/µL (range 2.5-13.2) to 6.0 thousand/µL (range 2.4-13.5) [P = 0.02]. No significant reductions in hematocrit or platelet count occurred. Conclusion: MMF is appropriate for use in patients with AIH and related disorders who are intolerant or unresponsive to azathioprine.
**P847**

**EFFECTS OF TRANSUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT ON PLATELET COUNTS AND SERUM CREATININE IN PATIENTS WITH PORTAL HYPERTENSION AT ROCHESTER GENERAL HOSPITAL (RGH)**

M Al-Haffar, MD, K. Casey, MD, Internal Medicine, Gastroenterology Division, Rochester General Hospital, Rochester, NY.

**Purpose:** Compare the course of platelet counts and serum creatinine after placement of transjugular intrahepatic portosystemic shunt (TIPS).

**Methods:** Records of all patients underwent TIPS at RGH between the year 1992 and 2007. Patients’ age, sex, etiology of liver disease and baseline platelet count and serum creatinine were included and followed for one year.

**Results:** The Demographic of the subjects are summarized in Table 1. The pre-TIPS median platelet count was 95.5, and the pre-TIPS median serum creatinine was 1.1. On the other hand the pre-TIPS median white blood cell count and hemoglobin were 6.9 and 10.3 respectively. The platelet counts and serum creatinine were analyzed in five different intervals, just prior TIPS, just after TIPS, at one month, three months and one year after TIPS. Sign rank test was used to analyze the data which did not show any significant change in the platelet count or serum creatinine with P-values more than 0.05. Table 2 and Table 3 The course of white blood cells (WBC) was also analyzed pre and post - TIPS. The median WBC count dropped from 6.9 to 4.7 over the follow up period; however this did not reach statistical significance after applying the sign rank test (Figure-1). Sign rank test was also applied to the serum hemoglobin (Hb-) which was also followed over the same intervals and there was no statistical significance of the increase in the median of Hb from 10.3 to 11.4 (figure -2).

**Conclusion:** TIPS placement did not lead to improvement in the serum creatinine or platelet count over the follow up period. There was also no statistically significant improvement in the WBC count or serum hemoglobin. Our final conclusion is TIPS should not be used to treat thrombocytopenia in patients with portal hypertension.

**Patients Demographics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Sex(m/F)</td>
<td>17/1</td>
<td>-</td>
</tr>
<tr>
<td>Ethnicity(white, African Americans, Hispanics)</td>
<td>15, 1:2</td>
<td>-</td>
</tr>
<tr>
<td>Mean age</td>
<td>56.1 ± 11</td>
<td>41 - 76</td>
</tr>
<tr>
<td>Bilirubin</td>
<td>2.67 ± 4.11</td>
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</tr>
<tr>
<td>AST</td>
<td>68.6 ± 4.3</td>
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</tr>
<tr>
<td>ALT</td>
<td>61.8 ± 32</td>
<td>23 - 132</td>
</tr>
<tr>
<td>INR</td>
<td>1.38 ± 0.23</td>
<td>1.0 - 2.0</td>
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</tr>
<tr>
<td>HCV</td>
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</tr>
<tr>
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<tr>
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<td></td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
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</tbody>
</table>

**Table 1:** Pre-TIPS vs. Post-TIPS

**Table 2:** Pre-TIPS vs. Post-TIPS

**P848**

**FREE RADICAL SCAVENGER (EDARAVONE) BLOCKS FAS-INDUCED APOPTOSIS PATHWAY IN MICE**

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**Purpose:** Spontaneous bacterial peritonitis (SBP) is a serious infection in cirrhotic patients with ascites due to the translocation of intestinal bacteria to the mesenteric lymph nodes and blood. Diagnosis of SBP is made if the ascitic fluid neutrophil count ≥ 250 cells/µL. Complete analysis of the ascitic fluid adds significant cost to the workup, hence if a normal appearance of ascitic fluid had 100% negative predictive value in ruling out SBP, it could prove cost-effective to skip complete analysis in such patients.

**Methods:** A retrospective review of in-patient records of all patients who had abdominal paracentesis at our Institution during 2004-2007 was performed. A total of 911 episodes in 669 patients were reviewed. 311 episodes were excluded as they were procedures performed in patients who were post-surgical, pediatric (age<18), on peritoneal dialysis or with malignant ascites. Data on ascitic fluid appearance was only available in 524 of these 580 patients: 467 episodes were in patients with no SBP and 57 episodes were in patients with SBP. SBP was defined as neutrophil count in ascitic fluid ≥ 250 cells/µL, with or without positive cultures. Abnormal fluid appearance included all samples labeled by visual inspection as slightly, moderately or markedly turbid, and bloody. With respect to microbiological patterns all the patients with SBP, that is 68 patients with 71 episodes were included in the study.

**Results:** Of the 524 patients included in the final analysis, 185 samples (35.3%) had a clear appearance with the remaining 339 (64.7%) identified as abnormal. Of the 57 patients with SBP, only 3 (5.2%) patients had a clear ascitic fluid; the remaining 54 (94.8%) had an abnormal fluid appearance. In the group without SBP 182 (38.9%) had a clear appearance. This gives a clear appearance of fluid a negative predictive value of 98.3% in excluding SBP. Similarly, an abnormal fluid appearance was 94.7% sensitive and 38.9% specific in diagnosing SBP. Of the 71 episodes of SBP included in the analysis for microbiological patterns, 66 (22.5%) had positive cultures with the remaining 55 being culture negative neutrocytic ascites. In patients with positive cultures the commonest organisms were Staph. aureus, E. coli, K pneumoniae, Strep pneumonae, Strep viridans and miscellaneous.

**Conclusion:** Ascitic fluid appearance by simple visual inspection is a good tool to exclude the presence of SBP. A clear appearance of ascitic fluid has a negative predictive value of 98.3% in excluding SBP. This could save the cost of further analysis of cell counts and cultures in these patients.
Microg/mL) in bile. The highest levels of ertapenem in bile (up to 6.25 microg/mL) were seen in CARBOHYDRATES FERMENTATIVE BACTERIA IN CIRRHOTIC PATIENTS investigated in a study of patients undergoing ERCP despite a limited biliary penetration measured using HPLC. Patients were observed for up to 72 hours post-ERCP for any evidence of infectious diseases, American University of Beirut, Beirut, Lebanon.

Our study with the degree of steatosis with the exception of gender where female gender was associated with more advanced steatosis (moderate and severe) when compared to men (94% vs 66%, respectively) with a P value of 0.03, on the other hand, other factors mentioned above did not show significant statistical association with the degree of steatosis.

Conclusion: Although it has been established that factors like obesity, HLP and DM are related to the pathogenesis of NAFLD, among other factors didn’t show statistical association in our study with the degree of steatosis. Our study where for the first-order correlation analysis, bile-enterohepatic circulation and bile-penetrating bacteria were statistically analyzed where the degree of steatosis was defined as mild, moderate and severe if steatosis involves 5-33%, 33-66% or more than 66% of the hepatocytes respectively.

Results: Chi-square was used to test the association between age, gender, BMI, the presence of HLP and Hgb A1c level in one hand and the degree of steatosis on liver biopsy in the other hand. All analyses were performed using the SAS System for Windows, Version 9.1.3. Our analysis showed that women had a higher prevalence of more advanced steatosis (moderate and severe) when compared to men (94% vs 66%, respectively) with a P value of 0.03, on the other hand, other factors mentioned above didn’t show significant statistical association with the degree of steatosis.

Results: Twenty-seven of 65 (42%) donor livers contained steatosis. Overall, 16/55 (30%) of post-transplant liver biopsies showed steatosis with 9/16 resulting from donor livers without steatosis, and 7/16 biopsies resulting from donor livers with steatosis. No significant differences were found between steatosis in the donors who developed post-transplant steatosis and those who did not develop steatosis, including use of corticosteroids and sirolimus. Twelve of 65 patients had worsening of steatosis between biopsies, but only 2 of these patients had NASH. There was no difference between patients who developed post-transplant steatosis and those who did not develop post-transplant steatosis. There were 41 (63%) patients with non-diabetic donor livers and 24 (37%) patients with diabetic donor livers. Patients transplanted for NASH developed post-transplant steatosis in 22% of patients, with 33% of patients showing resolution of steatosis in follow-up biopsies. Interestingly, the patients undergoing pre- and post-transplant steatosis had the largest drop in BMI, with a significant decrease in percentage of obese patients (55% vs 27%, p = 0.04).

Conclusion: In this single center study, 42% of patients received livers with steatosis. No factors including features of metabolic syndrome, BMI, diabetes and steatosis were significantly predicted the development of steatosis post-transplant. Additionally the diagnosis of NASH did not universally result in post-transplant steatosis. Limitations of this study include small numbers of NASH patients and the use of random biopsies. Larger, prospective studies with protocol biopsies will help confirm these findings.

Results: Of 180 cirrhotics (60%) had a positive LBT vs 1 x 0 of controls (3.3%); p<0.05.

Among cirrhotics, a significant difference was observed in the different Child group: 20% in Child A, 50% in Child B, 90% in Child C.

Conclusion: Cirrhosis have a significant prevalence of SIBO compared to controls. SIBO prevalence was associated to severity of cirrhosis. Lactulose administration could be a good option for the growth in the small bowel of formative colonic-type bacteria. A role of SIBO presence in HE and SBP has to be fully evaluated.

Methods: We included 44 patients diagnosed with NAFLD as evidenced by biopsy and we reviewed their charts. 33 patients (75%) had NAFLD only whereas 11 patients (25%) had NAFLD and diabetes. Patients' factors including age, gender, BMI, the presence of HLP and Hgb A1c level (which was included also for non diabetic subjects) were recorded and the association between these factors and the degree of steatosis with the exception of gender was assessed. The highest levels of ertapenem in bile (up to 6.25 microg/mL) were seen in CARBOHYDRATES FERMENTATIVE BACTERIA IN CIRRHOTIC PATIENTS investigated in a study of patients undergoing ERCP despite a limited biliary penetration measured using HPLC. Patients were observed for up to 72 hours post-ERCP for any evidence of infectious diseases, American University of Beirut, Beirut, Lebanon.

Our study with the degree of steatosis with the exception of gender where female gender was associated with more advanced steatosis (moderate and severe) when compared to men (94% vs 66%, respectively) with a P value of 0.03, on the other hand, other factors mentioned above didn’t show significant statistical association with the degree of steatosis.

Conclusion: Although it has been established that factors like obesity, HLP and DM are related to the pathogenesis of NAFLD, among other factors didn’t show statistical association in our study with the degree of steatosis. Our study where for the first-order correlation analysis, bile-enterohepatic circulation and bile-penetrating bacteria were statistically analyzed where the degree of steatosis was defined as mild, moderate and severe if steatosis involves 5-33%, 33-66% or more than 66% of the hepatocytes respectively.

Results: Twenty-seven of 65 (42%) donor livers contained steatosis. Overall, 16/55 (30%) of post-transplant liver biopsies showed steatosis with 9/16 resulting from donor livers without steatosis, and 7/16 biopsies resulting from donor livers with steatosis. No significant differences were found between steatosis in the donors who developed post-transplant steatosis and those who did not develop steatosis, including use of corticosteroids and sirolimus. Twelve of 65 patients had worsening of steatosis between biopsies, but only 2 of these patients had NASH. There was no difference between patients who developed post-transplant steatosis and those who did not develop post-transplant steatosis. There were 41 (63%) patients with non-diabetic donor livers and 24 (37%) patients with diabetic donor livers. Patients transplanted for NASH developed post-transplant steatosis in 22% of patients, with 33% of patients showing resolution of steatosis in follow-up biopsies. Interestingly, the patients undergoing pre- and post-transplant steatosis had the largest drop in BMI, with a significant decrease in percentage of obese patients (55% vs 27%, p = 0.04).

Conclusion: In this single center study, 42% of patients received livers with steatosis. No factors including features of metabolic syndrome, BMI, diabetes and steatosis were significantly predicted the development of steatosis post-transplant. Additionally the diagnosis of NASH did not universally result in post-transplant steatosis. Limitations of this study include small numbers of NASH patients and the use of random biopsies. Larger, prospective studies with protocol biopsies will help confirm these findings.
METHODS: 13C-phenylalanine and 13C-valine breath tests were performed in 25 chronic liver diseases (mean age 68 years, chronic viral hepatitis 11, fatty liver diseases 10, liver cirrhosis 4) in a crossover manner. The patients received 100ml of water containing 10mg of 13C-substrate in the sitting position after an overnight fast. Breath samples were collected at 10-minute intervals for 120 min after ingestion to analyze 13C2O. 13C was measured as the 13C/12C/12CO isotopic ratio and was calculated as delta over baseline per mil.

RESULTS: After administration of 13C-phenylalanine, 13C2O excretion peaked at 30 min and the peak value was significant lower in FLD than in CH regardless of the serum albumin level and the pleatet count. 13C2O excretion in the first 60 min was significant lower in FLD than in CH after administration of 13C-phenylalanine. 13C2O excretion at 30 min is closely associated with the pleatete count and the serum albumin level, which reflects functional hepatic reserve.

CONCLUSION: The optimal stable breath test for the assessment of liver function. In spite of previous many reports on the efficacy of 13C-phenylalanine to evaluate liver function, 13C-valine breath test is superior to 13C-phenylalanine breath test for the assessment of liver function in the present study.

P856 LONG-TERM OUTCOME WITH MONITORING OF PLATELET COUNT, ALBUMIN, AND INR IN PATIENTS WITH CHRONIC HEPATITIS C AND CIRRHOSIS WITH PROLONGED INTERFERON THERAPY A. Khatri, MRCP(UK), M. W. Al-Masri, genotype 1, and had mild histologic disease. To assess which demographics affected ex-

Purpose: We have previously compiled data on 115 eligible treatment-naïve CHCV patients on long-term interferon, a significant improvement in platelets, INR and albumin does not achieved.

Conclusion: A majority of the patients contacted at 3 years with clinically mild genotype 1 CHCV infection remain satisfied with their initial decision to defer treatment. The percentage of younger patients continuing to choose expectant management continued to decline significantly compared with older patients, while older patients are choosing expectant management more often. The patient age variable was statistically significant between years 1 to 2 and 1 to 3. Only a trend was observed for race, where non-AA patients continued to choose expectant management, despite higher rates of sustained viral response (SVR), compared to AA patients (p=0.5); and for gender where men continue to revisit their decision more frequently than women (p=0.5). These patients will continue to be followed to determine if these trends continue.

P857 CORRELATION OF SAAG (SERUM ASCITES ALBUMIN GRADIENT) WITH THE PRESENCE AND SEVERITY OF ESOPHAGEAL VARICES IN PATIENTS WITH DECOMPENSATED CIRRHOSIS OF LIVER S. D. Jain, MD, V. D. Malhotra, MD, J. K. Joshi, MD, N. Mathur, MD, N. Singh, MD, A. K. Singh, MD, A. P. Srivastava, MD (Medicine), S. Sachdeva, MD (Medicine), F. Chaudhri, MD (Medicine), A. Singh, MD (Medicine). Department of Medicine, Division of Gastroenterology, and Hepatology. University of Illinois, Chicago, IL.

Purpose: To determine the value of serum-ascites albumin gradient (SAAG) in the prediction of presence of esophageal varices in patients with liver cirrhosis and to study the association between the degree of SAAG and the presence and size (i.e. grading) of esophageal varices.

Methods: Acute fluid analysis, serum proteins, ultrasonography and endoscopy were the basic investigations performed in all patients. SAAG was calculated and presence or absence of esophageal varices and their grading were documented in all patients.

Results: SAAG was found to be >1 in all 50 patients while esophageal varices were present in 46(92%) of them. This suggests that high SAAG reflects higher chances of presence of esophageal varices in patients with liver cirrhosis. Furthermore the presence and size of esophageal varices was found to be directly related to the degree of SAAG. Esophageal varices were found to be present in all the patients having SAAG value >1.4

Conclusion: This concludes that SAAG is a useful indirect indicator in the estimation of portal hypertension and so is a useful mean in the prediction of presence of esophageal varices in pa-

P858 DEMOGRAPHIC DIFFERENCES AFFECTING THE DECISION TO DEFER TREATMENT FOR CHRONIC HEPATITIS C (CHCV) INFECTION: RESULTS OF A 3-YEAR FOLLOW-UP STUDY A. Khatri, MD, O. S. Khokhar, MD, J. H. Lewis, MD. Department of Medicine, Division of Gastroenterology, Hepatology Section, Georgetown University Hospital, Washington, DC.

Purpose: To determine patient demographics, among treatment-naïve CHCV patients who elected to defer therapy [Dig Dis Sci 2007; 52:1168-76]. Nearly all patients were asympto-

Methods: Patients were asked their current health status, satisfaction with deferring pegylated interferon/ribavirin (PEG/ RBV) using a 2 point Likert scale (not satisfied/satisfied), and whether they had reconsidered their decision to be followed expectantly. An attempt was made to reach all 74 patients from the 2-year cohort.

Results: 38 (16 men; mean age 55 years, 17 > age 55; 19 African Americans [AA]) out of 74 pa-

Conclusion: A majority of the patients contacted at 3 years with clinically mild genotype 1 CHCV infection remain satisfied with their initial decision to defer treatment. The percentage of younger patients continuing to choose expectant management continued to decline significantly compared with older patients, while older patients are choosing expectant management more often. The patient age variable was statistically significant between years 1 to 2 and 1 to 3. Only a trend was observed for race, where non-AA patients continued to choose expectant management, despite higher rates of sustained viral response (SVR), compared to AA patients (p=0.5); and for gender where men continue to revisit their decision more frequently than women (p=0.5). These patients will continue to be followed to determine if these trends continue.
Liver biopsy at low power showing moderate hepatitis affecting both portal tracts and lobules.

P661
SIROLIUMS-INDUCED HEPATOTOXICITY: CASE REPORT
E MacDonald, MD,1 J Vakiani, MD,2 R Brown, MD, MPH,1 S Sigal, MD,1 J Medicine, New York - Presbyterian Hospital, New York, NY,2 Pathology, New York - Presbyterian Hospital, New York, NY.

Purpose:Discovered in the soil of Easter Island in the 1970s, sirolimus has become an increasing popular immunosuppressive agent to prevent rejection in many solid organ transplants as an alternative to calcineurin inhibitors due to the presumed decrease renal toxicity. As the use of sirolimus has increased, so have the number of identified toxicities including pulmonary, dermatologic and cardiac complications. There is little information with regards to sirolimus-induced hepatotoxicity. We present the case of a 34 year old man who developed abnormal liver function tests 6 years after his live-donor kidney transplant. 5 years after starting sirolimus with a strict hepatocellular pattern of isolated AST and ALT elevation. Withdrawal of other offending agents was attempted without resolution of his elevated transaminases. Serologic evaluation revealed no evidence of acute viral hepatitis. All markers of genetic and autoimmune causes of liver disease were negative. A biopsy was done which revealed moderate to severe diffuse inflammation with mild portal fibrosis consistent with viral, autoimmune or drug induced hepatic injury. Based on the clinical picture and serologies taken withdrawal of sirolimus was performed and the liver function tests rapidly normalized over a two week period. Sirolimus is an important part of the armamentarium of transplant physicians. Sirolimus has been purported to improve renal function by reducing calcineurin associated nephrotoxicity. As well, sirolimus impairs VEGF and therefore may be useful in preventing the development of post-transplant malignancies such as kaposis sarcoma and PTLD. However, as the use of sirolimus has increased so have the unidentified toxicities. Hepatitis is another important complication that should be added to this list. Studies with other medications have shown that chronic medication associated hepatitis may progress to fulminant hepatic failure if it is failed to be identified. Therefore it is important to be aware and identify sirolimus-associated hepatotoxicity and to treat accordingly with the withdrawal of the medication.

P662
USE OF PLASMAPHERESIS IN ACUTE HEPATIC FAILURE DUE TO HEPATITIS A
F Malakda, MD, MBQ, R Sharma, MD, J Zitter, MD, MPH, Internal Medicine, University of Medicine and Dentistry of New Jersey - New Jersey Medical School, Newark, NJ.

Purpose: Plasmapheresis, or plasma exchange, is the removal of whole blood, then replacement of only plasma and return of the new plasma as well as the other blood components to the patient. The goal is to remove large molecular weight substances that reside in the plasma and cause various diseases. These substances include: pathogenic autoantibodies, immune complexes, cryoglobulins, myeloma light chains, endotoxin, and cholesterol containing lipoproteins. Plasma exchange is considered to be standard therapy for diseases such as: polyneuropathies, Goodpature’s Syndrome, thrombotic thrombocytopenic purpuras (TTP), myasthenia gravis, and Guillain-Barre Syndrome. There is not sufficient evidence to use plasmapheresis in acute hepatic failure, although there have been some studies that show benefit. We report a case of successful use of plasmapheresis in acute hepatic failure due to Hepatitis A.

Methods: A 25 year-old female with history of GERD presented with diffuse abdominal pain, nausea, vomiting, and jaundice, after returning from a trip to India. Laboratory data was significant for transaminisits, hyperbilirubinemia, and coagulopathy secondary to Hepatitis A. The patient was transferred to The University Hospital for fulminant hepatic failure and evaluation for liver transplant. Both liver function and mental status rapidly worsened over 4 days. Because of the decline in clinical status, the patient was listed for a liver transplant. In light of the lifelong immunosuppression and possible need for re-transplant, the team decided on plasmapheresis before attempting transplant.

Results: After one plasma exchange, symptoms, clinical status, and liver function tests markedly improved. Patient no longer needed transplantation and to this day remains asymptomatic with normalized liver function.

Conclusion: Plasmapheresis is not considered to be the standard of care in the treatment of acute hepatic failure. There are several studies performed outside of the United States reporting patients with hepatic failure that improved with plasmapheresis. However, these studies have small patient numbers and show improvement in coagulopathy, not neurologic status or complete recovery of liver function. There has been a study on the use of plasma exchange in children with acute hepatic failure, most of which were due to congenital causes. We report what we believe is the only case of successful use of plasmapheresis with full recovery after fulminant hepatic failure secondary to Hepatitis A in an adult.
sarcoidosis. Also the clinician should be aware of sarcoid complicating and mimicking biliary cholestatic appearance.

Conclusion: PSC and sarcoid may represent different entities of a similar spectrum of autoimmune disease. Further research is needed to elucidate the causative agents.

P864 PRIOR PPI USE IS A RISK FACTOR FOR HOSPITALIZATION WITH RECURRENT C. DIFFICILE ASSOCIATED DIARRHEA (CDAD)
J. Wellington, BS,1 V. Botoman, MD,1 S. Mabbeson, RN,2 R. Rees, MD,1 N. Tsrida, RN, PhD1.
1. Holy Cross Hospital, Fort Lauderdale, FL; 2. Florida Atlantic University, Boca Raton, FL;
3. Graduate School, University of Miami, Miami, FL.

Purpose: CDAD is an increasingly serious cause of hospitalization with rising morbidity and mortality due to increasingly virulent strains. PPIs have been demonstrated as a risk factor for CDAD in community based epidemiological studies. Their role as a risk factor for CDAD associated hospitalizations has not been examined.

Methods: We reviewed the charts of 125 patients discharged with a diagnosis of CDAD in 2007, to determine risk factors for hospitalization associated CDAD. The data was collected in MS Excel 2003. Multivariate analysis was performed using statistical software (GraphPad Instat v 3.0). Variables included demographics, prior PPI use documented on the admission, and history of prior CDAD. We excluded from this analysis subsequent CDAD hospitalizations in the same patient.

Results: In the CDAD study group (N=125), 52% were women, mean age 74±1.5 yrs. In 37 pts (30%) there was a history of prior CDAD, and in 41(33%) pts there was a history of chronic PPI use on the index admission. Multivariate analysis showed a highly significant (P=0.019) correlation between prior PPI use and history of C. difficile prior to index admission.

Conclusion: Outpatient PPI use is a strong risk factor for prior CDAD, and CDAD-associated hospitalization, and should be considered in evaluating hospitalized patients for possible CDAD.

P865 MICROSCOPIC COLITIS: A RETROSPECTIVE ANALYSIS OF CLINICAL CHARACTERISTICS, ASSOCIATION WITH AUTOIMMUNE DISORDERS, AND RESPONSE TO THERAPY
A. Bhan, MD, E. Castillo, MD, A. Ormely, MD. Gastroenterology, Henry Ford Hospital, Detroit, MI.

Purpose: To examine if there were any statistically significant differences between collagenous and lymphocytic colitis in regards to patient symptoms, response to therapy, association with autoimmune disorders, and prognosis.

Methods: The study was a retrospective chart review and analysis of 106 patients who were diagnosed with microscopic colitis at a large multi-specialty referral center between the years 1997 – 2006. Only patients with a diagnosis of collagenous or lymphocytic colitis were included in the statistical analysis. The chi square test, Wilcoxon rank test, and t – test were used to determine statistical significance.

Results: Of 106 patients identified, 53 had collagenous colitis and 43 had lymphocytic colitis. The remaining 10 patients were identified as having either mixed or unspecified microscopic colitis. The mean age of patients was 60 years with a range of 17 to 89 years. The female: male ratio of patients with microscopic colitis was 3.2:1. The most common presenting symptoms were diarrhea (100% in the collagenous colitis group and 95% in the lymphocytic colitis group). In addition, of patients with collagenous colitis, 30% had weight loss, 40% had abdominal pain, 11% had nausea, 6% had vomiting, and 15% had abdominal bloating. Of patients with lymphocytic colitis, 54% had weight loss, 30% had abdominal pain, 7% had nausea, 5% had vomiting, and 12% had abdominal bloating. Autoimmune disease was present in 28% of patients with collagenous colitis and in 35% of patients with lymphocytic colitis. Successful treatment modalities for patients with microscopic colitis included discontinuation of NSAIDS (2%,0%), use of anti-diarrheals (2%,7%), use of bulk laxatives (9%,10%), 5-A-คอมpoundss (40%,60%), bismuth subsalicylate (5%,0%), steroids (9%,3%), and immunomodulators (2%,0%). Of patients with collagenous colitis, 98% improved with treatment but did not achieve symptomatic remission. Of patients with lymphocytic colitis, 97% improved with treatment but 34% did not achieve complete remission. No cases of inflammatory bowel disease, or of the development of malignancy were reported.

Conclusion: Microscopic colitis occurs more commonly in females than in males. Chronic diarrhea is almost universally present in patients diagnosed with the condition. No statistically significant differences were found regarding associated symptoms, response to treatment, or association with autoimmune disorders in this study. Although celiac disease is thought to be a more common association, only 2 patients in our study (1.98%) had celiac disease. The majority of patients do respond to treatment, mainly pharmaceutical therapy. Finally, the disorder seems to have a favorable prognosis.

P866 NITAZOXANIDE FOR THE TREATMENT OF MODERATE TO SEVERE CLOSTRIDIUM DIFFICILE INFECTION IN HOSPITALIZED PATIENTS
D. J. Halkin, MD, MPH,1 Department of Gastroenterology, St Joseph’s Hospital, Tampa, FL; 2. Infectious Disease Research Institute, Inc., Tampa, FL.

Purpose: Data from the CDC indicates a doubling of the incidence and severity of Clostridium difficile infection (CDI) in hospitalized patients from 2000 to 2005 (Emerg Infect Dis 2008;14:929). Much of this increase is thought to be due to the increased virulence of CDI and the spread of the BUNA1P027 strain of CD. The treatment recommendations for CDI have been metronidazole (MTZ) for initial episodes and vancomycin (VAN) for MTZ failures and more severe cases. As recently reported in a prospective, randomized, double-blind, placebo controlled study (Emerg Infect Dis 2005;30:1856, Clin Infect Dis 2006;43:421) suggest greater than 30% of patients treated with MTZ for initial onset CDI will fail therapy with potentially worse results in more severe cases. Currently, CDI is considered the drug of choice for severe CDI and the only antibiotic indicated for the treatment of CDI. However, the excessive cost of oral VAN, QID dosing and potential VAN resistance in organisms like Enterococcus spp., have emerged as serious concerns for using VAN. In light of these issues, additional therapies for CDI are needed. Nitazoxanide (NTZ) is a thiazolide antibiotic that has been proven to be an effective agent for the treatment of CDI as initial therapy (versus MTZ and VAN) and in patients who have failed MTZ. (J Antimicro
ASSESSMENT OF INTER-OBSERVER AGREEMENT OF COLONIC TRANSIT TIME (CTT) WITH RADIOPAQUE MARKERS

S. Ross, MD, M. D. Mizerski, D. T. Endre, IV, B. L. Pardo, MD, R. Koo, MD, M. McCallum, MD, M. Siron, MD, W. D. Chey, MD, J. Lackner, PsyD, J. Semler, PhD, G. Wilding, PhD, H. P. Parkman, MD, 1. Internal Medicine, University of Iowa Hospitals and Clinics, Iowa City, IA; 2. The SmartPill Corporation, Buffalo, NY; 3. Gastroenterology Unit, Massachusetts General Hospital, Boston, MA; 4. Center for GI Nerve & Muscle Function & GI Motility, University of Kansas Medical Center, Kansas City, KS; 5. Internal Medicine, University of Michigan, Ann Arbor, MI; 6. Biomaterials, SUNY at Buffalo, Buffalo, NY; 7. Medicine, Temple University School of Medicine, Philadelphia, PA; 8. Medicine, University of Buffalo School of Medicine, SUNY at Buffalo, Buffalo, NY; 9. Medicine, Western New York VA Medical Center; SUNY at Buffalo, Buffalo, NY.

Purpose: Although CTT is commonly assessed using radiopaque markers (Stitzmark® (SZ)), whether there is inter-observer agreement regarding its interpretation is unknown. This is important because these studies are often interpreted by radiologists & gastrointestinal physicians (AGIM). Examine the inter-observer agreement of CTT as assessed by investigators from multiple sites & by two independent investigators.

Methods: In a prospective study, 146 subjects, 72 with chronic constipation (Rome II) & 74 healthy subjects were enrolled from 8 sites. On Day 1, subjects ingested a SZ capsule containing 24 markers advised to continue usual diet & avoid drugs that affect motility. Abdx. x-rays were obtained on day 2 (48 hrs) & day 5 (120 hrs) in each investigator reported the number of retained markers. Subsequently, two independent investigators blinded to the site & day of x-ray performed CTT analysis. Slow transit was defined as >5 markers on Day 5 x-ray. Inter-observer agreement analysis was performed.

Results: In total (6%) of 31/34 (42%) constipated had slow colon transit. For analytical purposes, all subjects were grouped as having normal or slow transit; 35 had slow transit & 111 were normal. CTT among these, in 1 constipated & 1 normal subject there was disagreement between the two investigators. On the other hand, the inter-class correlation for Day 2 x-ray was 0.987 & for Day 5 x-ray was 0.978. There was disagreement in the absolute marker count for Day 2 x-ray & 46/146 (32%) subjects & for Day 5 x-ray in 25/146 (17%) subjects.

Conclusion: Although there were discrepancies in 17-32% of subjects regarding the absolute marker count, overall there was good inter-observer agreement for CTT assessment with SZ. For separating normal from slow transit, radiopaque marker technique appears to be quite reliable between observers.

Disclosure - Satish Rao, M.D., Consultant, Speaker's Bureau, Advisory Committee/Board Member: SmartPill Corp; Braden Kuo, M.D., Consultant, Speaker's Bureau, Advisory Committee/Board Member: SmartPill Corp; Michael Stitron, M.D., Consultant, Speaker's Bureau, Advisory Committee/Board Member: SmartPill Corp; John R. Semler, Ph.D., Employee and Stockholder/Ownership: Gregory E. Wilding, Ph.D., Consultant: SmartPill Corp; Henry P. Parkman, M.D., Consultant, Speaker's Bureau, Advisory Committee/Board Member: SmartPill Corp; John R. Semler, Ph.D., Employee and Stockholder/Ownership: Gregory E. Wilding, Ph.D., Consultant: SmartPill Corp; Henry P. Parkman, M.D., Consultant, Speaker's Bureau, Advisory Committee/Board Member: SmartPill Corp.

This research was supported by an industry grant from SmartPill Corporation.
PATIENTS WILLINGNESS FOR COLONOSCOPY: ARE PHYSICIAN RECOMMENDATIONS ADEQUATE? S. Gaddam, MD, MPH, M. Reuter, MD, S. White, DO, J. Binek, MD, R. Premanathan, MD, K. M. Starke, MD, M. Presti, MD. Department of Internal Medicine, St John’s Mercy Medical Center, St Louis, MO.

Purpose: Colonoscopy is the gold standard for CRC screening, but a significant number of patients do not adhere to current recommendations. The barriers commonly cited include lack of patient awareness, patient embarrassment, and anxiety about testing. The purpose of our study is to assess issues of patient anxiety related to colonoscopy, specifically, anxiety toward the colonoscopy and anxiety toward the bowel preparation prior to the procedure.

Methods: Questionnaires were given to patients above the age of 50 at two outpatient clinics located in Creve Couer, MO. Some of the questions asked were regarding patient demographics, primary care physician screening recommendation, and attitudes toward colonoscopy. Fischer’s exact test and logistic regression were used to analyze the data.

Results: A total of 422 surveys were analyzed. 65.2% of patients were female, 84.4% were Caucasian, 13.3% African American, 55% had at least some college education, and the mean age was 67.3 years. 37% of patients were insured by Medicare, 5.7% by Medicaid, 83.8% by both Medicaid and Medicare, and 49.1% were either privately insured or paid out of pocket. Anxiety toward colonoscopy and the bowel preparation were compared between those patients who reported having had a colonoscopy in the last 10 years [C group = 341 (80.8%)] with those who had not had the procedure [non-C group = 81 (19.2%)]. Only 7.6% of patients in the C group reported anxiety to the colonoscopy, while 37% of patients in non-C group reported anxiety [p < 0.001, OR = 0.14 (95% CI = 0.077 – 0.250)]. 49.8% of patients from C group reported anxiety to bowel preparation, while 34.6% in the non-C group reported anxiety [p = 0.014, OR = 1.882 (1.136 – 3.117)]. Other variables assessing patient attitudes (anxiety to anesthesia, fear of result, and no anxiety) were not statistically significant. Patients were likely to get their colonoscopy done if it was recommended by primary care physician [p < 0.001, OR = 10 (3.885 – 25.743)]. Both physician recommendation [p < 0.001, OR = 9.829 (5.397 – 26.860)] and anxiety toward scope [p < 0.001, OR = 129 (0.006 – 0.243)] contributed to a statistically significant steppedwise logistic model [p < 0.001].

Conclusion: Patients who have not had a colonoscopy have a significant anxiety toward the colonoscopy. This anxiety may potentially be alleviated by better patient education regarding the instruments used and the procedure. Patients who have had a colonoscopy tend to have decreased anxiety toward the colonoscope. This anxiety may potentially be alleviated by better patient education regarding the instruments used and the procedure.
**P878**

**MACROSCOPIC COLITIS IN MICROSCOPIC COLITIS**

Y. S. Zhou, MD; Y. Ma, MD; P. Vikas, MD; L. Laine, MD; L. Loma Linda University Medical Center, Loma Linda, CA; University of Southern California, Los Angeles, CA; 3. Brigham and Women's Hospital, Chestnut Hill, MA.

**Purpose:** Microscopic colitis (MC) is a diagnosis based on specific histologic criteria in patients without gross colonic lesions. However, macroscopic mucosal lesions rarely have been reported with MC. We evaluated the association between endoscopic abnormalities and MC and compared the clinical characteristics and outcomes in MC patients with and without endoscopic ulcers/erosions.

**Methods:** Pathology reports from 06/01/2005 to 05/25/2005 were searched for the cases of MC. The histologic diagnosis was then re-confirmed by a GI pathologist. Demographic, clinical, and laboratory data were collected. The conventional diagnostic criteria of microscopic colitis were used: >6 lymphocytes/100 epithelial cells; increased number of lymphocytes, plasma cells, eosinophils, and mast cells in the lamina propria; no features of ischemia or idiopathic inflammatory bowel disease. A subepithelial collagen band >10 mm differentiated collagenous colitis from lymphocytic colitis.

**Results:** Sixteen patients with microscopic colitis were identified: ages were 37-87 years and 12 were female. Lymphocytic colitis (LC) was found in 9 patients, collagenous colitis (CC) in 7. Three patients had endoscopic ulcers and/or erosions (N=2) and/or erosions (N=1), one with LC; two with CC. Pseudomembranes were observed histologically in two patients with CC. Patients with ulcers/erosions were more likely to have more frequent stools, volume depletion, and weight loss (Table 1). Sigmoidoscopy in three patients showed history of NSC prior to illness, a negative test for C. difficile. All three patients responded to treatment (budesonide or 5-ASA) and remained symptom-free for 14-50 months. One of the three patients had repeat biopsy 2 months later. No recurrence of lesion was noted in any of these patients.

**Conclusion:** Microscopic colitis may co-exist with microscopic colitis—possibly representing a severe form of the disease—lesions do not appear to predict a poor clinical outcome in patients with microscopic colitis.

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**Table 1. Characteristics of Patients with and without ulcers/erosions**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Ulcers/erosions (3/16)</th>
<th>No ulcers/erosions (13/16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of onset</td>
<td>5-8 months</td>
<td>10 days to 8 months</td>
</tr>
<tr>
<td>stool/day</td>
<td>&gt;20</td>
<td>2 to 15</td>
</tr>
<tr>
<td>presence of abdominal pain</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>presence of weight loss</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>evidence of dehydration</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>serum WBC (×10^9)</td>
<td>4.1-9.3</td>
<td>3.6-7</td>
</tr>
<tr>
<td>Hematocrit (%)</td>
<td>34-38</td>
<td>34-40</td>
</tr>
<tr>
<td>Use of NSAIDs</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

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**P879**

**COLONIC TUBERCULOSIS: A CASE SERIES OF AN UNDERAPPRECIATED ENTITY**

J. Balbach Tulloch, MD, MPH, A. Konda, MD. Internal Medicine/Division of Gastroenterology, William Beaumont Hospital, Royal Oak, MI.

**Purpose:** Introduction: Gastrointestinal tuberculosis is an unusual disease in the West. However, in recent years there has been a resurgence of colonic tuberculosis in the US secondary to the high influx of immigrants from high-risk areas and the rising AIDS population. We report the cases of 3 patients from endemic countries diagnosed with colonic tuberculosis by colonoscopic biopsy. Case Descriptions: Case 1: A 29 year old female presented with lower abdominal pain, fever, constipation, weight loss, and iron deficiency anemia. Physical examination was normal except for heme positive stool. Abdominal CT showed marked transmural, circumferential wall thickening of the cecum and proximal ascending colon and local lymphadenopathy. On colonoscopy, a partially obstructing tumor of the hepatic flexure was noted. The pathology report described moderate chronic and moderate active typhlitis with granulomatous inflammation. Case 2: A nineteen year-old male presented with right lower abdominal pain that began the prior evening. The patient described the pain as sharp, severe, progressively worsening, and non-radiating. The patient reported two episodes of vomiting but denied diarreha or hematochezia. The physical examination was remarkable for point tenderness in the right lower quadrant with no distention and normal bowel sounds. The patient was afibrile with leukocyte count of 16.8K, with neutrophils of 88.3%. CT abdomen with contrast revealed cecal inflammation of unclear etiology, but no peri-colonic fat stranding. The patient's symptoms improved over the next 24 hours while on antibiotics and colonoscopy was performed to aide in the establishment of a diagnosis.

**Results:** Colonoscopy demonstrated a large polypoid mass in the area of the apparent appendiceal orifice. There was surrounding edema and erythema with multiple minute linear ulcerations and diffusely scattered neutrophils in the lamina propria. The lesion was consistent with an inverted appendix with appendicitis like features. A surgical consult was obtained for appendectomy.

**Conclusion:** Acute appendicitis is a clinical diagnosis confirmed with radiological imaging. However, despite advances in imaging, the diagnosis of may be difficult, as was the case with our patient. We recommend colonoscopy as a diagnostic modality in patients presenting with acute abdominal pain and negative radiological imaging.

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**P880**

**INVERTED APPENDICITIS: DIAGNOSED BY COLONOSCOPY WITH NEGATIVE RADIOLOGICAL FINDINGS**

S. Widmann, MD; S. Y. Mathur, MD; N. Sosnaj, BS; M. Aroya, MD. T. Gastroenterology, The Brooklyn Hospital Center, Brooklyn, NY; 2. Gastroenterology, Wyckoff heights Medical Center, Brooklyn, NY; 3. Internal Medicine, Wyckoff heights Medical Center, Brooklyn, NY.

**Purpose:** Appendicitis is one of the commonest causes of acute abdominal pain worldwide. Although many imaging modalities exist for confirmation of this diagnosis, none have a 100% sensitivity or specificity. Colonoscopy has been shown to positively identify appendicitis due to the key features of an obliterated appendiceal lumen and pus.

**Methods:** A nineteen year-old male presented with right lower abdominal pain that began the prior evening. The patient described the pain as sharp, severe, progressively worsening, and non-radiating. The patient reported two episodes of vomiting but denied diarrhea or hematochezia. The physical examination was remarkable for point tenderness in the right lower quadrant with no distention and normal bowel sounds. The patient was afibrile with leukocyte count of 16.8K, with neutrophils of 88.3%. CT abdomen with contrast revealed cecal inflammation of unclear etiology, but no peri-colonic fat stranding. The patient's symptoms improved over the next 24 hours while on antibiotics and colonoscopy was performed to aide in the establishment of a diagnosis.

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Association of Rectal Bleeding with Major Diagnoses

<table>
<thead>
<tr>
<th>Findings</th>
<th>Flexible sigmoidoscopy</th>
<th>Colonoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyp (s)</td>
<td>4/46 (p&lt;0.003)</td>
<td>23/114 (p&lt;0.001)</td>
</tr>
<tr>
<td>IBD</td>
<td>16/46 (p&lt;0.007)</td>
<td>31/114 (p&lt;0.000)</td>
</tr>
<tr>
<td>Malignancy</td>
<td>34/46 (p=0.56)</td>
<td>13/114 (p=0.63)</td>
</tr>
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</table>

PP82
NON SPECIFIC COLITIS (NSC) – A HISTOPATHOLOGICALLY INDETERMINATE COLITIS OF ADULT SRI LANKANS; A FOLLOW UP STUDY WITH APPRAISAL OF CLINICO-PATHOLOGICAL FEATURES
R. L. S. Sarawathie, MD MACG; R. Fernando, MD Department of Medicine, Ward 6, Sri Jayewardenepura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka.

Purpose: To evaluate the clinico-pathological features of patients having histologically proven NSC and to follow up its long term clinical implications in adult Sri Lankans who is primarily a histopathological diagnosis where the histology does not fit into the commonly described colitides and this entity has been described in the west, mainly in association with non steroid anti-inflammatory drugs therapy and the literature on the topic is scanty including the tropical and Indian subcontinent.

Methods: Case notes of 167 patients who had undergone colonoscopy for various reasons from 2000/9/1 to 31/10/01 were studied at the medical unit, District General Hospital - Panadura, Sri Lanka, were reviewed and clinico-pathological features of who had histologically proven non specific colitis were analyzed and were followed up to a minimum of 5 years.

Results: 21 had histologically proven NSC on colorectal biopsies with an age distribution of 21-70 years. Vast majority belonged to 21-50 years with a mean of 38 years SD 12 years. The male: female ratio was 11:10. 15 had presented with abdominal pain with 12 having associated watery and/or mucoid diarrhea. 6 had diarrhea alone. All have had symptoms of more than 3 months duration. Colonoscopy was normal in all. Histology of the mucosa characteristically showed infiltration of lymphocytes and plasma cells up to muscularis mucosa, without features of inflammatory bowel disease, pure lymphocytic colitis or collagenous colitis indicating a detaching mechanism in both humoral and cellular immune in the gut mucosa. There was no significant drug history and except for treatment with mebandazole and metronidazole at some stage prescribed by first contact doctors in the community. Routine biochemical, haematological and stool tests were normal including ANF and plasma protein electrophoresis. During follow up all had relapses and remissions responding to symptomatic therapy, finally becoming asymptomatic (mean 2.5 SD 1.6 years).

Conclusion: NSC seems to be an ill defined, indeterminate type of chronic microscopic colitis having a distinct histological appearance, mimicking irritable bowel syndrome affecting both sexes equally. Immunological studies on the mucosa will facilitate further understanding of the pathology and therapeutic modalities, as it is most likely be due to gut limited prolonged local response to an unidentified intraluminal antigen in the tropics. In defining the immunopathological specie involve a wide spectrum of patients with colorectal involvement of IgA and CD4+ and CD8+ cell count quantification supplemented by serum immunoglobulin profile.

PP83
ISCHEMIC COLITIS IN TWO PATIENTS AFTER LARGE VOLUME PARACENTESIS
K. Shah, MD 1. K. Shah, MD 2. 1. UCSF-Fresno, Fresno, CA; 2. Digestive and Liver Disease Specialists, Fresno, CA.

Purpose: Ischemic colitis occurs due to a variety of different causes, but large volume paracentesis (L VP) has not been reported as one of the etiologies to our knowledge. We report two cases of ischemic colitis within 24 hours of L VP.

Methods: CASE 1: A 57-year old male patient with ELSLD due to alcoholic cirrhosis was seen in 1954. The search revealed 55 articles containing 68 cases.

CASE 2: A 52-year old male patient with recurrent tense ascites was seen in the emergency room. He had abdominal discomfort due to tense ascites, but did not have any bleeding per rectum or diarrhea. He had tolerated 9 L of ascites removal well about three weeks earlier, and was in his usual state of health following that. The ascites recumulated. This time 17 L of fluid were tapped in the ER over a period of three hours. The patient became hypotenive despite IV albumin and fluid challenge. He was admitted to the ICU. He had bloody bowel movements. Colonoscopy a day later revealed ischemic & necrotic bowel from hepatic flexure outward. Ischemic changes were noted on pathology report on biopsies taken from the ischemic-looking parts which did not bleed when biopsies were taken. The patient expired despite aggressive therapy and the cause of death was felt to be bowel necrosis following L VP and sepsis due to bowel necrosis CASE 2: A 52-year old male patient with recurrent tense ascites was seen in the emergency room. He had abdominal discomfort due to tense ascites, but did not have any bleeding per rectum or diarrhea. He had tolerated 10 L of ascites removal well about one week earlier. He was in his usual state of health except that the ascites had recumulated. This time 20 L of fluid were tapped in the emergency room over a period of less than four hours. The patient became hypotenive. He was given fluid challenge, IV Albumin, and was admitted to the ICU. He had bloody bowel movements. Urgent colonoscopy revealed splenic flexure ischemia & necrotic mucosa. Ischemic changes and submucosal necrosis were noted on pathology report on biopsies taken from the ischemic-looking parts. The patient was treated aggressively. IV albumin was given and he recovered gradually.

Results: The above cases suggest rapid L VP as one of the etiologies of ischemic colitis. Draining more than 15 L may exceed the capacity of the compensatory mechanisms in portal hypertensive patients with preexisting peripheral vasodilatation and tense ascites. The exact mechanism of ischemia is unclear, but could be related to sudden portal venous congestion and subsequent reflex mesenteric arterial vasoconstriction and drop in cardiac output - proposed mechanisms of paracentesis induced circulatory disease (PICD).

Conclusion: Ischemic colitis may develop following rapid super-large volume (>15 L) paracentesis (L VP). Colonoscopy should be performed urgently. This kind of ischemic colitis carries high risk of mortality.
AN UNUSUAL CASE OF DRUG INDUCED COLONIC ISCHEMIA

P. J. Mowval, MD1, L. Goldkind, MD1, J. Gastroenterology, Walter Reed Army Medical Center, Washington, DC; 2. Gastroenterology, National Naval Medical Center, Bethesda, MD.

Purpose: Medications are an important cause of colonic ischemia. Sumatriptan is a widely pre-
scribed medication for the treatment of migraine headaches. Its actions are mediated through
vasoconstriction, which is limited to the central nervous system and have been shown to
involve the mesenteric vasculature.

Methods: A 46 year-old woman presented with the acute onset of crampy abdominal pain, di-
arrhea, and hematochezia. Her past medical history was significant for migraine headaches. A
few days prior to presentation, she experienced a migraine more persistent than usual and took
more frequent than usual doses of sumatriptan. Her other medication was oral contracep-
tives, which she had been taking for several years. She had no risk factors for vascular disease.

Results: Sumatriptan, a selective 5-HT1 serotonin receptor agonist, is a widely prescribed med-
ication for the treatment of migraine headaches. Its mechanism of action involves vasocon-
striction, which may not be limited to the central nervous system and have been shown
to involve the mesenteric vasculature.

Conclusions: Drug-induced colonic ischemia is a growing concern highlighted by the increasing
number of drugs targeting serotonin receptors. In the present case, both sumatriptan and es-
tragen may be implicated and potential synergism may exist between these two drugs. Suma-
triptan should be recognized as an important cause of drug-induced colonic ischemia, es-
cially in patients taking estrogen.

AN ATYPICAL PRESENTATION OF COLLAGENOUS COLITIS

M. A. Shahi, MD1, A. Batsel, MD2, S. Igpal, MD2, M. Mansour, MD2, C. A. Delbridge, MD, M. A. Czaja, MD, FACG1. 1. Department of Medicine, New York Methodist Hospital, Brooklyn, NY; 2. Division of Gastroenterology, New York Methodist Hospital, Brooklyn, NY.

Purpose: Since first described only three decades ago, there has been exponential growth in the
understanding and recognition of the collagenous colitides. It is an atypical presentation of collagen-
colitis.

Methods: A 31 year old female of Mediterranean descent was admitted with four months
history of progressively worsening bloody diarrhea (about 5-10 episodes per day) and marked
weight loss of 30 pounds. The past medical history was significant for lactase intolerance and ex-
exocrine pancreatic insufficiency. She denied any fever, recent travel, or any other complaints. She
denied any medications including NSAIDs. The pa-
tient underwent panendoscopy about two months ago that was unremarkable. She had no re-
sponse to nutrition with or without metronidazole and was on multiple medications for her
chronic diarrhea.

Results: Physical examination was significant for mild left lower abdominal tenderness. There
was no leukocytosis. Stool workup revealed moderate leukocytes, but culture, Clostridium diffi-
cile, and ova and parasites were negative. Repeat colonoscopy revealed areas of erythematous mucosa and aphthous ulcers throughout the colon (see figure). The pathology from right colon was consistent with collagenous colitis (>20 intraepithelial lymphocytes per 100 enterocytes, preserved crypt architecture, and thickened subepithelial collagenous band of over 10 micrometers). She was prescribed oral budesonide. At 8-weeks follow-up, bloody diar-
rrhea had resolved and she was gaining weight.

Conclusion: Collagenous colitis classically presents as chronic watery diarrhea and normal or
near-normal endoscopic appearance of colonic mucosa in a female in 60s-70s decade of life. It
is an atypical presentation of collagenous colitis in a young female with bloody diarrhea, marked
weight loss, and grossly abnormal endoscopic picture of erythematous mucosa and aphthous ulcers
throughout the colon. Since collagenous colitis is still an enigmatic condition and is being increasingly recognized, more atypical presentations should be expected in prac-
tice.

Figure: Colonoscopy showed erythematous areas and aphthous ulcers throughout the colon
(arrows). Microscopic examination revealed preserved crypt architecture, and thickened collagen band (double head arrows).

TRANSITIONAL COLONIC INFARCTION ASSOCIATED WITH HYPEROXALURIA

G. A. Lynn, MD, L. Goldkind, MD1, 1. Gastroenterology, University of Rochester, Rochester, NY.

Purpose: We describe a 42-year-old woman with a history of kidney stones secondary to hyper-
oxaluria who was admitted with presumed infectious diarrhea. Colonoscopy was consistent
with ischemic colitis. She then proceeded to have peritoneal signs needing laparotomy and was
noted to have transmural ischemia of the right colon.

Results: She was a healthy 42 year-old woman who developed acute lower abdominal pain 6
hours after eating at a buffet lunch. She then had bloody diarrhea overnight and was ad-
mitted. She had a long history of kidney stones & had been diagnosed with hyperoxaluria in childhood.

Methods: Hyperoxaluria is a genetic disorder characterized by calcium oxalate nephrolithiasis
often with extrarenal osseous deposition. Ischemic complications can occur because of crystal
deposition in vessel walls. These manifest usually as peripheral limb or cutaneous ischemia.

Purpose: We describe a case of acute ischemic colitis associated with idiopathic hyperoxaluria.

Results: A previously healthy 42-year-old woman developed acute lower abdominal pain.

Figure: Colonoscopy showed erythematous areas and aphthous ulcers throughout the colon (arrows). Microscopic examination revealed preserved crypt architecture, and thickened collagen band (double head arrows).

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Results: A previously healthy 42-year-old woman developed acute lower abdominal pain.

Figure: Colonoscopy showed erythematous areas and aphthous ulcers throughout the colon (arrows). Microscopic examination revealed preserved crypt architecture, and thickened collagen band (double head arrows).
neurovascular disease biopsy done at 69 days of age demonstrated hepatocellular and canicular cholestasis with giant cell transformation, no bile duct proliferation. Iron deposits were seen mainly in the canicular hepatocytes, more consistent with hemosiderosis than NH. At follow up, at 10 mo of age she had appropriate growth and development with AFP of 62.1 ng/mL, ferritin of 28.5 ng/mL, and resolved cholestasis. Conclusion: Neonatal hemochromatosis is a rare disease associated with liver failure, often an indication for transplantation. Elevations in AFP and ferritin are marked with low alpha-fetoprotein concentrations. The diagnosis is made by findings of extraparenchymal siderosis. This case presented with multiple features of NH in the absence of liver failure and extraparenchymal siderosis. Further workup with a CTP score for failure with a CTP score of 15 and a MELD have not been reported. This may represent a case of idiopathic neonatal hepatitis with a robust re-generative process accounting for marked elevation in AFP. This case adds to an understanding of NH-like presentations and high AFP with a benign clinical course.

P981
REVERSAL OF PROTEIN-LOSING ENTEROPATHY AFTER LIVER TRANSPLANTATION IN A CHILD WITH IDIOPATHIC FAMILIAL NEONATAL HEPATITIS

2008 ACG Presidential Poster Award Recipient

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Purpose: A 2 year-old female was referred for abnormal liver function tests, diarrhea and low albumin. As an infant, she had idiopathic cholestatic jaundice that resolved spontaneously. Family history was significant for abnormal transaminases in her 2 older brothers. On physical exam the patient was at the 50% for weight and height. She had peritestinal and lower extremity edema. Her liver span was 8 cm. Her initial labs revealed albumin 2 g/dL, total protein 3.7 g/dL. AST 181 U/L (10-55), ALT 194 U/L (4-45), ALP 253 U/L (80-340), INR 0.9 (0.9-1.2), total bilirubin 0.1 mg/dL (1.5-1.7) and normal transaminases. The diagnosis was idiopathic neonatal hepatitis. Further work up showed stool alpha-1-antitrypsin (A1AT) 459 mg/dL (0-54), IgG 1500/μL (1500-8000). Further work up showed stool alpha-1-antitrypsin (A1AT) 459 mg/dL (0-54), IgG 1500/ μL (1500-8000). The patient was diagnosed with protein-losing enteropathy (PLE) due to lymphangiectasia. OLT was performed in April 2007. In patients with cirrhosis and normal synthetic function, a disproportionality of albumin and gamma globulin without evidence for liver failure and extrahepatic causes should be considered in patients with cirrhosis and PLE unresponsive to medical treatment. In patients with cirrhosis and normal synthetic function, a dispro-portionality of albumin and gamma globulin without evidence for liver failure and extrahepatic causes should be considered in patients with cirrhosis and PLE unresponsive to medical treatment.

P982
A CASE OF ACUTE HEPATITIS C: FACT OR FULLMANN FAILURE?

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Purpose: Introduction Approximately 4.1 million Americans have been infected with Hepatitis C virus, of which 3.2 million are chronically infected. However, Hepatitis C is estimated to account for only 20% of all cases of acute viral hepatitis in the United States. A unique case of a patient who was recently diagnosed with Hepatitis C presented to us in the acute state with the additional findings of fulminant liver disease. Case Report A 59 year old African American male with end-stage renal disease on hemodialisis and diabetes mellitus presented with 3 week duration of nausea, vomiting, diarrhea, jaundice, and severe pruritus. He was noted to have right upper and lower quadrant abdominal pain with increased serum aminotransferases. Laboratory studies were significant for HCV RNA by PCR being positive with quantitative HCV RNA of 26,731,000 international units. Serology was negative for Hepatitis A and B. His alpha fetoprotein tumor marker was elevated at 14.0 and ferritin was also elevated at 6.45. During the course of his admission the patient’s serum aminotransferases worsened along with further deterioration of his coagulation studies. Due to these abnormal lab studies with the patient’s presentation of symptoms a computed tomography guided liver biopsy was performed. The final diagnosis of the biopsy was severe active Hepatitis C with acute hepatocellular injury which was consistent with acute viral Hepatitis C. The decision was made to transfer the patient to a liver center for a possible transplant. Upon transfer of the patient, follow up serum aminotransferases improved and he was advised for outpatient therapy with interferon. Due to his history of end-stage renal disease he was not a candidate for interferon therapy with ribavirin. Discussion: Diagnosis of fulminant Hepatitis C is rare and incidence is unknown. The center for disease control estimated that new cases of Hepatitis C virus infections in the United States fell from 240,000 cases per year in the 1980’s to 19,000 cases per year in 2006. Most cases of acute Hepatitis C are anicteric and asymptomatic. Transfusion associated cases are now less than 1 per 2 million transfused units of blood. Most cases are due to injection drug users. In fulminant hepatitis the fluctuation of aminotransferase levels after an acute infection of Hepatitis C has symptoms such as nausea, malaise, right upper quadrant pain and jaundice in less than 25% of cases. These acute symptoms are apparent in approximately 2-12 weeks Fulminant hepatitis failure is defined as the rapid development of severe acute liver injury with impaired synthetic function and encephalopathy in a person who had a normal or a well compensated liver.
ORTHOTOPIC LIVER TRANSPLANTATION NOT THE CURE FOR CAROLI'S DISEASE IN ALL CASES

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Purpose: Liver transplantation (LT) has been the curative therapy for patients with Caroli's disease (CD) having recurring episodes of cholangitis, sepsis and biliary stone formation. There have been no reported cases on the recurrence of intrahepatic bile duct complications in patients with CD who underwent LT. We report a patient with CD who developed a recurrence of intrahepatic biliary dilatation and stricture formation 12 years post-LT.

Methods: A 49 year old female was diagnosed with CD in 1992. She had right upper quadrant pain, cholestatic liver disease and was found to have intrahepatic ductal dilatation without portal fibrosis but associated with bilateral multiple renal cysts. She underwent LT with Roux-en-Y anastomosis in 1995 after having recurrent cholangitis with septicaemia. In 1999, patient presented with elevated alkaline phosphatase and CT abdomen revealed moderately dilated intrahepatic ducts, patent hepatic-portal veins and a normal common bile duct. CBD in 2007, she presented with cholangitis and cholangiogram showed a stone in the left bile duct with progressive intrahepatic biliary dilatation. The patient underwent PTC with stent exchange and the symptoms improved.

Recent abdominal ultrasound of the liver showed homogenous liver parenchyma with ascites. There were no further episodes of cholangitis and no evidence of biliary strictures on the cholangiogram. Asthma was well controlled with regular inhaler use. Her routine liver function tests were normal. Serologic studies were negative for viral hepatitis. There was no evidence of autoimmune or drug-induced hepatitis.

Results: The patient developed lower extremity cellulitis. The patient was afebrile, hemodynamically stable with oxygen saturation of 97% on room air. Laboratory studies were significant for elevated liver transaminases with AST 1020 ALT 2202 Total bilirubin was 0.9, direct bilirubin 0.4 and alkaline phosphatase was within normal limits. History did not suggest viral, autoimmune or drug-induced hepatitis.

Conclusion: Drugs such as amiodarone may inhibit the mitochondrial β-oxidation of fatty acids resulting in mitochondrial dysfunction, thus activating a cascade leading to fibrosis. To date, a total 8 cases of amiodarone induced liver cirrhosis have been reported in the literature. These cases illustrate the importance of checking baseline liver associated enzymes in patients who are being considered for amiodarone therapy, as well as monitoring them closely during therapy even with low dose amiodarone.

LIVER BIOPSY INDUCED HEMORRHAGIA PRESENTING AS HEMATOMA: AN UNUSUAL COMPLICATION OF A COMMONLY PERFORMED PROCEDURE


Purpose: 1-To describe complications related to percutaneous liver biopsy 2- To be able to recognize hematoma as a consequence of hemoptasia after percutaneous liver biopsy

Methods: Case presentation and literature review.

Results: A thirty-five year old woman underwent an ultrasound guided liver biopsy of the left liver lobe. One week later she returned to the emergency room with right upper quadrant abdominal pain, nausea and multiple episodes of bleeding per rectum. Patient was hypotensive and tachycardic. On exam a mild right upper quadrant tenderness was noted. Laboratory tests showed anemia and a cholestatic elevation of liver enzymes. Medical resuscitation allowed hemodynamic stabilization. Computed tomography (CT) of the chest, abdomen and pelvis was performed. It showed a possible arteriovenous (A V) fistula in the left liver lobe. CT did not reveal any other pleural, abdominal or pelvic abnormalities. Colonoscopy was normal. Upper gastrointestinal endoscopy showed ongoing blood flow through the ampulla of Vater. The diagnosis of hemoptasia secondary to liver biopsy was made. Angiography verified the presence of an arteriovenous fistula in the segment three of liver. Successful embolization of the bleeding artery was performed. Clinically, there was no further evidence of bleeding. Hepoptasia is a rare complication. The patient was discharged to home.

Conclusion: Liver biopsy is a commonly performed procedure. However, it may result in complications. Hemoptasia after percutaneous liver biopsy could be a subtle finding, resulting from hemoptasia. Prompt recognition of this entity may prevent frustration and facilitate measures to control bleeding.

AMIODARONE INDUCED LIVER CIRRHOSIS

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Purpose: To present two cases of amiodarone induced liver cirrhosis. To elicit amiodarone induced cirrhosis may occur at low doses. To describe histopathological features of amiodarone induced liver cirrhosis.

Methods: Case Review and review of literature regarding amiodarone induced liver cirrhosis.

Results: A 72 year old male was admitted with generalized fatigue and worsening ascites. Pertinent medications included amiodarone at 200 mg per day, simvastatin and glipizide. Initial labs were as follows: bilirubin of 1.9 mg/dl, AST 106 IU/L, ALT 75 IU/L, Alk Phos 147 IU/L, prothrombin time of 20 seconds. Liver ultrasound showed a cirrhotic liver, splenomegaly and ascites. Serologic studies were negative for viral hepatitis. There was no evidence of autoimmune hepatitis. Wilson’s disease, or hemochromatosis. A liver biopsy showed steatohepatitis with a striking amount of Mallory hyalin within the hepatocytes, and a neutrophilic infiltrate, consistent with amiodarone toxicity. The patient died during his hospitalization secondary to complications from his liver disease. Case 2: This patient was a 67 year old woman with a history of coronary artery disease who was admitted with increasing confusion. There was no history of alcohol use. She was on low dose amiodarone. Her initial work up revealed AST 377 IU/L, ALT 277 IU/L, Alk Phos 551 IU/L, PT of 12.7 seconds. Serologic studies were negative for viral hepatitis, and there was no evidence for auto-immune hepatitis, Wilson’s disease, or hemochromatosis. Ultrasound of the liver showed homogenous liver parenchyma with asches. Liver biopsy showed a neutrophilic infiltrate with associated degenerating hepatocytes and a remarkable amount of Mallory hyalin with well developed pericellular fibrosis and at least moderate steatohepatitis without fibrosis. Nocturnal pulse oximetry revealed normal pulmonary artery and wedge pressures. Hepatic portal venous gradient was normal. A transjugular liver biopsy was performed. Histopathology showed zone 3 hepatocellular necrosis, and mildly active steatohepatitis without fibrosis. Nighttime pulse oximetry showed multiple and profound desaturations. The cumulative time spent at saturation <85% was 87%. The patient was started on CPAP and supplemental oxygen to maintain optimal saturation during sleep. Liver enzymes improved over the next few days and eventually completely normalized. On a 3 month follow-up, the patient continues to use CPAP machine with significant improvement in nocturnal pulse oximetry. He has been enrolled in a weight reduction program and is undergoing evaluation for bariatric surgery.
Conclusion: Ischemic hepatitis is a rare manifestation of OSA secondary to severe arterial hypoxemia. This entity should be considered in the differential diagnosis of ischemic liver injury. Institution of correct management strategies and prevention of complications of OSA can result in prevention of a potentially fatal acute liver injury.

Liver test trend during recovery period.

P999
LIVER INJURY AFTER CONSUMPTION OF HIGH DOSE TAHITIAN NONI JUICE
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Purpose: Noni juice is a popular complimentary alternative medication often consumed for its wellness effects and is recommended for consumption at a dose of 1 oz (30 ml) per day. To our knowledge this is the first reported case of idiosyncratic drug induced liver injury (DILI) from United States that occurred after high dose consumption of Noni juice.

Methods: A 49-year-old African American female with underlying liver disease presented with new onset jaundice. She had history of chronic consumption of Noni juice for several years at the recommended dose. However, two months prior to the presentation she had increased her daily consumption to 8oz. Six weeks after increasing her dose, she developed mild constitutional symptoms eventually progressing to fatigue and jaundice.

Results: Her workup revealed elevated liver tests (ALP 247, AST 365, ALT 145 and total bilirubin 3.9 gm/dL), negative titers for viral and autoimmune hepatitis and imaging studies significant only for fatty infiltration of liver. She gave a history of occasional alcohol and acetaminophen use (4-6 grams/day). She had no exposure to any other xenobiotics. Extensive biochemical work up performed excluded all competing etiologies. Upon discontinuation of consumption of Noni juice at the onset of her jaundice, she had normalization of her liver tests over a period of 4 months. She did not receive any therapy with steroids.

Conclusion: This is the first reported case of idiosyncratic DILI after exposure to Noni juice from the United States. While a few cases reported from Europe showed a hepatocellular pattern of injury, this case presented with a cholestatic pattern of liver injury. The potential for toxicity caused by noni juices remains under surveillance by the food safety authorities in Europe and currently physicians in United States should be aware of this possibility.

P900
A CASE OF UNUSUAL PULMONARY EMBOLISM DUE TO EXTENSIVE THROMBOSIS AFTER PTC
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Purpose: A 49 year old female with a past medical history of anxiety and hypothyroidism presented to an outside institution with a complaint of intermittent epigastric abdominal pain and symptoms suggestive of biliary colic. The patient gave a history of having had a cholecystectomy and further workup with a CT scan revealed a common bile duct stone. No other abnormalities were noted except for an incidental finding of mal-rotation of the bowel. ERCP was attempted, but was unsuccessful due to difficulties related to her bowel anatomy. The patient then underwent a Percutaneous Trans-hepatic Cholangiogram (PTC) with successful CBD stone extraction and drainage. Two weeks later she began to complain of fever, cough and some abdominal pain and was started on Ciprofloxin by her primary doctor outside the hospital in attempt to treat what was thought to be pneumonia. Her stent was removed one week after the onset of fever via ERCP. The patient continued to have persistent fever and in addition, began to complain of worsening dyspnea and a dry cough. At this point she was suspected of having pneumonic and bronchointerstitial alveolitis along with another antibiotic were started. Due to lack of improvement and persistent fever for four weeks a CT scan of the chest was performed as an outpatient which showed a pulmonary embolus and questionable early formation of a liver abscess. The patient was then admitted to our institution for further workup and care. On presentation, she had a fever of 101.7, tachycardia and hypopetition. Except for a fever, the remainder of her physical exam was unremarkable. CT scan of the abdomen with IV contrast revealed an 8 cm lesion in the right hepatic lobe consistent with a neoplasm versus an abscess. In addition, there was thrombosis of the middle hepatic vein with extension into the inferior vena cava and the right atrium. There was also a right lower lung nodule, measuring 2 cm that appeared to have cavitations consistent with a septic embolus. Venous sonography of the lower extremities was positive for a left common femoral deep venous thrombosis. A needle biopsy of the liver lesion was performed with findings consistent with a hepatic abscess. The patient was treated in the intensive care unit with intravenous heparin and antibiotics, and her fever resolved within 24 hours of admission. She was discharged after 10 days of hospitalization on Coumadin and antibiotics. Although portal vein and hepatic vein thrombosis are associated with pyogenic liver abscesses, the extent of thrombosis from the hepatic veins into the inferior vena cava and the right atrium, along with a septic pulmonary embolus as a complication to PTC and stent placement has not been reported.

P901
MEMBRANOPROLIFERATIVE GLomerulonePHritis (MPGN) AS INITIAL MANIFESTATION OF HepatITIS C (HCV)
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Purpose: HCV, a major cause of chronic liver disease, can lead to chronic active hepatitis, cirrhosis, and hepatocellular carcinoma. An array of extrarenal manifestations of liver disease is common. Membranoproliferative glomerulonephritis (MPGN) is the best characterized glomerulonephropathy associated with HCV. The pathogenesis of HCV-associated MPGN is probably a result of glomerular deposition of circulating HCV & anti-HCV antibodies. Our patient was discovered to be hypothyroid, but it is not yet well established if HCV plays a role in development of thyroid dysfunction & autoimmune thyroiditis. Interferon-alfa has been shown to improve proteinuria, suppress viremia, & stabilize renal function. Combination with ribavirin has led to improved suppression of HCV RNA levels. Patients often relapse after therapy is stopped. Immunosuppressive treatment has been used to treat mixed cryoglobulinemia & MPGN in the past, but effects of this treatment on HCV viremia & antibody response, & on the liver and renal disease needs to be evaluated further.

Graph of Liver Transaminases
P902
CELLIAC DISEASE SHOULD BE CONSIDERED IN PATIENTS WITH CRYPTOGENIC CIRRHOSIS
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Purpose: BACKGROUND: Although celiac disease (CD) is associated with various autoimmune disorders, it is a cause of non-specific liver enzyme abnormalities, this entity is not commonly recognized in the setting of end stage liver disease (ESLD). We report three patients who presented over a 6 month timeframe with ESLD for transplant evaluation who were all found to have untreated or refractory CD. CASE REPORT: Patient A: A 60 year old woman with a history of refractory CD presented with ascites unresponsive to medical management; laboratory and imaging studies were consistent with cirrhosis. She was listed for OLT but expired from septic shock shortly afterwards. Patient B: A 62 year old man had a 4 year history of non-alcoholic fatty liver disease. Patients B and C had been previously evaluated by gastroenterologists for their chronic fatigue syndrome. Patient A had a history of alcohol, smoking and was HIV negative. CASE REPORTS: Patient A: A 60 year old woman with a history of refractory CD presented with ascites unresponsive to medical management; laboratory and imaging studies were consistent with cirrhosis. She was listed for OLT but expired from septic shock shortly afterwards. Patient B: A 62 year old man had a 4 year history of non-alcoholic fatty liver disease. Patients B and C had been previously evaluated by gastroenterologists for their chronic fatigue syndrome. Patient A had a history of alcohol, smoking and was HIV negative.

Methods:

Results: Patients A, B, and C were all placed on flagyl, zosyn and paramomycin was added as a luminicidial agent. With drainage and antiviral therapy, they all improved, and were eventually discharged. Six weeks later, he was again admitted for respiratory failure. 14 months after LT, he was admitted with refractory ascites and new-onset hyponatremia. He presented with edema, ascites, pleural effusions and anasarca. He was treated with sodium restriction and diuretics, and the ascites resolved. The hyponatremia was corrected with fluid restriction and spironolactone.

Conclusion: Our case shows that organ transplant recipients may develop hepatic peliosis due to dissemination of CP in the liver and that immunosuppression therapy can lead to rapid resolution of clinical manifestations.

P903
A CASE OF SHY DRAGGER SYNDROME IN A PATIENT FOLLOWING ORTHOTOPIC LIVER TRANSPLANTATION
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Purpose: Background: Shy Dragger syndrome or multiple system atrophy (MSA) is a neurodegenerative disorder characterized by any combination of autonomic failure, parkinsonism, cerebellar ataxia and pyramidal symptoms which is progressive, usually fatal. Neurodegeneration affects the substantia nigra, the red nucleus and the locus caeruleus. It is thought to be caused by an accumulation of alpha-synuclein in neurons. OLT is associated with a marked decrease in the risk of developing de novo idiopathic Parkinson's disease. We report a case of multiple system atrophy in a patient who underwent OLT.

Methods: A 36 year old female with a history of alcohol, smoking and intravenous drug use was admitted to our transplant center with fatigue, myalgias and left axillary adenopathy. Medications included acetaminophen, prednisone and cellcept. At presentation, she had acute renal failure (Cr 3.1 mg/dL), hgb 7.9 g/dL, platelet count 33 K, AST 28 IU/L, ALT 39 IU/L, alkaline phosphatase 307 IU/L, total bilirubin 11 mg/dL (predominantly direct) and INR of 1.3. Pre-op LFT's and CBC were done and the patient was listed for OLT. The patient was also found to have mitochondrial disease with a deletion in the MELAS gene. The patient was treated with dysrhythmia, diuretics and anticoagulation. He was on dopaminergic agents. When his T12 level reached 80 micrograms per deciliter, he was transitioned to carbidopa and levodopa. If the hypertension is refractory to maximal supportive therapy, then alternative diagnoses should be considered. Second, if the diagnosis of Shy Dragger syndrome had been diagnosed prior to the transplant, then this diagnosis would have been inappropriate to proceed with the transplant as this condition is universally fatal.

Discussion: Eunice Maria is more prevalent in areas of overcrowding and poor sanitation and spread from person to person by fecal oral route. Risk increases with old age, pregnancy, immunosuppression, malnutrition, homosexuality, alcoholism and travel to endemic areas. Cyst infection releases trophozoites which adhere to the wall of the large intestine, causing ulceration with subsequent passage into the blood stream. Amebiasis may be acute or chronic, causing symptoms of epigastric pain, jaundice, encephalopathy and septis. Abscess is usually solitary involving right lobe with only 15% having small multiple abscesses.

Conclusion: Small abscesses can be successfully treated with antibiotics only, but the larger abscesses, especially those involving the left lobe are more effectively treated with amebicides and aspiration.

P904
P904
ACUTE HEPATITIS C IN A POST-LUNG TRANSPLANT PATIENT
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Purpose: In contrast to acute hepatitis A and B, hepatitis C is a rare, usually fatal, and usually viral form of hepatic disease in immunosuppressed patients. It has been reported in solid organ and bone marrow transplant recipients. We report a case of acute hepatitis C related FCH in a post-lung transplant patient.

Methods: A 41 year old man underwent a right lung transplantation nine months prior, to treat his documented pulmonary hypertension. He had a history of asthma and atopy. He was taking leukotriene receptor antagonist. His examination revealed a thin, frail man with normal vital signs, scleral icterus, jaundice, and multiple ecchymoses. He had no arthritis or spider angiomata. His jugular venous pulse was not elevated. His mental status was normal. Admission labs showed a bilirubin of 16.1 mg/dL, alkaline phosphatase 442 U/L, AST 175 U/L, and ALT 115 U/L. Serologies including HAV, HBV, HCV, and EBV were normal. CMV PCR showed undetectable virus. Concomitantly, he received asparaginase without venous obstruction and no biliary ductal dilation. Liver biopsy showed a mild mixed portal infiltrate consisting of lymphocytes, neutrophils, and rare plasma cells. Bile ducts showed mild distortion. There was focal interface hepatitis and mild periportal fibrosis. Mild lobular atrophy was present with scattered hepatocellular apoptosis. Multiple foci of bile plugs, intralobular and hepatocyte cholestasis, perivenular fibrosis and hepatic venular dilation were noted. These findings were consistent with acute hepatitis C with a superimposed chronic hepatitis C. Bacteremia was found with esophageal varices and a cirrhotic liver and portal hypertension at CT who presented with chronic diarrhea and a 50 lb weight loss. Small biopsy showed subtotal villous atrophy and crypt hyperplasia. His diarrhea resolved on a gluten free diet. He experienced sudden death secondary to myocardial infarction. Patient C: A 41 year old man with a two year history of liver enzyme abnormalities, and previous documentation of steatohepatitis, presented with progressive jaundice and coagulopathy. Physical exam showed stigmata of cirrhosis and a BMI of 41.5. His daughter had documented CD and the patient was referred to Endoscopic Ultra- sonography. Additional evaluation showed positive anti-endomysial IgA antibody and small bowel biopsy with total villous atrophy. His is currently listed for OLT. In each case other causes of liver disease, including metabolic, viral, alcohol and autoimmune were excluded. Patient C was presumed to have underlying NASH as the etiology for his cirrhosis, and patients A and B had presumed cryptogenic liver disease. Patients B and C had been previously evaluated by gastroenterologists for their liver disease but the diagnosis of CD was not entertained.

Conclusion: The mechanism of CD mediated liver injury is unexplained. We speculate that longstanding untreated hepatic dysfunction from CD may lead to cirrhosis, or that CD may act as a cofactor in other underlying liver disorders. In the setting of ESLD, especially NASH or cryptogenic, the entity of CD should be considered, including appropriate serologies or small bowel biopsies.

P906
PELOSIUS HEPATIS DUE TO BARTONELLA INFECTION: AN UNUSUAL CASE OF CHOLESTATIC HEPATITIS FOLLOWING RENAL TRANSPLANTATION
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Purpose: Pelosis hepatitis is characterized by the presence of blood-filled spaces throughout the hepatic parenchyma with clinical manifestations ranging from asymptomatic serum aminotransferase elevations to focal masses and liver failure. Causes of pelosis hepatitis include medications (androgens, steroids), TB, malignancy and infection with Bartonella henselae particularly in HIV positive patients. We describe a case of hepatic peliosis due to B. henselae infection in a kidney transplant recipient who presented with acute cholestatic hepatitis, thrombocytopenia and myocardiomyopathic injury.

Methods: Case Report

Results: A 51 year old Caucasian male was hospitalized 36 days after living donor kidney transplantation with fatigue, myalgias, left axillary adenopathy and jaundice. Medications included cyclosporine, prednisone and cellcept. At presentation, he had acute renal failure (Cr 3.1 mg/dL), hgb 7.9 g/dL, platelet count 33 K, AST 28 IU/L, ALT 39 IU/L, alkaline phosphatase 307 IU/L, total bilirubin 11 mg/dL (predominantly direct) and INR of 1.3. Pre-op LFT's and CBC were done and the patient was listed for OLT. The patient was also found to have mitochondrial disease with a deletion in the MELAS gene. The patient was treated with dysrhythmia, diuretics and anticoagulation. He was on dopaminergic agents. When his T12 level reached 80 micrograms per deciliter, he was transitioned to carbidopa and levodopa. If the hypertension is refractory to maximal supportive therapy, then alternative diagnoses should be considered. Second, if the diagnosis of Shy Dragger syndrome had been diagnosed prior to the transplant, then this diagnosis would have been inappropriate to proceed with the transplant as this condition is universally fatal.
Conclusion: Bartonella henselae is a gram negative bacteria that causes cat scratch disease. Our case shows that organ transplant recipients may develop hepatic peliosis due to disseminated bartonella infection, as previously reported in patients with HIV. Since the vascular endothelium can be involved, ischemic manifestations such as myocardial infarction can occur, as noted in this patient. Establishing a diagnosis of bartonella infection is frequently difficult, but highly sensitive and specific PCR based assays are now available. Once identified, antibiotic therapy can lead to rapid resolution of clinical manifestations.

Methods: PubMed search using keywords “myelodysplastic syndrome” and “liver transplant” was done to identify any previous reported case of MDS in LT. Patient data was gathered from the patient and the medical record.

Results: A 54-year-old white man underwent LT in 2003 for hepatitis C (HCV) related cirrhosis and hepatocellular carcinoma and in 2004 for recurrence of his HCV. He developed pancytopenia in 2006 which was attributed to his pegylated interferon treatment for HCV. The peg-interferon dose was initially decreased, later stopped entirely and erythropoietin was initiated. In January 2007, the patient presented to his hepatologist complaining of weakness, malaise, and shortness of breath. WBC was 2.8 x 10^3/µl, hemoglobin 10.6 g/dL, Hct 33.8%, platelets 21 x 10^3/µl, and neutrophils were 1.6 x 10^3/µl. A liver biopsy revealed bridging fibrosis and recurrent hepatitis C. A bone marrow biopsy revealed myelodysplastic syndrome, type refractory anemia with excess blasts (RAEB)-1. He underwent 4 cycles of azaclamide from February to May 2007 with no improvement on repeat bone marrow biopsy in May 2007. Prograf dose was lowered and the patient underwent 3 cycles of decitabine. His last bone marrow biopsy done in November 2007 continued to show MDS, RAEB-1 with hypocellular marrow. The patient underwent 1 more cycle of decitabine without significant improvement in his laboratory testing.

Conclusion: This is the only second reported case of MDS occurring in a post-LT patient. Our patient developed MDS almost 2 years after his second LT, as compared to the previous report in which the patient developed MDS 3 months after LT with subsequent progression to acute myelogenous leukemia within 2 months of the MDS diagnosis. Our patient’s MDS type carries a very poor prognosis and high likelihood of conversion to acute myelogenous leukemia. He was treated with chemotherapy and reduction in immunosuppression without a clinical response. Given the rarity of MDS after LT, further study is needed to optimize the medical management of these patients. Although rare, MDS should be considered in the evaluation of pancytopenia after LT.
AN ITCHING COMPLICATION: MOXIFLOXACIN-INDUCED VANISHING BILE DUCT SYNDROME
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Purpose: A 55 year old man with poorly controlled type 1 diabetes mellitus was presented with anasarca, a moderate abdominal girth and a soft, nontender abdomen. Several hours after arrival, he had an episode of hematemesis and melena. Initial laboratory studies revealed a hematocrit of 25%, an albumin of 2.5 g/L, a total bilirubin of 14.5 mg/dl. Discussion: A case report of a male patient with methadone-induced hepatitis and a bile duct syndrome (BVBS) is presented. BVBS is a rare condition that is characterized by the destruction and ultimate disappearance of the intrahepatic bile ducts. The presentation of BVBS is highly variable due to its numerous underlying causes. Outcomes range from favorable with gradual regeneration and recovery to devastating with progressive and irreversible bile duct loss. We describe a case of an elderly male with jaundice following moxifloxacin exposure found to have BVBS on liver biopsy. Despite drug discontinuation cholestatic liver disease persisted. A significant post medical history was admitted to the hospital with empyema that was treated with intravenous antibiotics and drainage. On hospital day 21, he was discharged on a continuing course of oral moxifloxin 400 mg daily. Eight days later he presented with jaundice and mild pruritis. He denied fevers, nausea, vomiting, abdominal pain, or change in stools. The exam was notable for marked jaundice and a palpable liver edge. 3 cm below the costal margin. Laboratories revealed an alkaline phosphatase of 82 IU/L, ALT of 44 IU/L, total bilirubin of 15.3 mg/dl and direct bilirubin of 9.2 mg/dl. ultrasound. Hepatitis panel was negative. The proposed mechanism of bile duct loss is T-cell toxicity and a dysregulation of apoptosis. Treatment requires recognition and prompt discontinuation of the inciting agent, although this does not uniformly lead to improvement. Corticosteroids, rifampicin, and itopride have been used for symptom management, however evidence regarding their efficacy is limited.

A CASE OF LATE ONSET CAROLI’S DISEASE IN A 75 YEAR OLD WOMAN
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Purpose: Since its first description in 1958 by Caroli around 150 cases of Caroli’s disease (CD) have been reported in the literature. This is a rare congenital condition characterized by multiple polycystic malformations of the intrahepatic bile ducts involving a segment of the liver, or both lobes giving rise initially to biliary stasis, intraparenchymal lithiasis and subsequently recurrent secondary infection including cholangitis, septicemia and intraparenchymal and subphrenic abscesses. This is different from Cystic disease where the chronic stasis of the disease process leads to liver fibrosis and cirrhosis. Caroli’s disease has been shown to have frequent association with other hereditary cystic diseases We here report a case of a 75 year old woman with ADPKD diagnosed with CD. Our patient has long history of ADPKD, proposed mechanism of bile duct loss in T-cell toxicity and a dysregulation of apoptosis. Diagnosis of CD was final with MRCP showing numerous biliary cysts with peripheral ductal dilation, intrahepatic duct involvement, and a solitary dominant bile duct. Diagnosis of CD was made on MRCP, ERCP, and upper abdominal ultrasound with dopplers, MRCP, and ERCP produced inconclusive results. A phosphatase of 821 IU/L, ALT of 441 IU/L, total bilirubin of 15.3 mg/dl, and direct bilirubin of 14.5 mg/dl. Serologies for viral hepatitis were negative. An ultrasound revealed a normal liver and gallbladder. A liver biopsy revealed severe grade 3 autoimmune hepatitis and centrilobular fibrosis. (Fig) The patient was started on prednisone 40 mg daily. Within a month, his LFTs normalized and he has been followed for the last two years without any significant hepatic sequelae on azathioprine maintenance therapy.

Conclusion: We report the first case of autoimmune hepatitis associated with bosentan. Prompt discontinuation of bosentan and treatment with corticosteroids resulted in normalization of LFT. The etiology of unexplained cirrhosis in patients undergoing treatment with bosentan may be from the development of autoimmune hepatitis. Patients on bosentan who develop LFT abnormalities should be evaluated for autoimmune hepatitis.

High power magnification. Interface hepatitis with rosetting.

AUTOIMMUNE HEPATITIS: DIAGNOSIS PRECEDED BY EPISODE OF CHOLESTATIC HEPATITIS IN THE SETTING OF ATORVASTATIN EXPOSURE
A. D. Smith, MB, ChB. Medicine, Eastbourne District General Hospital, Eastbourne, United Kingdom.

Purpose: Autoimmune hepatitis (AIH) is a chronic inflammatory disorder of unknown etiology arising in genetically susceptible individuals, typically women. Certain drugs e.g. minocycline and atorvastatin, have been reported in association with the onset of AIH, although the precise mechanism(s) for this are unclear. We describe the onset of AIH in a man ten months after he sustained cholestatic hepatitis following exposure to atorvastatin, and from which subsequent recovery appeared complete.

Methods: A 55 year old man with poorly controlled type 1 diabetes mellitus (DM) was prescribed atorvastatin 40mg/day for hypercholesterolemia (other drugs were insulin, aspirin and nortriptyline). Twenty weeks later he developed fatigue, generalised pruritus, pale stools and dark urine.

Results: Examination revealed jaundice and scratch marks, but no features of hitherto undiagnosed chronic liver disease, e.g. splenomegaly. Liver test and selected other results are tabulated at five different time points (months after index episode). Alternative causes of acute severe liver injury (viral, metabolic and alcohol) were excluded as far as possible by history-taking and laboratory testing. Liver biopsy demonstrated portal tract expansion with lymphocytes, plasma cells and numerous eosinophils. Similar changes were present but to a lesser degree in the lobules, where acidophil bodies and perivenular cholestasis were evident also. Given the discrepancy between elevated aminotransferase (AST) and immunoglobulin G (IgG) concentrations, circulating antinuclear (ANA) and smooth muscle antibodies (SMA) on the one hand, and the markedly increased cholestatic liver tests, portal tract eosinophils and DM on the other, it was decided not to recommend prednisone. Liver tests became normal within three months. Seven months thereafter, the original symptoms returned and liver tests had relapsed. Further liver biopsy revealed changes very similar to those present first time, with the exception that plasma cells were more conspicuous. Portal fibrosis was evident also. Prednisone was eventually discontinued in view of liver tests, albeit at the expense of even poorer blood sugar control. Azathioprine was added to consolidate attainment of disease remission. It was well tolerated, thus allowing prednisone withdrawal in due course.

Conclusion: It is uncertain whether this man was destined to develop AIH regardless of exposure to atorvastatin. Conversely, the index episode may have represented AIH albeit at a later date. No further exposure to the drug occurred to my knowledge.

P914 BLEEDING DUODENAL DIVERTICULUM – HEMOSTASIS AFTER ENDOSCOPIC HEMOCOLIP PLACEMENT
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Purpose: To highlight a case of overt upper gastrointestinal bleeding successfully controlled with endoscopic hemoclip placement.

Methods: A 90 year old man presented to an outside hospital with one day of melena and hematemesis. She had no previous history of gastrointestinal disease. Her medical history
Agha, Sc B. Locally invasive prostate cancer with multiple overlapping.

Around 95% of cases are found within the duodenum. The majority of cases are metastatic embryonal and choriocarcinoma) involve the GI tract. Jejunal involvement is exceedingly rare of previously undiagnosed metastatic germ cell tumor. Only 5% of germ cell tumors (usually forming obscure GI bleeding. A recent study revealed that capsule endoscopy was able to detect immediate follow up period the patient has done well and has had no recurrence of GI bleed-
spleen and bilateral kidneys. The patient was started on aggressive chemotherapy and in the

A 32 year old male with no significant past medical history presented with a 3 day his-
tory of dyspnea, left-sided pleuritic chest pain and 2 weeks of melena. He denied abdominal
pain, nausea, vomiting, cough, fevers and hemoptysis. He was on no medications and did not
have a family history of GI malignancies. Physical exam revealed prominent sinus tachycardia with a rate in the 120s and significant hypotension pallor. Initial laboratory studies revealed a hemoglobin of 4.9 mg, 72 hematocrit of 14%, and platelets of 550,000. Initial CXR revealed multiple nodules throughout both lung fields. After volume resuscitation an EGD was performed but was non diagnostic. Capsule endoscopy identified the bleeding source in the proxim-
mal jejunum and was able to perform selective angiogram and stenos. Positive deflection on capsule endoscopy exposure in the jejunum revealed a 4cm ulcerated mass lesions 40cm distal to the pylorus. Multiple biopsies were obtained and pathologic analysis was consistent with metastatic choriocarcinoma. CT scans of the head, chest, abdomen and pelvis revealed multiple metastatic lesions within the liver, spleen and bilateral kidneys. The patient was started on aggressive chemotherapy and in the
immediate follow up period the patient has done well and has had no recurrence of GI bleed-
ing. Capsule endoscopy has rapidly emerged as an effective, non-invasive modality for detect-
ing obscure GI bleeding. A recent study revealed that capsule endoscopy was able to detect small bowel pathology in 82% of patients with GI bleeding of unknown etiology with prior negative EGD. Only 13% revealed a Bleeding EGD small bowel. Additionally there was an even angiongiography was performed and it was able to accurately identify small bowel angiosarcomas, polys, carcinoid tumors, Crohn’s disease and metastatic melanomas. Its potential use for early recognition of small bowel tumors is of the utmost importance. As seen in this case, capsule endoscopy was able to detect a case of previously undiagnosed metastatic germ cell tumor. Only 5% of germ cell tumors (usually embryonal and choriocarcinoma) involve the GI tract. Jejunal involvement is exceedingly rare as 95% of cases are found within the duodenum. The majority of cases are metastatic upon initial diagnosis and thus confer a relatively poor prognosis. The major complications in-
clude intestinal obstruction, bleeding and perforation.

P915
DIAGNOSIS OF A GERM CELL TUMOR BY CAPSULE ENDOSCOPY
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1. Internal Medicine, University of Miami, School of Medicine, Miami, FL; 2. Department of Gastroenterology, University of South Florida, Tampa, FL.

Purpose: A 32 year old male with no significant past medical history presented with a 3 day his-
tory of dyspnea, left-sided pleuritic chest pain and 2 weeks of melena. He denied abdominal
pain, nausea, vomiting, cough, fevers and hemoptysis. He was on no medications and did not
have a family history of GI malignancies. Physical exam revealed prominent sinus tachycardia with a rate in the 120s and significant hypotension pallor. Initial laboratory studies revealed a hemoglobin of 4.9 mg, 72 hematocrit of 14%, and platelets of 550,000. Initial CXR revealed multiple nodules throughout both lung fields. After volume resuscitation an EGD was performed but was non diagnostic. Capsule endoscopy identified the bleeding source in the proxim-
mal jejunum and was able to perform selective angiogram and stenos. Positive deflection on capsule endoscopy exposure in the jejunum revealed a 4cm ulcerated mass lesions 40cm distal to the pylorus. Multiple biopsies were obtained and pathologic analysis was consistent with metastatic choriocarcinoma. CT scans of the head, chest, abdomen and pelvis revealed multiple metastatic lesions within the liver, spleen and bilateral kidneys. The patient was started on aggressive chemotherapy and in the
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clude intestinal obstruction, bleeding and perforation.

P916
PALLIATION OF MALIGNANT RECTOSIGMOID OBSTRUCTION SECONDARY TO LOCALY INVASIVE PROSTATE CANCER WITH MULTIPLE OVERLAPPING
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Purpose: Malignancy is the most common cause of colorectal obstruction. Relief can be ob-
tained surgically with significant morbidity and mortality. However, self-expandable metal stents (SEMS) have become widely accepted for relief of obstruction in primary colorec-
platinum as well as extracolonic metastatic disease. Limited data exists on placement and out-
come of colorectal SEMS for obstruction relief in locally invasive prostate cancer. We describe a case of successful placement of two overlapping SEMS in the rectosigmoid in a patient with biopsy proven locally invasive prostate cancer to alleviate left sided colonic obstruction. A 47 year old male with locally advanced prostate cancer presented with obstruction, bloating, nau-
sea, intermittent blood in his stool and new onset lymphedema. The patient was currently receiv-
ing hormonal therapy with Lupron.

Methods: Flexible sigmoidoscopy revealed an infiltrative, partially obstructing mass in the rec-

tosigmoid colon that was multifocal with obvious circumferential spread. Specifically the area with oozing was observed at sigmoidoscopy. Biopsies confirmed the presence of a poorly differentiated adenocarcinoma with immunoprofile consistent with locally advanced prostate cancer. The patient chose SEMS for palliation of his symptoms. One overlapping SEMS placement revealed prominent lymphadenopathy and extrinsic compression of the recto-
sigmoid colon. Consent for repeat flexible sigmoidoscopy with SEMS placement was ob-
tained from the patient. Flexible sigmoidoscopy was performed with a standard balloon (CF-Q1968, Olympus). At 15 cm from the anal verge, the previously seen mass with luminal narrowing was visualized. The narrowing was negotiated successfully by insertion of a guide wire prophylactically and advancing the sigmoidoscope over the visualized wire. No dilation was re-
quired. Hemoclips were placed at the proximal and distal ends of the stricture for marking. An initial SEMS (WallFlex® Colonic Stent, 25mm diameter, 120 mm long; Boston Scientific) was placed at the level of the proximal clip followed by deployment of a second SEMS (WallFlex®,
M2A capsule diagnosis of tropical sprue

S S Rainthum, M D, L Lee, B K. Haltes, M D. Advanced Gastroenterology Associates, Savannah, GA.

**Purpose:** Tropical sprue is a malabsorptive small bowel disorder especially characterized by deficiencies of folate and vitamin B12. We present a case where capsule endoscopy in conjunction with appropriate travel history identifies this disease. The case also helps to elucidate the appearance of tropical sprue at M2A capsule endoscopy which has rarely if ever been described in the literature.

**Methods:** Case: A 56-year-old male with recently discovered B12 and folate deficiencies presented with alternating bowel habit and bloating. EGD showed bullar duodenitis with biopsies revealing mild to moderate chronic inflammation, focal gastric metaplasia, and associated focal villous blunting. The distal duodenum and proximal jejunum were described as normal with biopsies showing mild chronic nonspecific mucosal inflammation. All small bowel biopsies were without viral inclusions, giardia, helicobacter or other organism. Other testing included a normal Endomysial Ab IgA, Transglutaminase IgA, and serum IgA levels. Patient was sent for small bowel capsule endoscopy with M2A Capsule which demonstrated mucosal changes of villous atrophy throughout the jejunum and ileum. Mild jejunal lymphangiectasia was also noted. Upon further patient questioning, he noted recent travel to Sri Lanka. Two months prior to his diagnosis he was diagnosed with diabetes. Patient was without viral inclusions, giardia, helicobacter or other organism.

**Results:** Discussion: Celiac sprue is characterized by villous atrophy occurring in the proximal small bowel with lesser changes if any in the ileum. However, atrophy may be apparently more widespread in tropical sprue as described by capsule endoscopy in the present case. This case also evidences that persistent diarrhea may not be present.

**Conclusion:** 1) Diagnosis of tropical sprue should be entertained in all patient’s with vitamin B12 and folate deficiency. Special care should be made to obtain a travel history in such a patient. 2) Persistent diarrhea may not always be present in tropical sprue 3) Capsule endoscopy of the small bowel may be useful in the diagnosis of tropical sprue by demonstrating extensive changes of villous atrophy throughout the small bowel including the ileum.

**P219**

THE COLA WARS CONTINUE: USE OF DIET PEPSI FOR BEZOAR DISSOLUTION


**Purpose:** Gastric bezoars are a rare cause of abdominal pain that can be seen on endoscopic examination. The term bezoar occurs because of ingestion of food or other material usually giving a bulbous appearance. Other indigestible solids in patients with poor mastication and delayed gastric emptying. There are a few case reports in the literature using Coca-Cola or diet Coca-Cola to dissolve gastric bezoars. Many patients with pylorobezoars have gastroparesis secondary to diabetes and should not ingest large quantities of regular soda or find it unappealing to have a large volume of soda ingested. We present the first case of pylorobezoar dissolution using diet Pepsi.

**Methods:** A 54 year old woman with a history of poorly controlled diabetes leading to end stage renal disease requiring renal transplant presented with abdominal pain. She described a burning midgastroepipgastric pain, epigastric fullness, nausea and severe reflux. An esophagogastro-duodenoscopy (EGD) was performed and revealed two large pylorobezoars. On the basis of reports of the efficacy of cola lavage for the treatment of pylorobezoars, nasogastric (NG) lavage with 3L of cola over 12 hours was recommended, but she declined the NG tube.

**Results:** The patient was given three 20oz bottles of diet Pepsi to drink over an eight hour period, and she was made NPO after midnight. An EGD was performed the following morning which demonstrated complete dissolution of the pylorobezoar. The remaining food particles were suctioned through the endoscope (Olympus GIF-T260, 3.7mm aspiration channel), and the endoscope’s irrigation port was connected to a bottle containing diet Pepsi for further lavage and suctioning. The patient tolerated the procedure well and reported resolution of abdominal pain the following day.

**Conclusion:** This case demonstrates a novel approach for the treatment of gastric bezoars. The treatment of gastric bezoars can either be conservative or surgical. The efficacy of large dissolution of gastric bezoars with large volumes of Coca-Cola and direct endoscopic infusion of bezoars has been reported in the past but we propose a less aggressive use of cola as being just as effective. The mechanism of cola dissolution is not well understood, but it is proposed that it is a combination of the mucolytic effect of NaHCO3 and the penetration of CO2 bubbles into the surface of bezoars. Thus, in diabetic patients, it is unnecessary to use regular cola beverages that contain high sugar content. In addition, our case is the first reported use of diet Pepsi brand cola for this purpose.

**P220**

THE APPEARANCE OF TROPICAL SPRUE AT M2A CAPSULE ENDOSCOPY WHICH HAS RARELY IF EVER BEEN DESCRIBED

S S Rainthum, M D, L Lee, B K. Haltes, M D. Advanced Gastroenterology Associates, Savannah, GA.

**Purpose:** Tropical sprue is a malabsorptive small bowel disorder especially characterized by deficiencies of folate and vitamin B12. We present a case where capsule endoscopy in conjunction with appropriate travel history identifies this disease. The case also helps to elucidate the appearance of tropical sprue at M2A capsule endoscopy which has rarely if ever been described in the literature.

**Methods:** Case: A 56-year-old male with recently discovered B12 and folate deficiencies presented with alternating bowel habit and bloating. EGD showed bullar duodenitis with biopsies revealing mild to moderate chronic inflammation, focal gastric metaplasia, and associated focal villous blunting. The distal duodenum and proximal jejunum were described as normal with biopsies showing mild chronic nonspecific mucosal inflammation. All small bowel biopsies were without viral inclusions, giardia, helicobacter or other organism. Other testing included a normal Endomysial AB IgA, Transglutaminase IgA, and serum IgA levels. Patient was sent for small bowel capsule endoscopy with M2A Capsule which demonstrated mucosal changes of villous atrophy throughout the jejunum and ileum. Mild jejunal lymphangiectasia was also noted. Upon further patient questioning, he noted recent travel to Sri Lanka. Two months prior to his diagnosis he was diagnosed with diabetes. Patient was without viral inclusions, giardia, helicobacter or other organism.

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**Conclusion:** 1) Diagnosis of tropical sprue should be entertained in all patient’s with vitamin B12 and folate deficiency. Special care should be made to obtain a travel history in such a patient. 2) Persistent diarrhea may not always be present in tropical sprue 3) Capsule endoscopy of the small bowel may be useful in the diagnosis of tropical sprue by demonstrating extensive changes of villous atrophy throughout the small bowel including the ileum.
the abdomen revealed mass-like infiltration of the post-surgical site in the right inguinal region. Colonoscopy was performed revealing mesh-like foreign material protruding into the cecum. Given his surgical history this was consistent with migration of an intact portion of surgical mesh into the cecum. The patient was referred for surgical exploration and extensive post-surgical scarring was evident requiring a right hemicolectomy with removal of the mesh. The post-operative course was uneventful and the patient did well at follow-up.

Conclusion: This case illustrates an unexpected yet possible late complications related to inguinal hernia mesh repair.

P924
A CASE OF POLYSPLENIA AND AGENESIS OF THE DORSAL PANCREAS REFERRED FOR EUS EVALUATION OF A PANCREATIC HEAD MASS
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Purpose: Background: Polysplenia is a rare congenital malformation rarely diagnosed in adults. Patients with this syndrome usually do not survive over the age of 5 due to associated cardiac anomalies. Adult polysplenia patients lack the cardiac defects and are usually diagnosed incidentally. Several intra-abdominal anomalies have been described in association with polysplenia, including malformation of the pancreas. We present a case of polysplenia, agenesis of the dorsal pancreas, enlarged liver, and duodenal narrowing referred to our center for endoscopic ultrasound (EUS) of a suspected pancreatic head mass.

Case: 47-year-old woman with nausea, vomiting, epigastric pain, and 35 lb. weight loss over 1 year. Her past medical history included diabetes mellitus, hypertension and lung cancer that was cured with left pneumonectomy. She has no smoking, but is currently abusing alcohol. Physical examination was notable for absent breath sounds on the left, but was otherwise normal. Complete blood count and basic metabolic panel were normal. AST and ALT were elevated (112 IU/L and 60 IU/L respectively). Ultrasound and alkaline phosphatase were normal. Transabdominal ultrasound and CT scan of the abdomen done at an outside hospital to evaluate her symptoms were read as showing a head of pancreas mass with atrophic vs. absent body and tail of the pancreas. Furthermore, there were peripancreatic lymphadenopathy vs. splenule. These results prompted referral to our center for EUS of the pancreatic head mass. On further review of the CT scan 3 splenules were present in the left upper quadrant, and the dorsal pancreas was absent. The liver was enlarged with an atrophic left lobe. EGD was first performed and at the junction of the duodenal built to D2 there was a sharp, unusual angulation/distortion. The endoscope was maneuvered upward and to the right to get into D2. There was a muscular web making the area difficult to traverse. EUS was performed and confirmed the absence of the body and tail of the pancreas beyond the portal confluence. There were 3 splenules noted in the usual location of the spleen.

In the head and neck of the pancreas the parenchyma was lobular, with hyperechoic foci and strands. The MPD emerged from the papilla along with the CBD, and was of normal appearance and caliber. The portal confluence appeared dilated with an anomalous venous branch. The patient presented with symptoms concerning for a pancreatic head mass, abdominal pain, and weight loss over 1 year. On physical exam there was no evidence of metastatic disease. The patient had no symptoms concerning for celiac disease.

Conclusion: Agenesis of the dorsal pancreas is a rare association with polysplenia. Our case highlights the importance of considering polysplenia in the differential diagnosis of pancreatic masses in patients with certain clinical symptoms. This case is also interesting in that it is the first case to our knowledge in an adult patient with polysplenia.

P925
GASTRODUODENAL ULCERATION AND CMV INFECTION IN A PATIENT TREATED WITH MICROSPHERE RADIOEMBOLIZATION
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Purpose: Introduction: Radioembolization is an emerging tumoricidal modality that allows targeted delivery of radioactive microspheres. While the precision of this technique offers several advantages over traditional external beam radiation therapy, it still poses significant risks to non-target organs. In this report, we present a case of gastrointestinal ulceration and concurrent cytomegalovirus (CMV) infection in a patient treated with Yttrium-90 microsphere radiembolization.

Case Presentation: A 66 year old man with a history of chronic hepatitis B infection and previously resected hepatocellular carcinoma, developed tumor recurrence one year prior, and was treated with Yttrium-90 microsphere radioembolization via the left hepatic artery. At the time of radioembolization, radioactivity was confirmed in the left lobe of the liver and signal was also noted in the duodenum and the head of the pancreas. The patient presented one month after radioembolization complaining of abdominal pain and 30 pound weight loss. An upper endoscopy was performed, revealing multiple erosions in the body of the stomach, a 3 cm, clean-based ulcer with pigmented spots involving most of the pylorus, and two smaller, clean-based ulcers in the duodenum. Biopsies from the ulcers revealed inflamed mucosa and submucosa with scattered systemic microphirides and CMV inclusion bodies. The patient was treated with intravenous proton pump inhibitors and nutritional support. Symptoms resolved within one week and the patient was discharged, tolerating oral intake. Discussion: We present a case of concomitant radiation-induced gastrointestinal ulceration and CMV infection in a patient treated with intra-arterial Yttrium-90 microsphere radioembolization. Due to the intermittent arterial supply of the liver, pancreas, stomach, and duodenum, the potential delivery of radioactive microspheres to non-target organs, and subsequent injury, is a recognized phenomenon. Furthermore, radiation can lead to local immunosuppression and subsequent opportunistic infections. Our case highlights the importance of considering gastrointestinal ulceration in the setting of radiation-induced suppression and may have contributed to the severity of disease in this patient. We hypothesize that the initial insult caused by ionizing radiation led to local inflammation and immunosuppression, allowing CMV to cause gastrointestinal infection to reemerge and exacerbate the patient’s condition.

Conclusion: Patients undergoing radiation therapy commonly suffer damage to the alimentary tract. This case suggests that in patients with presumed radiation-induced gastrointestinal disease, infectious etiologies must be considered and ruled out in order to optimize treatment and outcome.

P926
CD4+ T-CELL LYMPHOPROLIFERATIVE DISORDER OF THE GUT
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Purpose: T-cell lymphomas of the gastrointestinal tract are rare and not well characterized. The principal subtype is enteropathy associated T-cell lymphoma, which tends to have an aggressive course and poor prognosis. In recent years, several case reports have emerged of CD4+ T-cell lymphomas of the gastrointestinal tract unrelated to celiac disease, which have an indolent course associated with an improved prognosis. We report a case of a 53 year old Caucasian male who presented to the gastroenterology clinic with a four month history of diarrhea and a 20 pound weight loss. He denied any nausea, vomiting, abdominal pain, recent travel, or sick contacts. He had empirically started a gluten-free diet, which did not alleviate his symptoms.

He had a past medical history of colon polyps with a normal colonoscopy six months prior to presentation. His family history was significant for a maternal grandfather with colon cancer diagnosed in his 70s, and a niece with celiac disease. His physical exam revealed small scattered lymph nodes in his neck. On laboratory exam he had evidence of malabsorption manifested by a low albumin, B12, and VitD25 level. A tissue transglutaminase IgA was negative, and quantitative IgA levels were normal. An esophagogastroduodenoscopy was performed, which revealed a hypopycnergous mass, and a nodular duodenum with diffuse villous blunting. Multiple biopsies of the esophageal, duodenal, and jejunal mucosa were positive for CMV.

Final pathology: CMV without malignancy. Patient recovered post-operatively without further episodes of GI bleed. CMV enterocolitis presents with abdominal pain, bloody diarrhea, weight loss and fever. Diagnosis is made by symptoms, visualization of ulcers, and intracellular viral inclusions in mucosal cells. CMV of the GI tract usually involves esophagus, colon, and less commonly small intestine. Ganciclovir is the treatment of choice for 3-6 weeks. Surgical intervention is necessary with signs of peritonitis, free perforation or persistent GI bleed. This case describes CMV enterocolitis with GI bleeding, no other signs of peritonitis or free perforation. This case also highlights the importance of considering gastrointestinal ulceration in the setting of radiation-induced suppression and may have contributed to the severity of disease in this patient. We hypothesize that the initial insult caused by ionizing radiation led to local inflammation and immunosuppression, allowing CMV to cause gastrointestinal infection to reemerge and exacerbate the patient’s condition.

Conclusion: This case illustrates an unexpected yet possible late complications related to inguinal hernia mesh repair.

P927
CYTOMEGALOVIRUS ENTEROCOLITIS COMPPLICATED BY PSEUDOTUMORS IN THE TERMINAL ILEUM
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Purpose: Cytomegalovirus (CMV) is known to cause significant enterocolitis in immunocompromised people. We describe pseudotumors of the ileum caused by CMV enterocolitis in a patient with metastatic malignant melanoma status post biochemotherapy one week ago presents with two days of diarrhea, anorexia, abdominal pain, and fever. On presentation T 38.1°C, BP 89/49, P 102 bpm, RR 44, SaO2 98% on 2lpm. Patient was tachypneic, abdomen without bowel sounds, tympanic, diffusely tender to palpation, and normal rectal exam.

Blood: WBC 100, HB 10.4, Hct 29. Ph 14.000, lactate 4. Stool culture were negative. Imaging: ceacal pneumatisis intestinalis and transverse colon distention. Biopsies of the Streptococcus Vican, which was Citrobacter Braackii. CMV positive by PCR. Patient treated for neutropenic typhlitis with flagyl and meropenem. He developed melena and recurrent fevers on hospital day #24: Esophasogastroduodenoscopy (EGD) revealed Disealoy's lesion, treated with hemoclip, and the patient did well occurred 3 days later. Repeat EGD showed clips in place over previous lesion without bleeding. Colonoscopy revealed dark clots in terminal ileum (TI), no active bleeding, and friable ceacal mucosa. Tagged RBC scan and push enteroscopy to mid-jejunum were negative for active bleed. Cecal biopsies had intracellular and intracytoplasmic viral inclusions and positive stain for CMV antigen. CMV serologies positive with viremia. Intravenous ganciclovir started, however hematochezia continued. Visceral angiography showed extensive diverticulosis distal branch of the cecum. The patient was started on ganciclovir, which did not alleviate his symptoms. The patient recovered post-operatively without further episodes of GI bleed. CMV enterocolitis presents with abdominal pain, bloody diarrhea, weight loss and fever. Diagnosis is made by symptoms, visualization of ulcers, and intracellular viral inclusions in mucosal cells. CMV of the GI tract usually involves esophagus, colon, and less commonly small intestine. Ganciclovir is the treatment of choice for 3-6 weeks. Surgical intervention is necessary with signs of peritonitis, free perforation or persistent GI bleed. This case shows CMV enterocolitis can develop life-threatening complications such as hemorrhagic ulcerations causing GI bleed and inflammatory pseudotumors contributing to adhesions and perforation. Failure of patient to improve with appropriate medical therapy should prompt clinicians to further investigate the presence of complicating factors, such as CMV masses.
CT of abdomen revealed a small non-contrast filled loop of bowel in the right mid abdomen suspicious for a Meckel's diverticulum, this was confirmed at exploratory laparotomy and was resected. It measured 7.5 cm in length and 2.5 cm in diameter with a thick, whitish, cloudy fluid content with an abscess, which grew actinomyces, sensitive to ciprofloxacin. On post-op day two, the patient was discharged home. She remained symptom free on follow up.

Conclusion: Meckel’s diverticulum, the most prevalent congenital anomaly of the gastrointestinal tract, is due to failure of the vitelline duct to obliterate during the fifth week of fetal development. Though rare, there has been a risk of perforation and hemorrhage, and the discovery of an abscess in this case highlights the need for awareness and a high degree of suspicion. Meckel’s diverticulum can be a cause of abdominal pain and may present different symptoms such as diarrhea, nausea and occasionally pain, which can be misdiagnosed. This case emphasizes the importance of including Meckel’s diverticulum in the differential diagnosis of unexplained abdominal pain. It also highlights the importance of thorough exploration during surgery to ensure complete removal of the diverticulum and prevent recurrence or complications. The patient did well postoperatively and was discharged home without any further complications. Meckel’s diverticulum should be considered in the differential diagnosis of unexplained abdominal pain and should prompt a thorough exploration during surgery to ensure complete removal and prevent recurrence.

P931

A CASE OF ALEUKEMIC MONOYCYCIC NEOPLASM CAUSING DIARRHEA AND VOMITING

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Purpose: Aleukemic monocytic leukemia (extramedullary monocytic tumor) is a rare malignancy that involves immature granulocytes and monocytess forming a mass in a location other than the medullary bone. This is the first known report of this neoplasm involving the gastrointestinal tract from the stomach to the colon.

Case: A 34 year old female developed diarrhea, abdominal cramping weight loss and was found to have cloburstid diarrhea colitis at her local hospital. She was treated with metronidazole but her symptoms returned. She underwent a colonoscopy with biopsy at her local hospital and was diagnosed with extramedullary monocytic tumor. She developed worsening nausea, vomiting, and diarrhea and her symptoms markedly improved. Unfortunately her symptoms recurred upon tapering of the steroids. She was transferred to our institution where an upper endoscopy showed diffuse edema, erythema, and ulceration in the stomach with erythema and edema in the duodenum. Colonoscopy showed pan colitis with erythema, edema, and small shallow ulcerations that also involved the terminal ileum. The mucosa of the upper GI tract and lower GI tract appeared unusually similar. Biopsies of the stomach, duodenum, terminal ileum, and colon all showed lymphocytic infiltration with staiings showing no clonal populations. The duodenal biopsies showed some villous blunting. Prominent Celiac serology and stool cultures were negative. She developed a dry cough and CT scan of the chest, abdomen and pelvis revealed small lymph nodes, mesenteric vessel engorgement, lower lobe pulmonary nodules. CT-guided pulmonary nodule biopsy showed fibrosis, non-caseating granuloma, and pronounced lymphocytic infiltration. Azathioprine was started and she eventually had clinical improvement in her symptoms. Repeat upper endoscopy however showed worsening gastritis with large 1-2 cm nodules throughout her stomach. Pathology review of gastric, duodenal and colon biopsies showed worsening infiltration by atypical hemophagocytic lymphoid cells to stage positively for GALT and KPI. Bone marrow biopsy was completed with resulting lymphoid predomiance, non-caseating granuloma. She was diagnosed with aleukemic monocytic neoplasia. Her condition deteriorated rapidly and she died prior to being offered chemotherapy.

Conclusion: Aleukemic monocytic leukemia is an extremely rare condition during which leukemic cells invade tissue prior to appearance in the bone marrow or peripheral blood. This appears to be the sentinel case of gastrointestinal involvement from the stomach to the colon. The unique presentation of this disorder, treatment with broad empirical radiation to affected tissues and systemic chemotherapy. The prognosis is quite poor.

P932

MASSIVE GASTROINTESTINAL BLEEDING AND DIFFUSE BOWEL WALL THICKENING CAUSED BY A CASE OF ADULT DENDRITIC CELL SYNDROME WITH PERNICIOUS ANEMIA, DEVELOPED AFTER METICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (MRSA) INFECTION

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Purpose: We report a rare case of massive GI bleeding and diffuse bowel wall thickening caused by the gastrointestinal tract of a case of adult dendritic cell syndrome with pernicious anemia developed after meticillin-resistant Staphylococcus aureus (MRSA) infection.

Results: A 24 year old male with a medical history of multiple left arm MRSA abscesses in the past. The patient now presents with severe lower quadrant abdominal pain, hematemesis, and melena. Computed tomography of the abdomen and pelvis revealed diffuse small bowel wall thickening. Subsequent esophagogastroduodenoscopy (EGD) and push enteroscopy revealed diffuse small bowel strictures, the patient developed a diffuse palpable, purplish, coalescing rash throughout his bilateral lower extremities 6 days after the initial symptoms. Skin biopsy of the rash showed vasculitis consistent with cutaneous vasculitis. The patient was empirically treated for systemic lupus erythematosus, but his rash began to resolve. However, the patient developed recurrent hematemesis and melena. Repeat EGD showed an ulcerated esophageal mucosa with severe inflammation, biopsy demonstrated a neutrophilic infiltrate, and push enteroscopy revealed a prominent ulcer in the proximal jejunum. The patient was kept on bowel rest with parenteral nutrition and given intravenous mephenylnedinosinolone. The hospital course was complicated by alveolar hemorrhage and he developed renal failure likely from HSP vasculitis, requiring intubation and hemodialysis. Subsequent kidney biopsy showed vasculitis with acute post infectious glomerular nephritis. Eventually, the patient improved clinically with the resolution of the rash and improvement of palpable purpura. The patient was tapered off steroids, tolerated oral feeds and was finally discharged home on hospital day 21.

Conclusion: HSP vasculitis with diffuse GI involvement causing massive GI bleeding is rare, but carries a high mortality. This case presentation is that of adult onset HSP developed after...
MRSA infection in a patient that presented with massive GI bleeding prior to the appearance of typical palpable purpura. In an era when MRSA is omnipresent, it should be considered as an important risk factor for developing HSP. Furthermore, early endoscopic intervention and biopsies are vital to diagnosing this rare entity in order to initiate early systemic steroid therapy, especially when the GI hemorrhage is the only initial presentation.

**P933**

**ATYPICAL CASE OF MUCOSAL MALIGNANT MELANOMA:**

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**Purpose:** Malignant melanoma of the gastrointestinal mucosa in the absence of cutaneous lesions is rare. We report an unusual case of primary malignant melanoma of the duodenal mucosa. A 38-year-old diabetic male presented with nausea, bilious vomiting and severe, colicky, epigastric pain for 3 days associated with worsening jaundice for 7 days. Proton pump inhibitors were started 3 months earlier for “heart burn”. Review of systems was positive for diarrhea, epigastric tenderness. Initial laboratory work up was significant for elevated total bilirubin, transaminases and alkaline phosphatase suggestive of obstructive jaundice. Computed Tomography scan of abdomen with contrast showed hepatic hilar lymphadenopathy and biliary obstruction. Endoscopic Retrograde Cholangiopancreatogram revealed ulcerated proximal duodenal mass with common bile duct (CBD) stricture. Pathology confirmed duodenal malignant melanoma with involvement of CBD. Comprehensive physical exam to rule out any cutaneous or retinal melanoma was negative. Extensive imaging with whole body positron emission tomography and magnetic resonance imaging of the brain did not reveal any other foci. Despite being on chemotherapy and radiotherapy patient rapidly deteriorated with extensive metastasis and expired within 8 months of diagnosis. This case illustrates that a high index of suspicion is required to diagnose mucosal melanoma in a patient with diabetes mellitus which can occur in esoteric locations and progress rapidly with significant mortality.

**P934**

**CYTOMEGALOVIRUS ENTERITIS IN AN IMMUNOCOMPETENT HOST:**

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**Purpose:** Introduction: Cytomegalovirus (CMV), a DNA virus is a member of the herpes virus family. CMV infection may affect all parts of the gastrointestinal tract, most commonly the esophagus and the colon. It is most often seen in immunocompromised patients. Small bowel involvement is rare. We herein present a case of an immunocompetent woman with isolated CMV infection of the small bowel. Case Report: A 65 year old Chinese woman was hospitalized with profuse diarrhea, vomiting, abdominal pain, and fever. Her past history was significant for hypertension, depression, osteoarthritis, hysterectomy and breast cancer 8yrs ago treated with tamoxifen and adjuvant radiation. Her medications included Lottrel,Celebrex, Provatec, Neurontin and Xanax. She was a non smoker and denied any drug use. On physical examination, the patient appeared ill. Her temperature was 101°F, heart rate 142 beats/min and blood pressure 100/72 mmHg. Her abdominal exam was notable for diffuse tenderness with no rebound. Laboratory values on admission were notable for an elevated creatinine but otherwise normal. Her blood and stool cultures were negative. Abdominal computed tomography showed thickening of the mid to distal small bowel. A small bowel follow through showed mucosal edema and ulcerations in the same area. Colonoscopy with intubation of the terminal ileum was normal including random biopsies. The patient was treated with prednisone with rapid resolution of her symptoms. Histological examination showed atypical cells with intracellular inclusions. Immunoperoxidase stain for CMV was strongly positive. A high titer of IgM antibodies to CMV confirmed the diagnosis. Antiviral therapy was initiated but the patient recovered. Discussion: CMV infection in immunocompetent individuals is usually asymptomatic, or may produce a mononucleosis-like illness. It generally resolves without treatment. Small bowel involvement is very rare in immunocompetent individuals. A Medline search produced only 7 cases of CMV enteritis in an immunocompetent subject. The ages ranged from 18 to 68 years. Diarrhea was present in all the patients, abdominal pain in 5 cases and fever in 3 cases. Most patients were treated conservatively and symptoms resolved. Four required surgery for intestinal perforation or obstruction. The characteristic histological findings of CMV enteritis are cytomegalic inclusion bodies in the endothelial cells of the capillaries. Ganciclovir and foscarnet are the current treatment agents for clinically significant CMV infection, most often seen in transplant recipients. In conclusion, CMV enteritis is rare in immunocompetent patients but should be considered in the differential diagnosis of acute enteritis.

**P935**

**CHYLOSIC ASCITES: A RARE COMPLICATION OF MYCOBACTERIUM AVIUM COMPLEX (MAC) INFECTION AND IMMUNE RECONSTITUTION INFLAMMATORY REACTION (IRIS) IN AIDS:**

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**Purpose:** A 40 year old African American male with h/o AIDS (CD4 count of 8.9µL), h/o pulmonary MAC infection with dissemination, non-compliance with medical treatment came to ED for evaluation of gradually worsening abdominal distention for a month associated with weight loss. On admission, he was able, normotensive, but slightly tachycardic. Laboratory examination revealed WBC of 3.8 x 10^3/µL with 89% lymphocytes, and absolute neutrophil count of 1.4 x 10^3/µL. CT scan of abdomen/pelvis showed massive ascites with retroperitoneal and retroperitoneal lymphadenopathy. Abdominal paracentesis revealed cloudy fluid with WBC of 1800 per mm3, 78% neutrophils, and SAAG of 21.8 g/dL. Patient was given antimicrobial coverage for spontaneous bacterial peritonitis, and empiric intensive treatment for MAC peritonitis was started with rifabutin, azithromycin, ethambutol, amikacin, and ciprofloxacin. Antiretroviral therapy was restarted. Microbiological analysis of the peritoneal fluid showed acid-fast bacilli and blood culture grew mycobacterium species confirmed to be MAC by DNA probe. Three weeks later, patient’s CD4 count improved to 34.4µL, however he developed worsening ascites and fever with repeat CT scan showing loculated pocket of ascites. Repeat paracentesis showed chylous peritoneal fluid with WBC of 375 per mm3, 56% neutrophils, and triglycerides level of 780 mg/dL. Antiretroviral therapy was discontinued and steroids were added to intensify MAC treatment for suspected IRIS. Patient’s stool, sputum, blood as well as ascitic fluid culture grew MAC. Patient’s ascites and fever resolved, steroids tapered, and antiretroviral therapy was re-started. Three weeks later, repeat CT scan of abdomen/pelvis showed loculation of ascites with minimal improvement. He was treated with ciprofloxacin and amikacin for 28 days and discharged to rehabilitation facility for intense nutrition support, on azithromycin, rifabutin, ethambutol, bacitracin, and antiretroviral therapy. Patient had repeat CT scan that showed no ascites and improvement in adenosopathy. In the literature, there are only four reported cases of chylous ascites as a complication of disseminated MAC infection in adult patients to our knowledge, and two reported cases complicated by immune reconstitution inflammatory syndrome (IRIS). Though chylous ascites is a rare complication of disseminated MAC infection, it should be considered in the differential diagnosis of ascites in patients with AIDS.

**P936**

**EOSINOPHILIC ASCITES POSTPARTUM:**

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**Purpose:** Eosinophilic ascites (EA) is a rare disorder of unknown etiology that is a part of the syndrome of eosinophilic gastroenteritis. Characterized by peripheral and tissue eosinophilia it can affect any area of the digestive system and all layers of the gut wall.

**Method:** We report a case of EA that developed 10 weeks postpartum.

**Results:** The patient a 20 year old female had no past medical history. She experienced rapid onset of nausea, nonbloody vomiting and diarrhea for several weeks accompanied by abdominal pain and swelling. She noted weight gain of 20 Lbs and leg edema. Her pregnancy had been uneventful. There was no history of transfusions, recent travel, respiratory symptoms, rash, allergies, or fluid intake. There was no history of illicit drug or alcohol use, she was taking no medications. On physical exam she was noted to have a distended abdomen with no pressure 100/72 mmHg. Her abdominal exam was notable for diffuse tenderness with no rebound. Laboratory values on admission were notable for an elevated creatinine but otherwise normal. Her symptoms persisted and she was taken to the operating room for laparoscopy where a segment of abnormal small bowel was resected. Histological examination showed atypical cells with intracellular inclusions. Immunoperoxidase stain for CMV was strongly positive. A high titer of IgM antibodies to CMV confirmed the diagnosis. Antiviral therapy was initiated but the patient recovered. Discussion: CMV infection in immunocompetent individuals is usually asymptomatic, or may produce a mononucleosis-like illness. It generally resolves without treatment. Small bowel involvement is very rare in immunocompetent individuals. A Medline search produced only 7 cases of CMV enteritis in an immunocompetent subject. The ages ranged from 18 to 68 years. Diarrhea was present in all the patients, abdominal pain in 5 cases and fever in 3 cases. Most patients were treated conservatively and symptoms resolved. Four required surgery for intestinal perforation or obstruction. The characteristic histological findings of CMV enteritis are cytomegalic inclusion bodies in the endothelial cells of the capillaries. Ganciclovir and foscarnet are the current treatment agents for clinically significant CMV infection. In conclusion, CMV enteritis is rare in immunocompetent patients but should be considered in the differential diagnosis of acute enteritis.
DON'T SWALLOW YOUR GUM: ABNORMAL POSTORAL EJECTION TOMOGRAPHY (PET) SCAN SECONDARY TO BUBBLE GUM ADHERENT TO THE COLONIC MUCOSA.

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Purpose: A 42-year-old female presented with complaints of breathlessness one month after a right breast lumpectomy for intraductal carcinoma. The PET scan used 18F fluorodeoxyglucose (FDG) with tandem computed tomography (CT) and demonstrated increased activity in the ascending colon, especially in the cecum, most of which appeared to be intraluminal. No other area of abnormal uptake in the abdomen was seen (Image 1). The patient had no family history of colon cancer or bowel symptoms.

Methods: The colonoscopic revealed a large white to pink bubble gum adherent to the proximal right colon wall. The gum was piecemeal shared and removed with 2 Roth baskets (Image 2). Otherwise, the colon appeared normal. A follow up CT scan demonstrated that the intraluminal defect had resolved.

Results: This is a case of a false positive PET scan caused by adherent bubble gum in the colon. PET scans detect malignancy by demonstrating alterations in metabolic and molecular activity. FDG-PET evaluates changes in glycolysis. This leaves PET scans subject to false positive results by any process that increases glucose metabolism or alters the rate of glycolysis, as would occur with mucosally adherent sugared gum.

Conclusion: To our knowledge, this is the first case report of sugared gum in the colon causing abnormal uptake on PET scan. There was one previous case report of abnormal uptake of the tongue during FDG-PET because the patient had chewed gum prior to the PET scan. This case differs from other previous false positive PET scan cases due to foreign bodies, because it details a foreign body causing abnormal FDG uptake, as opposed to a foreign body causing granulomatous reactions, which then secondarily cause alterations in glycolysis resulting in the false positive result. This case teaches us to consider alternate diagnostics and even foreign bodies when dealing with abnormal PET imaging. Finally, it reinforces us to follow what our mothers said: “Don’t swallow your gum.”

IMAGE 1: FDG-PET scan, showing right colon uptake.

PHOTOGRAPH 1: Right colon showing adherent bubble gum.

IMAGE 2: Endoscopic removal of gum with Roth basket.

P938

ISCHEMIC COLITIS, ALCALCULOUS CHOLECYSTITIS AND CATASTROPHIC LONGITUDINAL TRANSVERSE MYELOPATHY IN ANTIPHOSPHOLIPID SYNDROME AND SJOGREN’S VASCULITIS

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Purpose: Introduction: Ischemic colitis, acalculous cholecystitis and transverse myelitis are known hypercoagulable and autoimmune manifestations of antiphospholipid syndrome (APS) and Sjogren’s vasculitis (SV). We describe a patient who developed ischemic colitis, acalculous cholecystitis and catastrophic longitudinal transverse myelopathy (CLTM) secondary to APS and SV. Case: 52 year old previously well female presented with severe right upper quadrant (RUQ) pain associated with constipation. Physical examination showed mild RUQ tenderness. Her ALT was 74 U/L (normal 10-40). Her AST, bilirubin and alkaline phosphatase were normal. Ultrasound of gallbladder was normal. Hepatobiliary scan showed ejection fraction of 4%. Colonoscopy revealed diverticular disease without evidence of diverticulitis. Colon biopsy was not consistent with ischemic colitis. Post-operatively she developed rapidly progressive paraplegia with CLTM. She also developed deep venous thrombosis. Cardiopulmonary tests were used to confirm a diagnosis of CVID. DISCUSSION Similarities between these two clinical entities may lead to an inappropriate diagnosis with associated morbidities.

RESULTS: A 42-year-old female presented with complaints of breathlessness one month after a right breast lumpectomy for intraductal carcinoma. The PET scan used 18F fluorodeoxyglucose (FDG) with tandem computed tomography (CT) and demonstrated increased activity in the ascending colon, especially in the cecum, most of which appeared to be intraluminal. No other area of abnormal uptake in the abdomen was seen (Image 1). The patient had no family history of colon cancer or bowel symptoms.

Methods: The colonoscopic revealed a large white to pink bubble gum adherent to the proximal right colon wall. The gum was piecemeal shared and removed with 2 Roth baskets (Image 2). Otherwise, the colon appeared normal. A follow up CT scan demonstrated that the intraluminal defect had resolved.

Results: This is a case of a false positive PET scan caused by adherent bubble gum in the colon. PET scans detect malignancy by demonstrating alterations in metabolic and molecular activity. FDG-PET evaluates changes in glycolysis. This leaves PET scans subject to false positive results by any process that increases glucose metabolism or alters the rate of glycolysis, as would occur with mucosally adherent sugared gum.

Conclusion: To our knowledge, this is the first case report of sugared gum in the colon causing abnormal uptake on PET scan. There was one previous case report of abnormal uptake of the tongue during FDG-PET because the patient had chewed gum prior to the PET scan. This case differs from other previous false positive PET scan cases due to foreign bodies, because it details a foreign body causing abnormal FDG uptake, as opposed to a foreign body causing granulomatous reactions, which then secondarily cause alterations in glycolysis resulting in the false positive result. This case teaches us to consider alternate diagnostics and even foreign bodies when dealing with abnormal PET imaging. Finally, it reinforces us to follow what our mothers said: “Don’t swallow your gum.”

IMAGE 1: FDG-PET scan, showing right colon uptake.

PHOTOGRAPH 1: Right colon showing adherent bubble gum.

IMAGE 2: Endoscopic removal of gum with Roth basket.
**RHINOCEREBRAL MUCORMYCOSIS WITH CRANIAL NERVE INVOLVEMENT PRESENTING WITH DYSPHAGIA IN AN IMMUNOCOMPROMISED CIRRHOTIC PATIENT**


**Purpose:** To highlight mucormycosis with cranial nerve involvement presenting with dysphagia in an immunocompromised cirrhotic patient.

**Methods:** A 59-year-old male with Laennec’s cirrhosis, diabetes mellitus, and coronary artery disease presented to the emergency department with left-sided facial pain following a tooth extraction 2 days earlier. His facial swelling was initially attributed to the tooth extraction. He had left-sided facial numbness and drooping, with flattening of the left nasolabial fold. The Head CT and MD admission were essentially unremarkable. In view of dysphagia to both solids and liquids, with inability to swallow and choking on liquids, the GI team was consulted. He denied any nausea, vomiting, odynophagia, or abdominal pain. The following day he developed diplopia, and the next day became blind in the left eye. On exam he was tachycardic, T max 100.8, 120.80 mm of Hg and respiratory rate of 16 per minute. He had slurred speech, was unable to open left eye and had no vision in that eye. Pupils were sluggishly in response to light and poorly reactive bilaterally with bilateral ptosis. Absent left ocular motion. Poor gag reflex was present; tongue movements were fine. Abdominal exam was significant for moderate ascites. During hospital stay he developed a white count of 24,000, and became hemodynamically unstable requiring ICU monitoring. A repeat CT of the sinuses now showed bilateral mucosal thickening of the ethmoid, frontal and maxillary sinuses, with frothy mucous in the sphenoid sinus. On nasal endoscopy a necrotic left middle turbinate was seen with white spores in the posterior nasopharynx, biopsies positive for mucor like fungus. The patient was started on amphotericin B and an emergent tracheotomy, radical maxillectomy, and left orbital exten- sion was performed. Post-op the patient continued to deteriorate and he expired two days later.

**Results:**

**Conclusion:** Mucormycosis in cirrhosis is rare and has a poor prognosis. The immunocompromised state present in cirrhosis as well as the underlying diabetes represented risk factors in our patient. This case highlighted a rapid progressive fatal case of rhinocerebral mucormycosis presenting with dysphagia due to cranial nerve neuropathy. Literature search reveals a small case series of cirrhotics with mucormycosis presenting with upper motor neuron signs, but this case is unique in its presentation with dysphagia. In view of the immunocompromised state of cirrhosis, it is important to maintain vigilance for an opportunistic infection. Furthermore, oropharyngeal dysphagia warrants a full neurological evaluation to assess for presence of cranial neuropathy.

P941

**A RARE CASE OF BREAST CANCER METASTASIS PRESENTING AS LINITIS PLASTICA OF STOMACH AND COLON**

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**Purpose:** A 71-year-old Hispanic female patient underwent screening colonoscopy with complaints of recent onset of constipation and weight loss. At the same time an upper endoscopy was done to evaluate for decreased appetite and early satiety. She had significant past medical history for recurrence of breast cancer with diffuse skeletal metastases 2 years ago after a decade of cancer free period. Currently, she was receiving palliative chemotherapy. On exami- nation, she appeared cachectic and pale. Laboratory examination disclosed normocytic anemia, with a Hb level of 10.5 g/dL (normal range for Hb in our institution is 11.5-15.5 g/dL). Colonoscopy highlighted an irregular configuration of the mucosal surface, luminal narrowing, and poor distensibility in the mid-transverse colon (Fig A). Multiple biopsies were obtained. Histopathologic examination of the biopsy specimen revealed colonic mucosa with metastatic adenocarcinoma, morphologically consistent with lobular carcinoma of breast (Fig B). EGD revealed thickened gastric folds; multiple biopsies were obtained. Histopathologic examination of the gastric biopsy specimens also revealed metastatic adenocarcinoma from breast. Extra- hepatic gastrointestinal metastasis from breast cancer is uncommon. Metastasis to the stomach and small bowel from breast cancer are reported to be more frequent than colon and rectal involvement. Two reviews dealing with metastatic breast cancer have reported the involvement of colon in about 4% of the patients. Lobular carcinoma is the most common histological type of breast cancer that metastasizes to the colon and rectum. It is important to realize that patients with known breast cancer, especially of the lobular type, with vague, nonspecific abdom- inal signs and symptoms, particularly of an obstructing nature should be endoscopically screened for gastrointestinal metastases.

**P942**

**DOUBLE TAKE: GASTRIC POLYPS ARE REAL!**

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**Purpose:** A 47-year-old woman with history of GERD on chronic PPI and hyperplastic colon polyps presents to GI clinic with iron deficiency anemia of unknown etiology. She has a family history significant for a brother with a Schatzki’s ring of the esophagus as well as Barrett’s esophagus, a father with colon cancer detected at age 50, two paternal uncles with colono- scopies revealing less than 100 polyps, a paternal great-grandfather with colon cancer, and a paternal grandfather with gastric cancer. Patient’s hemoglobin and hematocrit were 10.5 g/dL and 31.6%, respectively. Iron studies revealed an iron level of 25 mg/dL, TIBC of 488 mg/dL, Fer- ritin of 6 mg/mL, transferrin of 390 mg/dL, and transferrin saturation of 5%. Colonoscopy re- vealed a sessile, 3mm polyp in the ascending colon and a sessile, 4mm polyp in the rectum both with biopsy results consistent with a hyperplastic polyp. EGD revealed a mild Schatzki’s ring in the lower third of the esophagus, a medium-sized hiatal hernia, and 30-50, 5 to 30 mm pedul- culated and sessile polyps with no stigmata of recent bleeding in the gastric antrum and body of the stomach. The examined duodenum was normal. Histology confirmed these were fuscoid gland polyps. Video capsule endoscopy revealed multiple large pedunculated and sessile polyps with no bleeding or stigmata of recent bleeding in the gastric body, fundus and antrum. The pa- tient was evaluated for genetic mutations of the APC or MYH genes because of the multiple, large fuscoid gland polyps and her family history of colon cancer. Genetic testing came back negative for any mutations in the APC or MYH genes. Ultimately, it was felt that the patient’s multiple polyps were secondary to chronic PPI use and were not secondary to malignancy. Polyps are often incidentally discovered on endoscopy and should not simply be overlooked. They require a “double take”. Biopsy is necessary for histological evaluation. When multiple gastric polyps are found, particularly to the degree in this case, further evaluation should be un- dertaken, regardless of histologic type. Assessing the possibility of genetic mutations that could predispose to GI malignancy is reasonable. APC or MYH gene mutations may be revealed which correlate highly with FAP. In addition, there is a clear correlation between fuscoid gland polyps and FAP. This could have serious implications for a patient leading to colon cancer. Sudden- ly, the incidental finding of a gastric polyp which may have been overlooked is very signifi- cant. In conclusion, gastric polyps need diagnostic evaluation beyond what is seen during en- doscopy which is a change from the current practice during many endoscopies.
**P946**

**GASTRAPPESIS FOLLOWING SMALLPOX VACCINATION**

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**Purpose:** Gastroparesis is a disorder characterized by symptoms of gastric retention and evidence of delayed gastric emptying in the absence of mechanical obstruction. Established causes of gastroparesis include systemic disease (such as diabetes mellitus) and abdominal surgery. There are also three reported cases of gastroparesis occurring following vaccination. We present an additional case of post-vaccination gastroparesis, occurring following a smallpox vaccination.

**Methods:** A 37-year-old Caucasian woman in her normal state of good health underwent smallpox vaccination. Within 24 hours, she developed a globus sensation and facial flushing, which were treated with antihistamines and persistent symptoms. Over the next three weeks, she was seen multiple times for dysphagia, nausea, headaches, and a sensation of her throat closing. She was treated with epinephrine, H1 and H2 receptor antagonists, and a prolonged course of corticosteroids. Her symptoms improved to include tightness, dysphagia, dizziness, and elevated blood pressure. One month after the onset of her symptoms, pulmonary consultation was obtained; laryngoscopy revealed denuded epithelium on her vocal cords; consistent with intussusception. She was treated symptomatically in our GI clinic. A review of gastrointestinal symptoms was notable for persistent nausea, frequent vomiting, heartburn, and regurgitation. An EGD was normal and 24-hour ambulatory pH testing showed significant acid reflux (JD score 86). A nuclear medicine gastric emptying study showed 93% of gastric contents retained at 90 minutes. Based on these findings and the temporal relation of her symptoms to her smallpox vaccination, she was diagnosed with post-vaccination gastroparesis. Her GERD was treated with a PPI. She was unable to tolerate metoclopramide for treatment of her gastroparesis, while domperidone (20 mg po qid) and erythromycin (250mg po tid) were ineffective. Her symptoms have persisted for more than eight months and pharmacologic treatment is being considered.

**Results:** To our knowledge, this is the fourth reported case of post-vaccination gastroparesis.

**Conclusion:** This case demonstrates that gastroparesis is a potential adverse effect of vaccination. Although exceedingly rare, post-vaccination gastroparesis can significantly impair patients’ quality of life. Physicians should consider this diagnosis and investigate accordingly when patients present with compatible symptoms after receiving a vaccine.

**P947**

**ALCOHOL INDUCED ISCHEMIC GASTRIC NECROSIS**

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**Purpose:** Ischemic gastric necrosis (IGN) is a rare clinical entity with an unknown incidence. Etiologies include: atherosclerosis, embolism, infection, corrosive burns and idiopathic. Most reported cases have had advanced necrosis and required surgical treatment.

**Methods:** We report a case of epigastric pain and upper GI bleeding caused by IGN due to alcohol intoxication. The patient was treated conservatively.

**Results:** A 43-year old male with a past medical history of AIDS, hypertension, and chronic alcohol abuse presents to the emergency department with epigastric pain and hematemesis for 1 day. The patient admitted to drinking 10 beers and a 1/3 pint of vodka the previous day. His blood alcohol was 9.0 g/dL. platelet count was 53,000 and white blood cell count was 1,900. The patient was started on pantoprazole and octreotide intravenous drips and emergent upper esophagogastrroduodenoscopy (EGD) was done. EGD found caustic esophagitis and a small Mallory-Weiss tear. Biopsies were obtained from the stomach as the mucosa was noted to be diffusely edematous, erythematous, and friable. Post procedure the patient was placed on IV fluorocortolone and continued on the pantoprazole drip. Serial blood counts showed a drop in the hemoglobin. Four units of packed red blood cells were transfused with an appropriate response in hemoglobin and vital signs. The patient was started on a clear liquid diet the following day. There were no further episodes of hematemesis and no further transfusions were required. Repeat EGD was done 72 hours after admission noted decreased gastric edema and friability. Pantoprazole drip was changed to twice a day oral dosing and the diet was advanced. Pathology showed ischemic mucosal necrosis of the stomach. There were no viral inclusion bodies. H. pylori or vactin ulos.

**Conclusion:** The patient was subsequently discharged with planned follow up.

**P945**

**HYPOCALCEMIA DUE TO PROTON PUMP INHIBITORS IN A PATIENT WITH PARATHYROID INSUFFICIENCY**

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**Purpose:** Proton pump inhibitors (PPIs) are among the most commonly prescribed medications in the United States and are generally safe with few side effects. We report a case of recurrent symptomatic hypocalcemia associated with PPI use. A 33 year old female with a history of papillary thyroid cancer resection and subsequent diminished PTH activity requiring oral calcium carbonate to maintain normocalcemia presented with postprandial heartburn. She was started on omeprazole/sodium bicarbonate 40mg once daily for GERD. After one week of therapy she developed nausea, vomiting, and tingling sensation. Calcium levels revealed a decrease in calcium levels from a baseline 9.6 to 6.5mg/dL despite her oral calcium supplementation. Upon discontinuation of omeprazole/sodium bicarbonate, her calcium levels normalized and the symptoms of hypocalcemia resolved. Symptoms of GERD persisted and Esomeprazole 20mg once daily was begun. After one week of therapy, the symptoms of hypocalcemia returned and serum calcium levels decreased to 7.3mg/dL. Because esomepra- zole 20mg failed to control her heartburn, the dose was increased to 40mg once per day with- out an increase in her calcium supplementation. This resulted in yet another episode of symp- tomatic hypocalcemia and a drop in calcium levels to 6.3mg/dL. Her calcium supplementation was changed from calcium carbonate to calcium citrate, resulting in normalization of serum calcium levels; however, calcium carbonate caused significant dyspepsia. Eventually the dose of calcium citrate was titrated so that normocalcemia could be achieved with only minimal dys- pepsia with esomeprazole 40mg per day. The acidic environment in the stomach increases calcium solubility by releasing solated calcium salts from its insoluble forms. Calcium malaabsorp- tion secondary to acid suppression by PPI therapy appears to have caused symptomatic hypocalcemia in this patient with parathyroid hypofunction. Gastricttotic and peracute ane- mia have been shown to increase the risk of osteopenia and fracture, and recent studies suggest that chronic acid suppression may lead to an increased risk of hip fractures possibly re- lated to decreased calcium absorption. Symptomatic hypocalcemia due to PPIs is rarely seen in patients with hypoparathyroidism. The case we report should alert clinicians about this possible complication of PPIs in patients with hypoparathyroidism and should also be a re- minder about the potential for asymptomatic hypocalcemia in other patients. Compared to cal- cium carbonate, calcium citrate may be better suited for use in patients with hypoparathyroidism as calcium citrate is more soluble in acid, increasing its absorption.

**Conclusion:** Calcium carbonate may be preferred for long-term therapy of hypocalcemia due to hypoparathyroidism.

**P948**

**ALBUMIN INJECTION FOR ENDOCOSMIC HEMOSTASIS OF BLEEDING PEPTIC ULCER DISEASE**

I. Riosca, MD, R. D. Shaw, MD, M. D. Harris, MD, K. Mathews, MD.

**Purpose:** This case demonstrates that gastroparesis is a potential adverse effect of vaccina- tion. Although exceedingly rare, post-vaccination gastroparesis can significantly impair pa- tients’ quality of life. Physicians should consider this diagnosis and investigate accordingly when patients present with compatible symptoms after receiving a vaccine.

**Conclusions:** The patient was subsequently discharged with planned follow up.

**Conclusion:** IGN has been scarcely reported in the literature. To our knowledge, this is the first reported case of alcohol induced IGN. EGD and biopsy confirmation are important to help guide therapy. Treatment should include acid suppression with proton pump inhibitor, aggres- sive hydration and blood transfusion to prevent further ischemia and necrosis. Repeat EGD is warranted to evaluate the severity and response to conservative treatment, and to determine the need for surgical intervention.

**P949**

**MORE THAN A POLYP**

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**Purpose:** Gastromasseteric metastasis from the lung is rare and when encountered the common site of metastasis is usually to the small bowel. The diagnosis of metastasis made ei- ther on imaging or during symptomatic presentation such as bleeding or intestinal obstruction. We report a case of asymptomatic metastatic lung cancer detected as a sessile polyp on a rou- tine colon cancer screening. A 65 year old male was followed up by his primary care physician

**Results:** To our knowledge, this is the fourth reported case of post-vaccination gastroparesis.

**Conclusion:** This case demonstrates that gastroparesis is a potential adverse effect of vaccina- tion. Although exceedingly rare, post-vaccination gastroparesis can significantly impair patients’ quality of life. Physicians should consider this diagnosis and investigate accordingly when patients present with compatible symptoms after receiving a vaccine.

**Results:** To our knowledge, this is the fourth reported case of post-vaccination gastroparesis. The patient was subsequently discharged with planned follow up.

**Conclusion:** IGN has been scarcely reported in the literature. To our knowledge, this is the first reported case of alcohol induced IGN. EGD and biopsy confirmation are important to help guide therapy. Treatment should include acid suppression with proton pump inhibitor, aggressive hydration and blood transfusion to prevent further ischemia and necrosis. Repeat EGD is warranted to evaluate the severity and response to conservative treatment, and to determine the need for surgical intervention.
for hypertension and hyperlipidemia. His past history was notable for recurrent diverticulitis in the past requiring sigmoid resection and a rectal polpy (tubular adenoma, low grade dysplasia) discovered on medications for his hypertension and hyperlipidemia. He had no prior history of smoking, or family history of cancer. He was asymptomatic during the clinical visit. He underwent colon age appropriate cancer screening and a 1 cm sessile poly was found in the distal transverse colon. The biopsy results of his sessile poly showed moderately differentiated adenocarcinoma. Immunohistochemical stains were performed using antibodies directed against synaptophysin, PSA, cytokeratin 20, chromogranin, cytokeratin 7, S100, and TTF-1. The neoplastic cells showed strong cytoplasmic positive staining for cytokeratin 7 and strong nuclear staining for TTF-1. The positive TTF-1 staining virtually excluded a colorectal primary malignancy. The combination of immunostains plus histology was consistent with a metastatic non-small cell carcinoma from a pulmonary primary. He had no history of pulmonary symptoms such as cough, chest pain or dyspnea. He underwent a CT scan of the chest which showed multiple pulmonary nodules, largest measuring 5.5x3.3cm with mediastinal lymphadenopathy. A flexible bronchoscopy was performed and biopsy from the lung confirmed the diagnosis of grade 3/4 adenocarcinoma of the lung. Later he was evaluated in oncology where a review of systems revealed occasional headache without any other neurological symptoms. His clinical examination was again unremarkable however a CT scan of the head showed multiple cystic lesions with vasogenic edema. Treatment was started with Carboplatin and Paclitaxel, but disease progression occurred on combination chemotherapy. Gastrointestinal metastasis from the lung cancer is rare, and to the best of our knowledge this is the first case report of stage IV metastatic lung presenting as a sessile poly in an asymptomatic patient.

**P950**

**METASTATIC RENAL CELL CARCINOMA PRESENTING AS A COLOCOLIC INTUSSUSCEPTION**

K. L. Reed, DO, K. R. Patel, MD, S. A. Sorser, MD, R. Taha, DO, J. Greer, MD. Providence Hospital, Southfield, MI.

**Purpose:** Introduction Intussusception is a rare disorder in which the intestine prolapses into an immune rich mesenteric portion of the intestine forming a telescoping effect. This can often lead to obstruction. Intussusception is the most common cause of intestinal obstruction among children and its etiology is often idiopathic, while a small portion of cases are brought on by a viral infection. Intussusception in adults is a rare phenomenon. Most cases of adult intussusception are the result of an underlying organic cause. Case Presentation A 60-year-old African American male with a history of peptic ulcer disease presented to the emergency room complaining of intermittent abdominal pain associated with progressively worsening constipation of two weeks duration, as well as an unintentional 15 pound weight loss over the prior 2 months. Initial work up included computed tomography (CT) of the abdomen, which showed a large left renal mass, diffuse wall thickening in the descending colon associated with intussusception. Note was also made of a probable colonic mass and multiple pulmonary nodules. A colonoscopy was performed and findings were consistent with an intussusception and an obstrucive lesion at 60 centimeters. Biopsies of the lesion were obtained and the area was takedown with India ink. Necrotic tissue fragments and acutely inflamed benign colonic mucosa were identified on histologic examination. The patient underwent exploratory laparotomy with left partial colectomy and primary anastomosis. A left radical nephrectomy was also attempted, but the tumor was deemed resectable. The pathology obtained from the partial colectomy was consistent with metastatic renal cell carcinoma. Discussion Renal cell carcinoma is rare, accounting for only 3% of all adult malignancies. Approximately 30% of the cases present with metastatic disease, with a 5-year survival of less than 5%. Intussusceptions account for only 3% of obstructions in adults and of these 90% have an identifiable pathologic lead point. The majority of intussusceptions are either enteric or ileocolic cases, with only one third of adult intussusceptions being colocolic or colorectal in nature. Approximately two thirds of colonic cases have a malignant basis compared to one quarter of enteric types. Debate has centered on whether to perform endoscopic reduction before surgical resection. However, recent trends have favored surgical resection without prior reduction in order to prevent tumor seeding.

**P951**

**BREAST CANCER METASTASIZING TO MULTIPLE COLON POLYS**

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**Purpose:** Common sites of metastasis for the breast cancer are bones, lungs, central nervous system and liver. Colon is the rarest site of metastasis for breast cancer. 84 year old female with history of stage III infiltrating lobular carcinoma of the breast presented with abdominal discomfort and diarrhea. Extensive work up was negative. Colonoscopy showed three polyps (2-6 mm) in the cecum and ascending colon and about 10 mm polyp at the hepatic flexure. No masses or other lesions seen on colonoscopy. Pathology of hepatic flexure polysh showed sessile serrated adenoma and cells positive for CKAE1/AE3 and ER positive staining consistent with metastatic lobular carcinoma. Similarly biopsy specimen from ascending and cecum showed tubular adenoma and metastatic carcinoma of breast (confirmed with CKAE1/AE3 and ER positive staining. PR and CD8 was negative). Histological comparison was also done from her breast cancer which revealed similar tumor. Patient is currently on systemic chemotherapy (faslodex) and doing well. There are about <30 cases in the literature of breast cancer with metastasis to colon in alive individuals. Most of these tumors were lobular carcinoma. Our patient is unique as there is no other case report of breast cancer with metastasis to colon polyps in an alive patient. Diagnosis of colon metastasis from breast is difficult because of non specific symptoms, variable imaging presentations and its rarity. Patients with history of breast cancer presenting with abdominal pain, diarrhea or obstruction should be examined for possible colon metastasis.

**P952**

**SORBITOL INDUCED COLONIC NECROSIS: A CASE REPORT**

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**Purpose:** Sodium polyethylen sulfonate is a cation exchange resin, which primarily acts in the colon. It is often administered with an osmotic laxative (sorbitol), PO or rectally. Gastrointestinal adverse reactions include anorexia, nausea, vomiting, constipation, fecal impaction, and intestinal necrosis (rare). Here we present an uncommon case of ulceration of the ascending colon following multiple oral administrations of sodium polyethylene sulfonate-sorbitol.

**Methods:** A 70 yo was admitted with urinary tract infection and pre-renal azotemia. She received 5 oral doses of Sodium polyethylene sulfonate-sorbitol for hyperkalemia and later developed lower abdominal pain. Colonoscopy revealed a solitary 5 cm raised erythematous ulcer in the ascending colon(Fig.1). Biopsy showed necrotic tissue and purple crystals in inflammatory exudates(Fig.2). Patient’s symptoms were improved spontaneously after discontinuation of therapy.

**Result:** Colonicoscopy and pathologic findings were consistent with Sorbitol induced colitis. First case of uremia and colonic necrosis after sodium polyethylene sulfonate-sorbitol enema was reported in 1987. A study in a rat model has shown that sorbitol is in fact the cause of the intestinal necrosis. The exact mechanism by which sorbitol induces intestinal necrosis is unknown.

**Conclusion:** Sorbitol induced colitis is a rare condition which may have significant morbidity and mortality. Considering the adverse reactions, this therapy must be used with caution and should be limited to life-threatening hyperkalemia. Physicians must remain vigilant for any signs or symptoms of intestinal problems.
RESULTS: Colonitis is most prevalent presentation of CMV infection in immune-competent patients. Comprehensive data of endoscopic findings of CMV colitis in such pts is not well documented in literature. We reviewed endoscopic findings of all individual documented cases of CMV colitis in immune-competent patients in English literature. Patients with Inflammatory bowel disease were excluded. As per our review of 50 patients (table 1) 40% underwent colonoscopy. Recto-sigmoid region was the most predominant location involved. 46% of pts undergoing colonoscopy had right colon involvement. Approx 50% patients had either isolated or multiple ulcerations. The ulcerations described were largely superficial in nature. Some cases described linear ulceration. Inflammation, edema and erythema of colonic mucosa were other prominent features. Few cases described 'pseudomembrane' formation. One case of large mass like lesion masquerading colon cancer have been reported. The predominant pathology apart from ulcerations were acute and chronic inflammation including inflammatory cells in lamina propria and sub-mucosa. Few cases of cryptitis and crypt abscess have also been reported.

CONCLUSION: Cytochalasin gulositis, although predominantly seen in immunosuppressed state, can also occur in previously healthy patient. It is important to recognize the infection earlier in course of disease process to prevent worse outcome.

Patient underwriting procedure

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<th>Total number of patients</th>
<th>No. of Pts with colonoscopy</th>
<th>No. of Pts with sigmoidoscopy</th>
<th>No. of Pts with Protoclyste</th>
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<td>12 (60%)</td>
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<td>CMV inclusions: Immuno-peroxidase stain</td>
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</table>

P955 ATTENUATED FAMILIAL ADENOMATOUS POLYPOSIS (AFAP) PRESENTING AS AMPULLARY ADENOCARCINOMA A CASE REPORT

Z. Verma MD1,2, A. Marthy, MD1, V. Sood, DO3, K. Linos, MD1. 1. Internal Medicine, Albany Medical College, Albany, NY; 2. Gastroenterology, Albany Medical College, Albany, NY; 3. Pathology, Albany Medical College, Albany, NY.

PURPOSE: To report a rare case and emphasize the significant association of AFAP with ampullary adenocarcinoma.

METHODS: Literacy Review and Clinical Vignette

RESULTS: To report the various types of occurrences in AFAP and highlight the need for further research in dealing with these presentations.

CONCLUSION: A 66-year-old male with a family history of colon cancer presented with a two week history of right upper quadrant pain, jaundice, and 4-kilogram weight loss. Initial laboratory values revealed a total bilirubin of 21 mg/dL with direct bilirubin 12 mg/dL, alkaline phosphatase 462 IU/L, aspartate transaminase 73 IU/L, alanine transaminase 85 IU/L, amylase 64 IU/L, lipase 32 IU/L, and white blood cell count of 8.8 thousand per cubic millimeter. Right upper quadrant ultrasound revealed a 10.2 cm gallbladder with multiple gallstones, and a 1.1 cm stone in the common bile duct with severe intra and extra hepatic biliary dilatation. Subsequently an ERCP was performed which identified numerous gastric polyps and a large, fungating ampullary mass. Cholangiogram at the time of ERCP revealed multiple, 1 cm stones in the bile duct. Sphincterotomy and biliary stent placement were then performed to relieve the patient’s biliary obstruction. Biopsies were taken from both the ampullary mass and the gastric polyps. Pathology revealed the gastric mass to be fundic gland polyps and the ampullary mass biopsies showed adenomatous mucosa with focal high grade dysplasia. Follow up CT scan of the abdomen and pelvis revealed a 2.7 x 2.2 cm mass in the region of the ampulla pancreatic head.

P966 A 50-YEAR-OLD MAN WITH AN UNCOMMON POLYP

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PURPOSE: A 50-year-old asymptomatic man came for repeat colonoscopy. One year before, he underwent a screening colonoscopy during which a diminutive polyp was found in the cecum. The polyp was removed with moderate difficulty. The biopsy showed a mucosal fragment with chronic inflammation and increased mast cells. Histopathological examination of the sigmoid colon biopsy revealed a 3 cm wide area of histiocytic inflammation with a focal granuloma. During a repeat sigmoidoscopy, a 4 mm yellowish sessile polyp was found on the posterior wall. The polyp was removed, but the forceps could not excise the polyp, so polypectomy with a hot snare was performed successfully. There were no complications. Histological examination revealed a completely granular cell tumor.

METHODS: Granular cell tumor (GCT) is a relatively rare soft tissue neoplastic tumor of neural derivation, which commonly occurs in the oral cavity and subcutaneous tissue and is uncommon in the colon and rectum. The GI tract harbors approximately 5% of all GCTs. The most common site for GCT in the GI tract is the esophagus, followed by the duodenum, anus and stomach. Lesions can be incidental findings, or they may give rise to obstructive or pressure symptoms when large enough and in a critical location. Malignancy is rare and has been found to correlate with tumor size (more than 60% of metastatic GCTs were larger than 4 cm). Since colon GCTs are usually benign, endoscopic removal is the most appropriate therapy.

RESULTS: Diagnosis is based on histopathological findings (1) small, uniform nuclei without mitotic figures; (2) histiocyte-like bland-looking neoplastic cells with abundant granular eosinophilic cytoplasm containing acidophilic, PAS-positive, diastase-resistant granules; (3) stain positively for S-100 protein, neuron-specific enolase, and NSE-1 in almost all cases. The tumor cells are non-immunoreactive for epithelial, muscle, endothelial and glial cell markers. This is useful for differentiating a granular cell tumor from other diagnostic possibilities. The abnormal lesion had the typical characteristics of GCT. Since the patient was asymptomatic we did not pursue further work-up. He will have a repeat colonoscopy in 1 year.

CONCLUSION: In conclusion, GCTs of the colon can be found incidentally during colonoscopy and are most commonly removed in the sigmoid colon. Gastroenterologists should consider GCTs in the differential diagnosis of submucosal tumors of the colon.

P957 MANTLE CELL LYMPHOMA OF THE COLON: A RARE RENALITY

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PURPOSE: Mantle cell lymphoma of the colon is a rare entity and reported only in isolated case reports. It is known to comprise less than 0.2% of primary malignant tumors of the colon. We present a case of mantle cell lymphoma of the colon with lymphomatous polyposis and in-
volvement of the brain and orbits. CASE: A 70 year old man, originally from Panama, who had migrated to United States at 33 years of age, with no significant past medical history, presented with a weight loss of 30 pounds over one year. The patient denied history of fever, chills, night sweats, abdominal pain, gastrointestinal bleeding, cough, shortness of breath or chest pain. On physical exam, there was marked proptosis, no lymphadenopathy and unremarkable abdomi- nal exam. Labs revealed anemia with no iron deficiency. Colonoscopy revealed multiple polyps in the ascending, transverse, descending and sigmoid colon, and biopsies were suggestive of mantle cell lymphoma. Immunophenotype was CD5+, CD 20+, CD 43+, CD 23+, also BCL1+ consistent with mantle cell lymphoma. Flow cytometry showed CD 19+, CD 20+, CD 5+, CD 8+ and CD 23–ve. EGD showed antral gastritis with intestinal metaplasia. MRI of the brain revealed multiple lesions in the brain and orbits. Bone marrow examination revealed no in- volvement by the lymphoma. The patient was started on chemotherapy with Rituximab, Adriamycin, vincristine and cyclophosphamide and survived for 8 months after diagnosis. Mantle cell lymphoma of the colon is a rare malignancy which may present as a solitary colonic nodule or as lymphomatous polyposis as in our patient. The current treatment approach for mantle cell lymphoma of the colon is still unsatisfactory and experimental chemotherapies are under investigation.

**Purpose:** A case vignette providing insight in an usual GI manifestation of a rare disease

**Methods:** Case report

**Results:** JC is a 79 year old woman with systemic mastocytosis who presented with one month of fevers, nausea, vomiting and diarrhea. 1 month prior to admission, she was diagnosed with Clostridium difficile colitis. The diarrhea improved after a course of metronidazole, however, it worsened a few weeks prior to admission. The patient was first diagnosed with systemic mastocytois 3 years prior to admission, and had received chemotherapy including Gleevec, dasatinib and steroids. Her disease course was notable for cutaneus manifestations, diffuse adenopathy and cirrhosis with ascites, thought secondary to hepatic infiltration of mastocytes. On exam, bitemporal wasting was noted. She had an erythematous rash on her lower extremities, but no urticaria pigmentosa. Abdominal exam was significant for ascites and a palpable spleen tip and liver edge. On admission, her white blood cell count was 14,000 but a C difficile toxin antigen was negative twice. She was empirically treated with metronidazole and cholestyramine with- out improvement. A colonoscopy was then performed. Endoscopically, the mucosa appeared erythematous with rare pseudomembranes. Biopsies were taken throughout the colon. On histologic examination, no pseudomembranes were seen but increased mast cells were found in the lamina propria throughout the colon. CKIT (CD117 and CD68) mutation markers were positive. Systemic mastocytosis is a rare disease likely related to mutations within KIT, a tyro- sine kinase receptor for stem cell factor (involved in maturation of mast cells). The disease can have varied clinical manifestations most often including urticaria pigmentosa. Gastrointestinal manifestations have been well described and incidence ranges in different case series from 14% to 85% and include nausea and vomiting, peptic ulcer disease, gastrointestinal bleeding, hepatomegaly, splenomegaly and diarrhea. However, other than a few case reports, few stud- ies have examined colonic involvement in mastocytosis. Because of the rarity of this disease most studies and case series have been small with heterogeneous patients.

**Conclusion:** Our patient was found to have many mast cells in the lamina propria and muta- tions in C KIT consistent with mastocytosis. Her diarrhea was possibly secondary to infiltration in the lamina propria by mast cells within the colon. Treatment includes histamine H2-receptor antagonists, mast cell stabilizers (such as cromolyn sodium) or interferon-alpha based treat- ment.

### Poster Abstracts — Tuesday October 7

**P958**

**AN UNUSUAL CAUSE OF DIARRHEA**

**Y. Langman, MD, I. Tepler, MD, A. Kramer, MD, A. Gotian, MD, L. J. Brandt, MD.**

**Gastroenterology, Montefiore Medical Center, Bronx, NY.**

**Purpose:** A case vignette providing insight in an usual GI manifestation of a rare disease

**Methods:** Case report

**Results:** A 79 year old man, originally from Panama, who had migrated to United States at 33 years of age, with no significant past medical history, presented with a weight loss of 30 pounds over one year. The patient denied history of fever, chills, night sweats, abdominal pain, gastrointestinal bleeding, cough, shortness of breath or chest pain. On physical exam, there was marked proptosis, no lymphadenopathy and unremarkable abdomi- nal exam. Labs revealed anemia with no iron deficiency. Colonoscopy revealed multiple polyps in the ascending, transverse, descending and sigmoid colon, and biopsies were suggestive of mantle cell lymphoma. Immunophenotype was CD5+, CD 20+, CD 43+, CD 23+, also BCL1+ consistent with mantle cell lymphoma. Flow cytometry showed CD 19+, CD 20+, CD 5+, CD 8+ and CD 23–ve. EGD showed antral gastritis with intestinal metaplasia. MRI of the brain revealed multiple lesions in the brain and orbits. Bone marrow examination revealed no in- volvement by the lymphoma. The patient was started on chemotherapy with Rituximab, Adriamycin, vincristine and cyclophosphamide and survived for 8 months after diagnosis. Mantle cell lymphoma of the colon is a rare malignancy which may present as a solitary colonic nodule or as lymphomatous polyposis as in our patient. The current treatment approach for mantle cell lymphoma of the colon is still unsatisfactory and experimental chemotherapies are under investigation.

**Conclusion:** Our patient was found to have many mast cells in the lamina propria and muta- tions in C KIT consistent with mastocytosis. Her diarrhea was possibly secondary to infiltration in the lamina propria by mast cells within the colon. Treatment includes histamine H2-receptor antagonists, mast cell stabilizers (such as cromolyn sodium) or interferon-alpha based treat- ment.
P961
CAPCEITINDE INDUCED COLITIS CYSTICA SUPERFICIALIS
P. J. Sargon, MD, B. Qeci, MD, T. Laurie, MD, H. Kavin, MD. Gastroenterology, Advocate Lutheran General Hospital, Park Ridge, IL.
Purpose: A 68-year-old woman on capecitabine for metastatic bilateral breast cancer presented with the above symptoms. In the treatment of colorectal and breast cancer, capecitabine has been shown to induce GI toxicity including common side effects such as diarrhea, abdominal pain, nausea, and vomiting, as well as rare side-effects such as necrotizing enterocolitis. Our literature search revealed WBC 25.4k/mcL and negative C. difficile toxins x3, stool cultures and O&P. AST was 134 U/I, ALT 56 U/I, ALP 1174 U/I, and bilirubin 0.8mg/dL. Non-contrast CT revealed a soft, mildly distended abdomen, tender to palpation in the lower quadrants. Labs revealed WBC 25.4k/mcL and negative C. difficile toxins x3, stool cultures and O&P. AST was 575 U/I, ALT 56 U/I, ALP 173 U/I, and bilirubin 8.0mg/dL. Non-contrast CT revealed a small amount of ascites in the abdomen. Colonoscopy revealed pancolitis, which was friable, granular, erythematous, and edematous, with a loss of normal vascular pattern. Random biopsy showed distorted mucosa and lamina propria with chronic inflammatory infiltrate and multiple dilated cystic glands lined with cuboidal epithelium. Pt was treated with IV steroids as an inpatient and a taper of oral steroids upon discharge. Prior to that, she did not respond to therapy with multiple aminosalicylates, and was refractory to cholecystamine, somatostatin, tincture of opium, metamucil, and imodium. The patient was diagnosed with capecitabine-induced colitis. Capecitabine is a 5-FU prodrug that is selectively incorporated into tumor cells and liver tissue. Through its use in the treatment of colorectal and breast cancer, capecitabine has been shown to induce GI toxicity including common side effects such as diarrhea, abdominal pain, nausea, and vomiting, as well as rare side-effects such as necrotizing enterocolitis. Our literature search produced only one reported case of capecitabine-induced pancolitis. In our case, the patient was able to achieve complete resolution of symptoms after one week of steroids.

P962
RECTO-URETHRAL FISTULA: A LATE, BUT UNUSUAL COMPLICATION OF RADIATION THERAPY FOR PROSTATE CANCER
L. K. Chan, MD, P. O. Arnold, MD. Division of Gastroenterology, Virginia Commonwealth University Health System, Richmond, VA.
Purpose: To describe a rare complication of prostate cancer therapy infrequently encountered by gastroenterologists.
Methods: Adenocarcinoma of the prostate is the most common malignancy in American men and carries significant consequences. There are many surgical or radiation-based treatments; the combination of EBRT with brachytherapy carries significant risk of rectal toxicity. This rectal toxicity can manifest as hematohexia or rectal bleeding. There are rarer but more serious complications from radiation treatment such as recto-urethral fistulas (RUF), but one must be astute aware. We describe a patient with previously treated prostate cancer who had a solitary rectal ulcer with fistulous tract from rectum to urethra.
Results: A 70 year old African American male presented complaining of rectal pain and intermittent hematochezia. He also reported tenesmus and occasional drainage of clear liquid suspected to be urine via rectum with passage of feces. Two years previously, he underwent combination prostate seed implants and external beam radiation for prostate cancer. Physical examination described pain on palpation of the anterior rectal wall at the level of the prostate and the presence of occult blood in the stool. There were no other pertinent findings. Laboratory data was unremarkable except for urinary findings consistent with cystitis. Colonoscopy revealed friable rectal mucosa and a deep, 1.5 cm ulcer in the distal rectum on the anterior rectal wall. Biopsy specimens noted chronic inflammatory changes; there was no evidence of infectious or neoplastic processes. Computed tomography of the pelvis described pain and contrast between the urinary bladder and the rectum indicating a recto-urethral fistula.
Conclusion: Prostate cancer is a serious disease, and radiation treatment can carry significant gastrointestinal effects. Radiation proctitis can require repeated hospitalizations, procedures, and blood transfusions. Endoscopic therapy with argon plasma coagulation (APC), can provide substantial symptomatic relief over several sessions. Surgery is reserved for those patients with no other therapeutic options. The endoscopic approach for a patient with suspected radiation-induced injury to the rectum should be cautious. On encountering a rectal ulcer, one should carefully sample the affected tissue to exclude an alternate etiology; other diagnostic modalities including radiographs and cystoscopy should be pursued to confirm the diagnosis. RUF is not usually discovered by a gastroenterologist. Upon encountering the male patient previously treated with radiation to the prostate, one must be aware of the possibility of this phenomenon and exercise appropriate caution.

P963
DELAYED DIAGNOSIS OF SPLENIC HEMATOMA AFTER ROUTINE COLONOSCOPY
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Purpose: Sixty-seven cases of splenic hematoma after colonoscopy have been reported in the literature. This complication is rare, however it is associated with significantly increased morbidity and mortality. We report a case of a large splenic hematoma following colonoscopy, highlighting a delay in the diagnosis of this complication.
Methods: A 46-year-old woman with a family history of colon cancer underwent an elective outpatient screening colonoscopy. She did not use anti-platelet or anti-coagulant agents prior to the procedure. The procedure was uneventful with intubation of thececum. The patient tolerated the procedure well. Numerous colonic diverticula and a single 5mm polyp in the rectosigmoid region were noted. Polypectomy was performed using cold biopsy forceps.
Results: She presented to her family practitioner 8 days following the procedure with a sharp left upper quadrant pain radiating to the sternum and left shoulder tip. The pain was worse with deep inspiration and unchanged with movement of the left shoulder joint. The physical examination was unremarkable except for mild diffuse abdominal tenderness. A 12 lead electrocardiogram was normal. She was treated with ondansetron 20mg po daily for presumed gastroesophageal reflux disease. Musclekeletal pain due to faulty sleep position was thought to be the cause of her shoulder pain and she was therefore instructed not to lie on the affected shoulder. Six weeks later, she presented to the Emergency Department with similar complaints, which had been continuous with no improvement after the empirical therapy. A chest x-ray showed blunting of the left costophrenic angle. The blood tests revealed normal complete blood count, metabolic profile, liver enzymes, serum amylase and serum lipase levels. She was treated with levofloxacin for presumed pneumonia. A subsequent contrast enhanced chest and abdominal CT found a large (9 x 6 x 11cm) subcapsular splenic fluid collection, which was confirmed by an ultrasound exam. A total of 360ml of old blood and fluid were drained percutaneously with ultrasound guidance. The patient made an uneventful recovery with resolution of her symptoms. A 4-week follow-up ultrasound showed complete resolution of the splenic hematoma.
Conclusion: To our knowledge, the delay to diagnosis from the colonoscopy is the longest reported in a patient with continuous symptoms. This case highlights the need for a high index of suspicion for splenic injury after colonoscopy in order to avoid a delayed diagnosis.

With the higher number of colonoscopies performed each year in the United States, it is likely that this complication is significantly under recognized and reported.

P964
PSEUDOCARCINOMATOSIS – AN ATYPICAL PRESENTATION OF PSEUDOMYXOMA PERITONEI IN A MORBIDLY OBSESE PATIENT
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Purpose: Introduction: Pseudomyxoma peritonei is a rare clinical entity typically diagnosed on clinical presentation with increased abdominal girth, abdominal mass, or abdominal pain mimicking endometriosis. We present a morbidly obese male with vageум gastrointestinal complaints and right upper quadrant fullness who was found to have carcinomatosis on computed tomography. Multiple fine needle aspirations failed to yield a diagnosis. Laparotomy was performed and revealed pseudomyxoma peritonei. Case: A 55 year old, morbidly obese Caucasian man with a BMI of 55 presented with six month history of intermittent diarrhea, abdominal bloating, constipation, and fatigue. He noted exacerbation of symptoms with deep inspiration and unchanged with movement of the left shoulder joint. He was a heavy smoker and had no history of trauma or surgery. He was unable to eat without vomiting.
Methods: This is the first report of a patient with intestinal spirochetosis (IS) presenting with hemoperitoneum without perforation or splenic rupture. Our patient is unique in that she exhibited hemoperitoneum without perforation or splenic rupture. Extraperitoneal bleeding is less common, but still reported in the setting of splenic rupture. Our case presentation demonstrates that hemoperitoneum can be the cause of her shoulder pain and she was therefore instructed not to lie on the affected shoulder. Six weeks later, she presented to the Emergency Department with similar complaints, which had been continuous with no improvement after the empirical therapy. A chest x-ray showed blunting of the left costophrenic angle. The blood tests revealed normal complete blood count, metabolic profile, liver enzymes, serum amylase and serum lipase levels. She was treated with levofloxacin for presumed pneumonia. A subsequent contrast enhanced chest and abdominal CT found a large (9 x 6 x 11cm) subcapsular splenic fluid collection, which was confirmed by an ultrasound exam. A total of 360ml of old blood and fluid were drained percutaneously with ultrasound guidance. The patient made an uneventful recovery with resolution of her symptoms. A 4-week follow-up ultrasound showed complete resolution of the splenic hematoma.

Conclusion: To our knowledge, the delay to diagnosis from the colonoscopy is the longest reported in a patient with continuous symptoms. This case highlights the need for a high index of suspicion for splenic injury after colonoscopy in order to avoid a delayed diagnosis.

With the higher number of colonoscopies performed each year in the United States, it is likely that this complication is significantly under recognized and reported.

P965
MICROCYTIC ANEMIA IN A PATIENT WITH MALIGNANT MELANOMA: AN UNCOMMON PRESENTATION
L. Pines VA, St. Petersburg, FL; 2. USF College of Medicine, Tampa, FL.
Purpose: Melanoma is the most common cutaneous malignancy in the United States. While the diagnosis of appendicitis can be quite challenging following colonoscopy since the appendix was perforated. Our patient is unique in that she exhibited hemoperitoneum without perforation or splenic rupture.

Conclusion: To our knowledge, the delay to diagnosis from the colonoscopy is the longest reported in a patient with continuous symptoms. This case highlights the need for a high index of suspicion for splenic injury after colonoscopy in order to avoid a delayed diagnosis.

With the higher number of colonoscopies performed each year in the United States, it is likely that this complication is significantly under recognized and reported.

P966
HEMOPERITONEUM WITHOUT PERFORATION OR SPLenic RUPTURE AFTER COLONOSCOPY
G. D. Luis, MD, S. B. Benjamin, MD. Gastroenterology, Georgetown University Hospital, Washington, DC.
Purpose: Complications of colonoscopy (CLN) are frequently reported and studied. We report a unique scenario of post CLN hemoperitoneum without perforation or splenic rupture.
Methods: 49yo female with h/o of Meckel’s diverticulum s/p resection as a newborn underwent uneventful CLN and upper endoscopy (EGD) for the evaluation of diarrhea. EGD was nor-

Erythema and superficial ulcerations throughout colon.

Sigmoid biopsy showing diontated, inflamed mucosa with dilated and cystic glands lined by flat or cuboidal epithelium.
COLONOSCOPY ACUTE APPENDICITIS: AN UNUSUAL COMPLICATION FOLLOWING FOLLOW UP CT

Purpose: Acute appendicitis following colonoscopy is exceptionally rare with less than a dozen documented in current literature. We describe two cases of this rare complication.

Case 1: A 46 year old male underwent a follow-up colonoscopy for a family history of colon cancer and history of polyps with no remarkable findings other than internal hemorrhoids. The prep for the procedure was excellent and the entire colon was visualized without difficulty. The patient returned to the hospital approximately three hours post procedure complaining of nausea, vomiting and 9 out of 10 sharp pain in the upper mid to left abdominal area. On admission patient had a temperature of 100.9 F and a WBC of 17.9. A CT of the abdomen revealed a distended appendix and significant stranding in the surrounding mesentery consistent with appendicitis. The following morning a laparoscopic appendectomy was performed with findings of a necrotic appendix. Case 2: A 53 year old male underwent colonoscopy for the evaluation of chronic constipation and possible narrowing of the colon. The colonoscopy was to the terminal ileum and revealed skipped areas of ulceration extending into the cecum. No other gross abnormalities were seen throughout the colon. Pathology of the ulcer biopsy specimens demonstrated mild acute cryptitis and granularity in the terminal ileum, right colon and sigmoid colon. Multiple biopsies were taken within these areas. The colonoscopy and biopsies were consistent with Crohn’s colitis. Three days later the patient began to experience abdominal pain but did not seek medical attention until eight days post procedure. Upon presenting to the emergency room patient had peritoneal signs with hypotension and leukocytosis. An abdominal x-ray revealed free air below the diaphragm. During emergent laparotomy there was no evidence of colonic perforation and there was a great amount of foul smelling pus in the area of the appendix and the tip of the appendix was perforated.

Conclusion: Diagnosis of appendicitis can be quite challenging following colonoscopy since the early symptoms may mimic other, more frequently encountered complications such as post-polypectomy syndrome and other non specific causes of abdominal pain. While rare, appendicitis is an important complication to keep in mind when treating patients with post colonoscopy abdominal pain.

COLONIC SPIROCHETOSIS: AN UNUSUAL CAUSE OF ASYMPTOMATIC COLONIC ULCERATION

Purpose: Colin spirochetes are a type of microorganism seen in the human gut mucosa. Although their role in colonic injury is not well established we report an unusual case of colonic spirochetosis causing colonic ulcer.

Methods: Clinical case presentation and review of English medical literature on intestinal spirochetosis.

Results: A 55 year old homosexual male with HIV on HAART therapy presented for screening colonoscopy. He denied recent fevers, chills, weight loss, abdominal pain, blood in stool, constipation or diarrhea. Laboratory results were notable for a CD4 count of 237 cell/μL and HIV RNA by PCR < 50 copies/mL. A colonoscopy was normal except for a non-bleeding 4 mm ulcer in the cecum. Pathology of the ulcer biopsy specimens demonstrated mild acute cryptitis with a prominent luminal brush border. No viral inclusions were identified. A Warthin-Starry stain showed luminal spirochetes on the surface epithelium (Figure 1). Intestinal spirochetosis was diagnosed and the patient was treated with metronidazole and remained asymptomatic over 6 months.

Conclusion: This is the first report of a patient with intestinal spirochetosis (IS) presenting with an asymptomatic colonic ulcer. Although IS has been described in homosexual men and patients with AIDS, colonic spirochetes often evince a normal appearing mucosa or edematous and hemorrhagic mucosal changes in our patient without ulceration. The cecal ulcer may have been a manifestation of invasive IS, presumably from pathogenic organisms or enteric commensal organisms due to other factors such as increased microorganism virulence and/or diminished host defense, leading to an inflammatory response. Diagnosis is usually made by histology noting a 3-μm basophilic fringe on the intestinal mucosal epithelium on hematoxylin and eosin (HE) sections, and often confirmed with a silver stain like Grocott or Warthin-Starry. Symptomatic or invasive IS patients can be treated after alternative causes have been excluded. The treatment of choice for IS is metronidazole. In asymptomatic IS patients, a conservative clinical follow-up is often advised. However, our patient was treated with metronidazole given the mucosal damage with ulceration in the cecum.
SEVERE PROXIMAL MUSCLE WEAKNESS IN A PATIENT WITH COLON CANCER: PARANEOPLASTIC SYNDROME OR IDIOPATHIC INFLAMMATORY MYOPATHY? G. Anand, MD. Gastroenterology and Hepatology, Kansas University Hospital, Kansas City, KS.

Purpose: Since the original description in 1887, dermatomyositis (DM) has become a well-recognized entity characterized by nonsuppurative inflammation of skeletal muscles, pain, and proximal muscle weakness with or without cutaneous lesions and sympathetic hyperactivity. In 1916, Schröter first called attention to DM coupled with visceral malignancy with most common sites being stomach 15.6%, breast 13.8%, lung 12.9%, ovary 9.2%, colon 3.7%. The onset of DM may precede, coincide or follow the diagnosis of malignancy. Method: A 42-year-old otherwise healthy Caucasian male presented with a 3-week history of fever, weight loss, drenching night sweats, severe proximal leg muscle weakness and pain, and mildly elevated CPK and aldolase. Symptoms started shortly after right hemicolectomy for a superficially invasive, well-differentiated, nonmetastatic adenocarcinoma of the colon. Physical exam was remarkable for symmetric 3+ leg edema with exquisite tenderness to palpation, proximal diminished motor strength with no other neurological deficits. Thorough skin exam revealed no lesions, however reported patient had facing facial rash a few weeks prior to the onset of muscle weakness, attributed to sunburn. Laboratory testing showed leukocytosis of 46k, anemia, CRP 298, LAFP score 158K, ferritin 1259: fluctuating troponins; mildly elevated CPK and aldolase. Extensive workup with autoimmune: paraneoplastic, tumor marker panels, SPEP/PUEP TSH, PSA, cortisol, HIV Ab, blood, sputum, and urine cultures. PET/CT MRI of the spine. ECHO was unrevealing. BM biopsy showed hypercellular (80%) marrow consistent with a reactive process, Philadelphia chromosome negative. EMG was consistent with inflammatory myopathy. MRI showed increased T2 signal intensity within multiple leg muscles and edema consistent with myositis. Open muscle biopsy revealed perimysial lymphohistiocytic inflammation with perivascular atrophy, strongly suggestive of DM. Muscle weakness dramatically improved after initiation of a high-dose steroid therapy. Conclusion: Based on the temporal relationship between the diagnosis of colon cancer and onset of severe proximal muscle weakness, preceded by characteristic facial rash in an otherwise healthy man, we hypothesize that in our case DM represents a paraneoplastic syndrome rather than idiopathic inflammatory myopathy. Multiple studies demonstrated that patients with tumor-associated DM are less likely to have myositis-specific autoantibodies, so do our patient. Gastrointestinal involvement in DM ranges from severe inflammatory disease resulting from myonecrotic dystrophy to colon cancer. Cutaneous paraneoplastic lesions of colon cancer are nonspecific immune type reactions and warrant further workup for an underlying malignancy.

P970

MULTIPLE GRANULAR CELL TUMORS OF ASCENDING COLON: A CASE REPORT AND LITERATURE REVIEW J. Ye, MD, R. Gaskins, MD, J. Stead, MD, U. Sundaram, MD. 1. Section of Digestive Diseases, West Virginia University, Morgantown, WV; 2. Department of Pathology, West Virginia University, Morgantown, WV.

Purpose: Granular cell tumor (GCT), also known as Granular cell Schwannoma or Abrikossoff tumor, is rare in the colon. It is commonly seen in the subcutaneous tissue and other soft tissue in the body. In the GI tract, it usually presents in the oral cavity or esophagus. Most GCTs are small submucosal benign tumors with maximal reported size of 1.5 cm in colon; however, a malignant counterpart has been reported. It is almost impossible to differentiate it from other benign or malignant epithelial cell tumors and other submucosal tumors by endoscopy. Here we report the first case of an aggregate of multiple GCTs with the largest tumor more than 1.5 cm in the ascending colon. A 39-year-old male patient underwent a screening colonoscopy. A 3-4 cm sessile polyp was noted in the ascending colon. A 39-year-old male patient underwent a screening colonoscopy. A 3-4 cm sessile polyp was noted in the ascending colon. An endoscopic examination revealed a benign submucosal granular cellular tumor (Fig 1). The tumor consisted of nests of neoplastic cells with abundant granular eosinophilic cytoplasm and strong expression of S-100 protein (Fig 3). Since there were multiple GCTs in aggregates with benign histology, endoscopic removal did not appear feasible. It was elected to observe the patient with repeat colonoscopy in 2-3 years GCT should be in the differential diagnosis of colon tumors.

P971


Purpose: We present a case of incidentally diagnosed appendicular neuroma, which has long been considered a rare histological finding. Case Summary: This is a case of a 65-year old man undergoing chemotherapy for a recently diagnosed metastatic urethral cancer. GI service was consulted to evaluate occult blood in the stool in view of recent diagnosis of DVT and plan for anticogulation therapy. Pt underwent EGD, which was essentially unremarkable and a colonoscopy that revealed a 1 cm transverse colon tubulovillous polyp and a small 4-mm nodule that was seen protruding from the appendicular orifice (Figure 1). This appendicular nodule was probed with biopsy forceps and then removed with same. Histological examination of the appendicular nodule revealed a spindle cell lesion compatible with a neuroma (Figure 2). This was consistent with or a component of a metastatic adenocarcinoma (Figure 3). The patient was referred to a urological oncologist for further treatment. Discussion: Differential diagnosis of an appendicular nodule is fairly broad and includes both benign and malignant lesions. Among more commonly reported findings are those of adenocarcinoma, either primary or metastatic, carcinosarcoma, lipoma and lymphangioma. Less commonly reported findings include mucinous cystadenocarcinoma and pseudomyxoma peritonei. Appendicular neuroma (AN) is a rare histological finding and considered to be a benign entity. It is usually asymptomatic, though isolated cases of appendicitis-like symptoms have been described. AN can arise from muscle or subcutaneous tissue with or without fibrous obliteration of appendicular lumen. The presence of fibrous obliteration would more likely present with associated symptoms. Enterochromaffin cell proliferation and neural elements are responsible for development of AN; the simple presence of endocrine cells within an AN should not be mistaken for carcinoid tumor. Conclusion: The incidental colonic finding of an appendicular nodule has a broad differential diagnosis, so that clinicians should be aware of malignancy should always be considered. Fortunately, many of these nodules are benign, including such rare findings as an appendicular neuroma, presented here.
fragmentation can also occur due to pump malocclusion, inappropriate single needle dialysis ie high flow, or collapse of arterial line. Immune factors as with mismatched transfusion, drugs or hemoglobin abnormality can also be the cause of hemolysis. We report kinking of arterial blood line which resulted in acute pancreatitis as a consequence of acute hemolysis in chronic hemodialysis patient. Case: A 79 year old male with history of end stage renal disease was admitted for dialysis. Blood flow after dialysis, the patient experienced nausea, vomiting and abdominal pain radiating to the back. Labs drawn at dialysis showed hemoglobin of 8.2 g/dl, which dropped from 10.2 g/dl. Other labs included amylase of 1415 U/L, LDH 3965 U/L, haptoglobin of 8.9 mg/dl and total bilirubin of 6 mg/dl. Electrolytes, PT, PTT, AST, ALT, complement factors, vitamin B-12, folate and ceruloplasmin were within normal range. ANA, serum and urine electrophoresis were negative. Peripheral blood smear revealed target cell, ovalocytes, schistocytes, helmet and tear drop cells. CT scan of abdomen was done which showed pancreatic edema. Imaging did not reveal any gallstones and all other etiologies of pancreatitis were ruled out. Workup for paroxysmal nocturnal hemoglobinuria, glucose-6-phosphate dehydrogenase deficiency and autoimmune hemolysis was negative. There was no contamination with formaldehyde, chloramphenicol, copper or hypotonicity of the dialysate. Mechanical hemolysis due to kinking of line was presumed to be the cause. The patient was kept NPO, intravenous fluids and pain management was initiated. After replacing a new line there were no further hemolytic episodes. His condition improved during the hospital stay and was discharged home after two weeks. Discussion: Acute hemolysis on hemodialysis has become rare in recent years. This makes it extremely difficult to link hemolysis with acute pancreatitis in patients on hemodialysis unless it is high on the list of differentials. In this case, after excluding all known causes of pancreatitis by radiology, serology and drug screening we proposed hemolysis induced by kinked hemodialysis blood line as a cause of acute pancreatitis. By emphasizing such an unusual mechanism of hemolysis leading to acute pancreatitis, we want to highlight the principles of root cause analysis which eventually led us to the etiology.

**P974**

**METASTATIC BREAST CARCINOMA PRESENTING AS OBSTRUCTIVE JAUNDICE, AND GASTROINTESTINAL BLEEDING**

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**Purpose:** We report a rare case of a patient who presented with obstructive jaundice from a pancreatic tumor metastasizing from breast cancer and gastrointestinal bleeding secondary to esophageal and gastric metastasis. Gastrointestinal tract metastasis from primary breast carcinoma is present in 14% to 35% of cases in autopsy series, with gastric involvement in 6% to 18% of cases. Management of these metastases differs from the management of conventional primary cancers.

**Methods:** Chart review and review of available literature using Medline and relevant bibliographies of published articles.

**Results:** A 52-year-old woman presented with complaints of melena, painful jaundice and fatigue. Her past medical history included a modified radical mastectomy three years ago for inoperable ductal carcinoma. Physical examination was remarkable for pallor and scleral icterus. Laboratory work-up was consistent with anemia and marked elevation in total bilirubin (19.3 mg/dl) and alkaline phosphatase (2933 U/L). Abdominal and pelvic CT scanning (with oral and intravenous contrast) showed dilated intraduodenal and extraduodenal bile ducts and a rounded soft tissue mass in the head of the pancreas. Endoscopic retrograde cholangiopancreatoscopy (ERCP) with contrast medium showed a diffusely dilated biliary tree. A sphincterotomy was performed, brush cytology obtained and a stent was placed in the common bile duct. Immunohistochemical analysis of the biopsy specimens tested positive for cytokeratin 7 and ERBB-2. Further immunostaining of the original breast tumor specimen was consistent with the same immunophenotype.

**Conclusion:** As the prognosis of cancer patients has been improving gradually, gastrointestinal metastasis will be encountered more often. The goal of therapy (i.e., cure, palliation, quality of life) should be clear in each case and survival expectancy from the primary disease and associated conditions estimated.

**P975**

**PANCREATIC MASS ASSOCIATED WITH RECURRENT ACUTE PANCREATITIS IN A PATIENT WITH PULMONARY SARCOIDOSIS: DIAGNOSIS OF PANCREATIC SARCOID ESTABLISHED WITH EUS/FNA**

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**Purpose:** Sarcoidosis is a chronic multisystem disease characterized by the presence of non-caseating granulomas in various organs most commonly involving the lungs. Pancreatic involvement is rare. It typically presents as an asymptomatic pancreatic mass diagnosed incidentally during surgery or autopsy. We present a case of pancreatic mass presenting as recurrent acute pancreatitis in a patient with quiescent pulmonary sarcoidosis.

**Results:** The present case is a 39 year old African-American female with a past medical history of previously treated pulmonary sarcoidosis confirmed by bronchoscopic biopsy, a prior episode of acute pancreatitis of uncertain etiology, diabetes, and hypertension. She presented with non-radiating, sharp, post-prandial low back pain associated with emesis for three days. There was no history of weight loss or steatorrhea. Initial evaluation revealed an elevated amy- lase of 64.9 mg/dl and total bilirubin of 6 mg/dl. Electrolytes, PT, PTT, AST, ALT, complement factors, vitamin B-12, folate and ceruloplasmin were within normal range. ANA, serum and urine electrophoresis were negative. Peripheral blood smear revealed target cell, ovalocytes, schistocytes, helmet and tear drop cells. CT scan of abdomen was done which showed pancreatic edema. Imaging did not reveal any gallstones and all other etiologies of pancreatitis were ruled out. Workup for paroxysmal nocturnal hemoglobinuria, glucose-6-phosphate dehydrogenase deficiency and autoimmune hemolysis was negative. There was no contamination with formaldehyde, chloramphenicol, copper or hypotonicity of the dialysate. Mechanical hemolysis due to kinking of line was presumed to be the cause. The patient was kept NPO, intravenous fluids and pain management was initiated. After replacing a new line there were no further hemolytic episodes. His condition improved during the hospital stay and was discharged home after two weeks. Discussion: Acute hemolysis on hemodialysis has become rare in recent years. This makes it extremely difficult to link hemolysis with acute pancreatitis in patients on hemodialysis unless it is high on the list of differentials. In this case, after excluding all known causes of pancreatitis by radiology, serology and drug screening we proposed hemolysis induced by kinked hemodialysis blood line as a cause of acute pancreatitis. By emphasizing such an unusual mechanism of hemolysis leading to acute pancreatitis, we want to highlight the principles of root cause analysis which eventually led us to the etiology.

**Conclusion:** As the prognosis of cancer patients has been improving gradually, gastrointestinal metastasis from primary breast carcinoma is present in 14% to 35% of cases in autopsy series, with gastric involvement in 6% to 18% of cases. Management of these metastases differs from the management of conventional primary cancers.

**Methods:** Chart review and review of available literature using Medline and relevant bibliographies of published articles.

**Result:** A 32-year-old gentleman from Dominican Republic with no previous history of tuberculosis presented with abdominal pain, vomiting and a 15 lb weight loss over two months duration. Ultrasoundography (US), computer tomography (CT) scan and magnetic resonance imaging (MRI) were suggestive of a multicystic irregular pancreatic head mass which appeared inseparable posteriorly form the IVC and extended along the portal vein and proper hepatic artery to the porta hepatitis, without any associated biliary or pancreatic duct dilatation. Also noted were enlarged mesenteric lymph nodes and features suggestive of small bowel obstruction. Tumor markers, CEA and CA 19-9 were within normal limits. The initial impression was malignant pancreatic neoplasm with mesenteric spread and small bowel obstruction and the patient was scheduled for an exploratory laparotomy. At operation, 10 x 8 cm cystic mass was seen in mesentery, containing thick creamy material. The mesenteric cystic mass was dissected out and the small bowel involved with this area of mesentery was transected and resected en bloc with the mass. A fine needle aspiration of the pancreatic head mass was done with a 25 G needle and the same material as in the mesenteric cyst was obtained. Histological examination of the mesenteric lymph node and fine needle aspiration cytology from the head of the pancreas confirmed the diagnosis of tuberculosis. Patient recovered following the administration of antituberculosis chemotherapy.

**Conclusion:** Pancreatic tuberculosis should be considered in the differential diagnosis of pancreatic masses, particularly if the patient is young, not jaundiced and from an area of high TB prevalence.
P977

PANCREATIC TUBERCULOSIS IN A PATIENT WITH HIV: A RARE DIAGNOSIS

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Purpose: Pancreatic and peripancreatic tuberculosis is extremely rare even in countries with high endemism. Fewer than 40 cases of pancreatic tuberculosis have been reported worldwide. There is a recent increase in such cases, but the infrequency with which it is encountered makes it a formidable diagnostic challenge.

Methods: We report a 47-year-old Ethiopian immigrant male with HIV presented with fever, abdominal pain, and weight loss. He appeared weak and diaphoretic but was awake and oriented. His vital signs were stable, except for temperature of 103°F. His physical exam was unremarkable, except for mild abdominal tenderness and splenomegaly.

Results: CT scan abdomen showed a complex cystic mass in the pancreatic head with internal septations, associated with extensive retroperitoneal adenopathy. Necrotic pancreatic tissue and pseudocyst were considered much less likely given the apparent septations and associated adenopathy. A CT-guided biopsy of multiple periaortic lymph nodes was positive for mycobacterium tuberculosis complex smear by smear and culture. He was started on 4 drug antituberculous therapy, resulting in resolution of the pancreatic mass after 9 months (see images).

Conclusion: Although rare, pancreatic and peripancreatic tuberculosis should be considered in the differential diagnosis of cystic lesions of the pancreas. On review of literature, the key to diagnosis of pancreatic tuberculosis is a CT-guided needle biopsy of the involved tissue and these masses respond well to antituberculous therapy.

Diagnostic indicators for pancreatic tuberculosis (based on the review of literature) 

<table>
<thead>
<tr>
<th>Diagnostic indicators in your patient</th>
<th>Diagnostic indicators in our patient</th>
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<tr>
<td>Cystic pancreatic mass in younger patient</td>
<td>Present</td>
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<tr>
<td>HIV status</td>
<td>Present</td>
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<tr>
<td>Immigrant population</td>
<td>Present</td>
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<tr>
<td>Fever</td>
<td>Present</td>
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<td>Abdominal pain</td>
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LABORATORY INVESTIGATIONS IN OUR PATIENT

<table>
<thead>
<tr>
<th>Tests</th>
<th>Results</th>
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<tr>
<td>CD4</td>
<td>31</td>
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<tr>
<td>Lipase</td>
<td>448 (Normal=40-300)</td>
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<tr>
<td>CA 19.9</td>
<td>33.0 (Normal=0-54.9)</td>
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<tr>
<td>Complete blood count</td>
<td>Anemia, lymphocytopenia</td>
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CT abdomen showing the complex cystic pancreatic mass.

CT abdomen showing resolution of the cystic pancreatic mass after nine months of antituberculosis therapy.

P978

ANSA PANCREATICA AND RECURRENT PANCREATITIS

H. Malhotra, MD, A. Carroll, MD, R. Jha, MD, E. H. Kramer, BS, F. Al Kawa, MD. Medicine, Georgetown University Medical Center, Washington, DC.

Purpose: Annas Pancreatica is a type of pancreatic ductal variation. The significance of this type of pancreatic duct anomaly and its relationship to the development of pancreatic atis is unclear. Case Report: We report the case of a 51-year-old male who presented with 10 episodes of acute pancreatitis and a 30 lb weight loss over the course of a year. CT scan and MRI findings were consistent with acute pancreatitis. An EUS was performed, revealing a loop of the pancreatic duct in the head with a branch that directed towards the minor papilla consistent with Annas Pancreatica. A prophylactic 5F SC stent was placed into the pancreatic duct via major papilla. Sphincterotomy was not performed. EUS revealed a tortuous pancreatic duct with a circular course, located in the pancreatic head. The duct was of normal caliber, at the level of the main pancreatic duct and a communication between the duct and a minor papilla was identified. Despite multiple attempts, it was not possible to cannulate the minor papilla to establish sphincterotomy was performed via the major papilla. A prophylactic 4F 3 cm single pig tail stent was placed into the pancreatic duct, and a sphincterotomy was performed. The patient was discharged and shortly after readmitted with another episode of pancreatitis. EUS was performed and the pancreatic duct was cannulated and normal of anomalous pancreatic duct was identified. During multiple attempts, it was not possible to cannulate the minor papilla to establish sphincterotomy and the stent was subsequently extended over the stent. The patient was asymptomatic for last six months and gained 20 lbs. Conclusion: It is presumed that the drainage of pancreatic juice can be improved by Annas Pancreatica ductal variation. Such patients are vulnerable to the development of pancreatitis. Pancreatic sphincterotomy via major papilla and/or minor papilla may be considered as a treatment modality in symptomatic patients with this type of anomaly.

P979

A RARE PRESENTATION OF SYNCHRONOUS ESOPHAGEAL AND PANCREATIC ADENOCARCINOMA WITH METASTASIS

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1. Gastroenterology, Loma Linda University Medical Center, Loma Linda, CA; 2. Gastroenterology, Jerry L. Pettis Memorial VA Medical Center, Loma Linda, CA.

Purpose: Most cases of multiple cancers with esophageal adenocarcinoma are associated with head and neck cancers or gastric cancers. We report a rare case of synchronous esophageal and pancreatic adenocarcinoma.

Methods: A 59-year-old Caucasian male with a history of alcohol abuse and a 40-pack/year smoking history presented with a chief complaint of severe epigastric abdominal pain, anorexia, and a 25-pound weight loss over 6 months. On admission, he was afebrile and in mild distress. Physical examination revealed tenderness to palpation in the mid-epigastric region.

Laboratory examination revealed a total bilirubin 3.4 mg/dl, direct bilirubin 2.1 mg/dl, alkaline phosphatase 508 IU/L, AST 316 IU/L. Abdominal CT scan showed inoperable biliary dilatation, common bile duct 1.5 cm in diameter, and mild pancreatic duct dilatation, with no obvious abnormal density or enhancing lesion in the pancreas. Bilateral adrenal gland masses, 3.5 cm on the left, 2.6 cm on the right, were also noted. EGD showed a circumferential mass in the distal esophagus, extending from 35 to 40 cm from the incisura. Biopsies revealed poorly differentiated adenocarcinoma. A subsequent EUS showed that the esophageal mass extended through the muscularis propria. In addition, a 9.1 x 6 mm hypochronic left lobe liver nodule, a 2.5 x 1.6 cm left adrenal mass involving the body and tail of the pancreas with upstream ductal dilatation, and a 2.3 x 1.9 cm mass in the head of the pancreas were observed. FNA of the pancreatic body mass and celiac node showed malignant cells consistent with adenocarcinoma. Ascitic fluid obtained during the EUS showed reactive mesothelial cells.

Results: EUS showed a structure in the head of the pancreas and a 2 cm distal common bile duct structure with marked dilatation of the proximal bile duct. A 10 x 40 mm metal biliary stent was successfully placed across the stricture. An EGD followed with successful placement of a covered 10 cm esophageal stent. The patient was referred for palliative chemoradiation followed by systemic chemotherapy. However, the patient and his family opted for hospice care. He died 6 months later.

Conclusion: In order to be considered synchronous secondary to a dual primary source, each cancer must appear malignant and distinct. In addition, the probability of one being a metastasis lesion of the other must be excluded. Although a distinction may be based on histology, CA 19-9 stain is very specific for pancreatic cancer, up to 55% of esophageal adenocarcinomas will stain for CA 19-9 as well. This case was considered to have two primaries due to the location of the mass in the head of the pancreas, which is the usual presentation for a primary pancreatic tumor.

P980

ACUTE PANCREATITIS INDUCED BY GASTROSTOMY TUBE (GT) MIGRATION: A CASE SERIES

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Purpose: Approximately 120,000 percutaneous endoscopic gastrostomy (PEG) procedures are performed in the US annually. Although PEG placement is generally safe, 16 to 70% complication rate is reported. Minor complications include wound infection, tube dysfunction, gastric outlet obstruction, peristomal leakage, bleeding, cutaneous or gastric ulceration, pneumoperitoneum and temporary ileus. Major complications include necrotizing fasciitis, esophageal or gastric perforation, buried bumper syndrome, and inadvertent PEG removal. Here we present another complication of GT migration into the duodenum. This complication has been under-recognized and rarely reported.

Methods: This is a case series study. Five nursing home patients with PEG who were admitted with obstructive symptoms, elevated serum amylase and lipase and normal liver enzymes were reviewed. In all cases the physical and radiological examination (fig. 1), revealed migration of the GT into the duodenum. Symptoms were resolved after GT replacement or retraction. Serum amylase and lipase were also normalized within 2 to 3 days. No other causes for acute pancreatitis were identified. In one case the patient was re-admitted several times with migrated GT and similar findings. Pancreatic enzymes were normalized after GT replacement in every occasion.

Results: In all cases, there was evidence of migrated GT balloon compressing periampullary area with increased amylase and lipase, which normalized when the balloon was deflated and moved away from the ampullary region. This condition was associated with balloon-type internal bolster, replaceable GT.

Conclusion: In elderly patients with PEG, abdominal pain, vomiting and hyperamylasemia, a migrated GT to the periampullary region should be looked for and the GT should be repositioned.
HEMOLYSIS INDUCED ACUTE PANCREATITIS

A. R. S. S. Reddy, M.D., C. R. Marino, M.D.

Purpose: To review the literature on hemolysis induced acute pancreatitis and discuss the role of antibiotics in this setting.

Methods: A MEDLINE search was conducted using keywords related to hemolysis induced acute pancreatitis.

Results: There are several case reports and case series that describe the occurrence of hemolysis induced acute pancreatitis. Some authors suggest that antibiotics may be beneficial in this setting, while others caution against their use.

Conclusion: Further research is needed to determine the role of antibiotics in hemolysis induced acute pancreatitis.

References:


BILIARY VENOUS FISTULA AFTER PERCUTANEOUS BILIARY DRAIN PLACEMENT


Purpose: To report a case of biliary venous fistula after percutaneous biliary drain placement and discuss the management options.

Methods: A 53-year-old male underwent percutaneous biliary drain placement for jaundice. He developed fever and right upper quadrant pain four days later. Imaging revealed a biliary venous fistula with right upper quadrant collection.

Results: The patient underwent percutaneous transhepatic cholangiogram, which showed a biliary venous fistula. A biliary stent was placed, and the patient's symptoms improved.

Conclusion: Biliary venous fistula is a rare complication after percutaneous biliary drain placement. Early recognition and appropriate management are crucial to prevent complications.

References:

ACUTE DUODENAL ANISAKIASIS WITH ASSOCIATED HEPATOPANCREATIC COMPLICATIONS

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Purpose: Anisakiasis is a gastrointestinal infection caused by the Anisakis larvae, a nematode found in undercooked seafood. Although fewer than 10 cases are diagnosed annually in the U.S., the incidence is expected to rise due to the increase in raw fish consumption. There have been few reported cases of duodenal anisakiasis and its complications.

Results: Case Report
A 71 year old female presented to the emergency room with a history of fluctuating jaundice with loose bowel movements for 8 weeks. Initial evaluation several weeks prior with ultrason sound and abdominal CT were unremarkable. She denied most other symptoms including fever, chills, and pain. She did have a past history of breast cancer treated with lumpectomy and radiation. Physical examination showed scleral icterus and jaundice, but a benign ab- dominal exam. Laboratory studies were remarkable for a leukocytosis of 11.2 x 10^3 cells/μL, AST 118 units/L, ALT 124 units/L, alkaline phosphatase 377 units/L, total bilirubin 1.6 mg/dL, serum amylase 120 units/L, and serum lipase 112 units/L. Abdominal CT scan and right upper quadrant ultrasound were unremarkable. Upper endoscopy revealed a 1 cm worm in the second portion of the duodenum. This was extracted with biopsy forceps and morphologically identified as Anisakis simplex. Albendazole therapy was initiated to eradicate infection. Two days later, his pain was resolving and laboratory abnormalities were normalizing.

Conclusion: Clinical presentation of anisakiasis can be variable, including symptoms of abdominal pain, nausea, vomiting, and diarrhea. Patients may develop low-grade fever with mild to moderate leukocytosis. The range of peripheral eosinophilia varies widely. Acute anisakiasis can be overlooked and has been misdiagnosed as acute appendicitis, Crohn’s disease, peptic ulcer disease, and gastric cancer. For gastrointestinal anisakiasis, endoscopy continues to be diagnostic and potentially therapeutic. Endoscopic removal results in quicker relief of symptoms and is thought to prevent an allergic reaction and the formation of eosinophil granulomas. The Anisakis larvae may invade the gastrointestinal wall to the level of the mucosal musculature and cause hepatopancreatic complications. The liver edema, eosinophil infiltration, and a granulomatous reaction. For our patient, the rise in hepatic eosinophilic enzymes suggests transient extrahepatic biliary obstruction caused by edema at the Syntome of Oddi from mucosal damage by the Anisakis larvae. Discovery of the Anisakis larva in the second portion of the duodenum and relatively rapid resolution of the laboratory abnormalities help support this hypothesis.

GANGLIOTIC PARAGANGLIOMA OF THE COMMON BILE DUCT

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Purpose: We present a rare case of a gangliotic paraganglioma (GP) in the common bile duct causing painless, obstructive jaundice.

Methods: Case Report
A 71 year old female presented to the emergency room with a history of fluctuating jaundice with loose bowel movements for 8 weeks. Initial evaluation several weeks prior with ultrason sound and abdominal CT were unremarkable. She denied most other symptoms including fever, chills, and pain. She did have a past history of breast cancer treated with lumpectomy and radiation. Physical examination showed scleral icterus and jaundice, but a benign abdominal exam. Laboratory studies were remarkable for a leukocytosis of 11.2 x 10^3 cells/μL, AST 118 units/L, ALT 124 units/L, alkaline phosphatase 377 units/L, total bilirubin 1.6 mg/dL, serum amylase 120 units/L, and serum lipase 112 units/L. Abdominal CT scan and right upper quadrant ultrasound were unremarkable. Upper endoscopy revealed a 1 cm worm in the second portion of the duodenum. This was extracted with biopsy forceps and morphologically identified as Anisakis simplex. Albendazole therapy was initiated to eradicate infection. Two days later, his pain was resolving and laboratory abnormalities were normalizing.

Results: A 71 year old female presented to the emergency room with a history of fluctuating jaundice with loose bowel movements for 8 weeks. Initial evaluation several weeks prior with ultrason sound and abdominal CT were unremarkable. She denied most other symptoms including fever, chills, and pain. She did have a past history of breast cancer treated with lumpectomy and radiation. Physical examination showed scleral icterus and jaundice, but a benign abdominal exam. Laboratory studies were remarkable for a leukocytosis of 11.2 x 10^3 cells/μL, AST 118 units/L, ALT 124 units/L, alkaline phosphatase 377 units/L, total bilirubin 1.6 mg/dL, serum amylase 120 units/L, and serum lipase 112 units/L. Abdominal CT scan and right upper quadrant ultrasound were unremarkable. Upper endoscopy revealed a 1 cm worm in the second portion of the duodenum. This was extracted with biopsy forceps and morphologically identified as Anisakis simplex. Albendazole therapy was initiated to eradicate infection. Two days later, his pain was resolving and laboratory abnormalities were normalizing.

Conclusion: Clinical presentation of anisakiasis can be variable, including symptoms of abdominal pain, nausea, vomiting, and diarrhea. Patients may develop low-grade fever with mild to moderate leukocytosis. The range of peripheral eosinophilia varies widely. Acute anisakiasis can be overlooked and has been misdiagnosed as acute appendicitis, Crohn’s disease, peptic ulcer disease, and gastric cancer. For gastrointestinal anisakiasis, endoscopy continues to be diagnostic and potentially therapeutic. Endoscopic removal results in quicker relief of symptoms and is thought to prevent an allergic reaction and the formation of eosinophil granulomas. The Anisakis larvae may invade the gastrointestinal wall to the level of the mucosal musculature and cause hepatopancreatic complications. The liver edema, eosinophil infiltration, and a granulomatous reaction. For our patient, the rise in hepatic eosinophilic enzymes suggests transient extrahepatic biliary obstruction caused by edema at the Syntome of Oddi from mucosal damage by the Anisakis larvae. Discovery of the Anisakis larva in the second portion of the duodenum and relatively rapid resolution of the laboratory abnormalities help support this hypothesis.

KLATSKIN-LIKE BILIARY SARCOIDOSIS

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Purpose: Clinical Vignette: Sarcoidosis is a multisystem granulomatous disease of unknown etiology that presents most often in young adults with hilar adenopathy, pulmonary infiltrates, skin or eye lesions. Hepatobiliary involvement is asymptomatic in most, with non-occlusive granulomas often seen. Cholestatic hepatitis with liver chemistry resembling PBC or PSC has been described. Intra-hepatic cholestasis, hepatosplenomegaly, pre-sinusoidal portal hyperten- sion, proteinuria, and cirrhosis may also be seen. Abnormalities of the liver, bile ducts, and extra- hepatic tree is rarely seen, and we describe a Klatskin-like biliary confluence granulomatous obstruction that responded to balloon dilation, stenting, and corticosteroid therapy. Case: A 38 yr. old caucasian female presented with painless jaundice. She had a history of pruritus, weight loss, fatigue, dark urine and malaise. Initial labs: Bilirubin 11.1, AST-107, ALT-92, GGT-431 (NI 15-85), ALK. Phos-635, CEA-1.2, Ni p-ANCA, Ni Ig’s, ACE-26 (NI 8-21), ANA, AMA, copper. Follow-up 2 weeks later: Bili.-1.5, CEA-1.5, Ni p-ANCA, Ni Ig’s, ACE-10 (NI 8-21), ANA, AMA. Copper. Its usual endoscopic appearance is as a submucosal mass, often resulting in negative mucosal biopsies. These neoplasms are largely benign in clinical course, although a few cases of regional lymph node metastases have been noted. Review of the literature shows 4 cases similar to ours where the GP originated in the biliary system.

CARCINOID TUMORS, INTOLERANT TO SANDOSTATIN

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Purpose: Cases of carcinoid tumors (CT) are known to be refractory to somatostatin analogs (SANSA). CASE: A 61 yr. old caucasian female presented with painless jaundice. She had a history of pruritus, weight loss, fatigue, dark urine and malaise. Initial labs: Bilirubin 11.1, AST-107, ALT-92, GGT-431 (NI 15-85), ALK. Phos-635, CEA-1.2, Ni p-ANCA, Ni Ig’s, ACE-26 (NI 8-21), ANA, AMA, copper. Follow-up 2 weeks later: Bili.-1.5, CEA-1.5, Ni p-ANCA, Ni Ig’s, ACE-10 (NI 8-21), ANA, AMA. Copper. Its usual endoscopic appearance is as a submucosal mass, often resulting in negative mucosal biopsies. These neoplasms are largely benign in clinical course, although a few cases of regional lymph node metastases have been noted. Review of the literature shows 4 cases similar to ours where the GP originated in the biliary system.

SANDOSTATIN DESENSITIZATION: A STRATEGY USEFUL FOR PATIENTS WITH CARCINOID TUMORS, INTOLERANT TO SANDOSTATIN

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Purpose: Currently there are no guidelines to manage patients with carcinoid tumors who benefit from sandostatin but are unable to tolerate it. We attempt a desensitizing strategy in such patients.

Methods: 49-year old white male was evaluated for a history of painless jaundice of 1-week du- ration, associated with mild facial flushing, lasting years. Asymptomatic otherwise, and had no other significant personal or family history or physical examination findings other than facial flush- ing. Work up revealed destruction of the gall bladder and dilatation of the common bile duct (CBD) (20 mm), hepatic ducts and a 3.5cm hypodense lesion in the head of the pancreas. Pa- tient underwent multiple endoscopic retrograde choangiopancreatographies (ERC) with stent placement; CBD biopsies and brushings did not reveal malignancy. Subsequent CT scan of the abdomen revealed multiple 10-15 mm ill-defined hepatic lesions and increased fullness of the right upper quadrant. Biopsy of the portal triad revealed Marked regenerative hyperplasia in 10% of the hepatocytes and in 20% of the palisads. Neither the head nor the neck. Octreotide uptake was noted in the head and neck of the pancreas and two hepatic lesions. Patient had an elevated chromogranin A-level of 6. While the patient was waiting for surgery (whipple procedure), he was started on sandostatin 150 mcg SQ bid to...
be continued for 2 weeks, followed by long acting sandostatin once every month. However, pa-
tient reported severe nausea, vomiting, diarrhea, abdominal cramps after each dose of 150 mcg and was reluctant to take the medication. After a few days apart with 3 doses, he was able to tolerate sandos-
statin. We attempted a trial of gradually increasing the dose of sandostatin, starting at less than 1/3rd of the recommended dose, at 25 mcg subcutaneously (SQ) twice a day.

Results: As the patient tolerated the dose, it was doubled every 3 days to eventually reach a
dose that is within the lower range of recommended for achieving steady state concentrations.
Upon reaching the targeted dose of 150 mcg SQ bid, he tolerated it without the initial severe gastro-
inestinal effects. Following this he was given a long acting sandostatin LAR injection of 20mg deep intramuscularly, which he tolerated well, with some relief of his flushing as well.

Conclusion: There are no guidelines to manage patients with carcinoid tumors who are unable
to tolerate sandostatin. We report a desensitizing strategy that can be useful in such patients
and situations where sandostatin is indicated for therapy of tumor (as a disease stabilizing
agent) or for control of carcinoid symptoms.

P990

H. PYLORI IN THE PATCH!

M. Jindal, MD, R. Jindal, MD, A. Aytaman, MD, Gastroenterology, VA NYHHS, Brooklyn, NY.

Purpose: Inlet patch is a heterotopic site of gastric mucosa in the upper esophagus. Itsendo-
scop ic prevalence has been reported to be ranging from 0.1-10%. Helicobacter pylori can infect
heterotopic gastric mucosa anywhere in the gastrointestinal tract, including in the upper esoph-
agusa, and may rarely produce symptoms. We present a case of H. pylori infection in an inlet
patch. Case Report: A 51 year old man with past history of ankylosing spondylitis and diabetes
mellitus reported post-prandial burning epigastic pain of 1 month’s duration, associated with
occasional heartburn and weight loss of seven pounds in the past year. Dyspepsia did not re-
spond to empiric therapy with a proton-pump inhibitor and the patient was not anemic. He un-
dertook elective esophagastroduodenoscopy (EGD) that revealed antral gastritis and a
15mm elliptical area of salmon colored mucosa just below the upper esophageal sphincter, sug-
gestive of inlet patch. Biopsy from the patch revealed body type gastric mucosa and focal antral
features. H. pylori was detected in the specimen on Giemsa staining. Chronic inflammatory in-
filtrate was noted with mild acute inflammatory activity. No intestinal metaplasia was reported
in the biopsy specimen. Patient was given treatment for H. pylori with amoxicillin, clar-
thromycin and omeprazole for two weeks. Dyspepsia resolved completely and the patient has
been symptom-free since treatment. Discussion: Inlet patch is a possible site for H. pylori in-
fection. The infection closely correlates with presence of H. pylori in the stomach, and inde-
pendent infection of the inlet patch has not been reported. Detection of inlet patch appears to
be endoscopist dependent and careful examination of the upper esophagus should be per-
duced during every EGD. The exact significance of eradication of H. pylori from the inlet
patch is not known, however inlet patch has been postulated to be a source of oral transmission
of H. pylori. Inlet patch may also be a site of persistent infection after conventional treatment
given to eradicate H. pylori.

P991

OBSTRUCTION WITH A PATENT LUMEN: A CASE OF POWDERED PSYLLIUM AND ACUTE ESOPHAGEAL OBSTRUCTION

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University of Minnesota, Minneapolis, MN.

Purpose: Psyllium is one of the most commonly used fiber supplements worldwide. There have
been case reports of esophageal and intestinal bezoars mass obstruction from psyllium use. A
60 year old male with no history of dysphagia presented with a globus sensation few minutes
after taking his daily psyllium supplement. He was unable to swallow solids or liquids. En-
doscopy revealed a material bonded to the surface just distal to the oropharynx continuous to
the gastro esophageal junction. The material had glue like gelatinous appearance, circumferen-
tially adherent to the underlying mucosa. The lumen of the esophagus remained patent with no
mass obstruction. The patient had immediate resolution of symptoms after the procedure. At
follow-up endoscopy, there was complete passage of material. Exam revealed a normal mucosa
without strictures, rings or abnormalities of peristalsis. Psyllium and Plantago Ovata. In 1986,
the FDA recommended dividing doses of psyllium supplements and addended their report in
2007, listing intestinal obstruction as a side effect of granular forms of psyllium. This modifica-
tion, however specifically states that this listing does not apply to psyllium powder. This patient
illustrates the first published case report of obstruction by coating of the esophagus from the
powdered form of psyllium. Physicians should be aware of psyllium use in patients presenting
with obstruction.

Psyllium powder coating the esophagus.

Psyllium powder coating the esophagus.

P992

A DIFFICULT DIAGNOSIS TO SWALLOW: MALIGNANT MELANOMA DIAGNOSED BY ENDOSCOPY

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University of South Florida, Tampa, FL; 2. Department of Pathology, James A Haley Veterans’
Administration Hospital, Tampa, FL.

Purpose: Primary melanoma of the esophagus is an extremely rare diagnosis. Bulky esophageal
melanomas are even rarer. We report a case of Malignant Melanoma involving the esophagus
in a patient with no prior history of the disease who presented with complaints of dysphagia.
Case Report: 79 yo male with a history of prostate cancer, CAD with CABG, and CVA comes
to the hospital with complaints of progressive solid food dysphagia and weight loss for 2
months. The patient had no history of Melanoma. A heterogeneously hyperpigmented bulky
lesion was seen on EGD from 25cm to 35cm in the mid esophagus. The mass was friable and in-
volved 2/3 of the lumen. A small, 3mm, dark, hyperpigmented lesion was also seen in the gastric
body. Biopsies confirmed Melanoma on slit 100 staining at both sites. Pt was noted to have metasta-
tic disease to the liver, and multiple lung nodules on staging CT. The primary Internal Medicine
team did not note any evidence of Melanoma on skin exam. Eye exam done by Ophthalmology
also did not find any evidence of Melanoma. In view of advanced disease, only palliation was
sought. A gastric feeding tube was placed by interventional radiology. Pt was started on Temodor by Oncology, and sent with Hospice follow up. Discussion: Primary Esophageal
Melanoma of the esophagus is a rare diagnosis with less than 250 cases reported in the world lit-
erature to date. Esophageal Melanoma is a very aggressive tumor which carries a poor overall
prognosis. There is limited data, primarily in the form of case reports, about potential surgical
choices for very early stage disease. Treatment is evolving. Once metastatic, the prognosis for the
disease is poor and palliative care should be considered.

P993

AN UNUSUAL ETIOLOGY OF DYSPHAGIA IN A PATIENT WITH ACROMEGALY

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Purpose: 58 year-old women with history of diabetes mellitus and high blood pressure pre-
sented to our clinics with complaints of intermittent dysphagia to solids for four years. She
states that since 5 months ago, these episodes have become more frequent, usually occurring
less than one second after swallowing with associated regurgitation of intact meals. There was
no history of odynophagia, heartburn, vomiting, retrosternal chest pain or weight loss. She de-
nied smoking or alcohol abuse. Physical examination revealed a protuberant mandible and
puffy hands. No hialthosis or signs of malnourishment were present. A barium swallow showed
a stricture of the esophagus at the level of the aortic knob. A subsequent upper endoscopy re-
vealed no mucosal lesion supporting an extramural etiology of dysphagia. A right aberrant
subclavian artery causing thoracic esophagus compression was identified by CT scan. A diag-
nosis of acromegaly was entertained by the presence of an elevated insulin-like growth hor-
mon levels and physical exam findings. Further imaging studies identified a pituitary mass and
patient is on scheduled for transphenoidal resection. Dysphagia lusoria is a rare disorder in
adults. The worsening of dysphagia in this patient led to a diagnosis of acromegaly. Oropharyn-
gial dysphagia in patients with acromegaly secondary to macroglossia has been previously de-
scribed. To our knowledge, dysphagia lusoria associated to acromegaly has not been previously
reported.
Granular Cell Tumor of the Esophagus: Case Report and Literature Review

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Purpose: 24 year female referred for 10-month history of emesis and abdominal pain underwent EGD revealing a white-yellow submucosal mass at 2 cm from the incisors measuring 1 cm in length and 0.5 cm in width. Pathology report read “One fragment consists of pink-staining granular cells with small, rounded nuclei consistent with granular cell tumor (GCT). Cells are strongly positive for S-100 and vimentin. Features of malignancy are absent.”

Methods: Abrikossoff first described “granular cell myoblastoma” in 1926. It was considered a myogenic tumor until Fisher and Wechsler’s 1962 challenge. Using electron microscopy and Wallerian degeneration studies, they noted similarities between a myoblastoma cell and a degenerating Schwann cell. Today, most pathologists and oncologists acknowledge the neural origin of GCTs supported by positive IHC staining for CD68, Ki-67 (slightly), NKK/C3, NSE, nestin, p53 (slightly); S-100 protein, and vimentin. In addition, positive PAS stain with resistance to diastase digestion and nonreactivity to HHF35, desmin, and alpha-smooth muscle actin are characteristic.

Results: GCTs comprise only 0.03% of all tumors, and GI GCTs are even more rare with the distal 1/3 of esophagus cited most frequently. Mean age of diagnosis is 45 years with equal M:F ratio. Dysphagia is the most common symptom correlating to > 5 cm size. Classic appearance is a small, non-tender, broad-based, submucosal growth resembling a “molar tooth” when central depression exists. A rubbery or firm consistency is characteristic with pink-tan, gray-white, or white-yellow coloration. EUS reveals a homogenous, hypoechoicosubmucosal lesion. Approximately 200 cases have been documented.

Conclusion: GCTs are notoriously benign, but no management guidelines exist. Presently, an esophageal GCT > 2 cm size, symptomatology, interval growth, recurrence, tissue invasion, or advanced histologic/imaging features prompt resection. Preoperative EGD re-evaluation with confirmatory biopsy followed by EUS to address muscularis and lymphatic invasion are recommended. EMR, Nd:YAG laser ablation, and APC are safe, effective alternatives to surgery in the absence of muscularis or lymphatic involvement. Esophageal GCTs are not radio-dosesensitive, but recurrence is uncommon.

PLUMMER-VINSON SYNDROME IN A PATIENT WITH ULCERATIVE COLITIS

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Purpose: Benign lipomas of the esophagus are extremely rare and account for only 0.4% of the tumors arising from the digestive tract. These tumors arise from the proximal esophagus near the cricopharyngeal muscle. We report a case of asymptomatic patient with a giant intramural lipoma of the upper thoracic esophagus found incidentally on a CT scan. A 75-year-old asymptomatic white male undergoing a preoperative chest x-ray prior to hand surgery was found to have a mass in the superior mediastinum. Computed tomography (CT) of the chest revealed a polyposid submucosal mass with fat density that arose from the cervical esophagus and extended 12 cm caudally (fig. 1). Upper gastrointestinal esophagostomy showed a submucosal space-occupying mass with normal overlying mucosa. Based upon the above findings, the patient was referred for surgical resection. A vertical esophagotomy was made and the mass was resected along with the pedicle. The pedicle was cauterized. The esophageal incision was then sutured. Pathology of the polyp showed a lipoma comprising of mature adipose tissue collection. The postoperative course was uneventful, and the patient was discharged 3 days after the operation. Giant esophageal lipomas are extremely rare and fewer than 20 surgical cases have been reported in the literature. These are benign slow-growing, pedunculated tumors that usually arise from the upper third of the esophagus. Most cases are asymptomatic and are found incidentally. Symptoms include dysphagia, regurgitation, and epigastric pain. Our case was unique because of the patient was asymptomatic despite the large polyp size. In most cases, the diagnosis is made by esophogscopy or barium esophagogram. Diagnosis can also be made in a rapid, noninvasive fashion by an EGD scan which shows low density tissue absorption related to fatty tissue having (~50 to ~150) Hounsfield Units. The size and location often determines the method of resection. Small polyps can safely be removed endoscopically while large masses should be resected surgically because of the risk of bleeding.

Figure 1

SQUAMOUS CELL CARCINOMAS OF THE ESOPHAGUS APPEARING AS LEIOMYOMAS BY EUS AND EGD

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Purpose: Introduction: Esophageal Squamous Cell carcinomas (SCCA) and leiomyomas are felt to be readily distinguishable from each other, as they originate from different histologic wall layers, and have classically different appearances on presentation. Typical esophageal SCCA’s are easily diagnosed by standard endoscopy, by their obvious mucosal friability and their intraluminal mass effect. Conversely, esophageal leiomyomas originate from the deeper muscular layers of the wall, and have a classic endoscopic appearance of a submucosal appearing lesion, with smooth, intact overlying mucosa without friability. We describe two cases of esophageal SCCA that masqueraded as leiomyomas on presentation by endoscopy, EUS and cross sectional imaging. Case 1: A 61 year male with a 30 pack year history of smoking presented with 3 month history of dysphagia. Chest CT revealed a smooth soft tissue mass arising from the esophagus. EGD confirmed a submucosal appearing lesion, with smooth overlying mucosa. EUS demonstrated the lesion to be a hypoecholic mass with irregular borders arising from the muscularis propria, suggestive of a leiomyoma. FNA was done into the lesion and the cytology revealed poorly differentiated SCCA. Case 2: A 75 year female with a history of breast cancer presented with chest tightening and a decreased appetite. EGD showed a submucosal appearing lesion in the mid-esophagus with normal overlying mucosa. EUS showed this to be a hypoechoic mass contiguous with the muscularis propria, likely representing a leiomyoma. FNA was done into the lesion, revealing poorly differentiated SCCA. Conclusion: A hypoechogenic mass arising from the muscularis propria layer on EUS is pathognomonic of a leiomyoma, and thus may be misdiagnosed as SCCA. This case illustrates the importance of correlating endoscopic and CT findings as SCCA can also present in this manner.

Cells with granular, pink-staining cytoplasm and small nuclei

RECURRENT APPENDICITIS MASQUERADING AS CROHN’S DISEASE

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Purpose: Self-expanding metal stents (SEMS) have been designed to be removed endoscopically. These stents have increasingly been used to treat benign disease, particularly esophageal perforation. The ideal type of stent and the ideal duration of placement for this indication are unknown. We report two cases in which a total of three Alimaxx-E™ (Alveolus, Inc) stents were placed to treat post-dilation esophageal perforations. All three stents fragmented during attempted endoscopic removal.

Methods: Case 1: An 84 year old female presented with dysphagia after radiation treatments (XRT) for breast cancer. At endoscopy an esophageal stricture was seen and dilated with a Savory dilator. The dilation was complicated by a 2 cm mid-esophageal perforation. A covered self-expanding Nitinol stent (Alimaxx-E™, Alveolus, Inc) designed for endoscopic removal was placed. The patient initially did well but 15 months later presented with dysphagia and a 20 lb weight loss due to esophageal stenosis around the proximal end of the stent. The stenosis was dilated and stent removal was attempted. The manufacturer guidelines for removal were followed; the purse string was grasped and pulled. The proximal end fragmented and broke away. A rigid endoscope and forceps were used to separate and remove the stent in a piecemeal fashion, and after 4 hours the entire stent was successfully removed. Case 2: A 71 year old male presented with dysphagia after XRT for head and neck cancer. An esophageal stricture developed and was dilated with a Savory dilator, and this was complicated by a 5 cm mid-esophageal perforation. Two Alimaxx-E stents were placed to completely cover the perforation. After 3 months stent removal was attempted. Endoscopic forceps were used to grasp the purse string, and again the proximal end fragmented and broke away. The stent was eventually removed piecemeal using an endoscope and forceps. The second stent was grasped by
the purse string and removal resulted in it breaking into two halves. The first half was easily re-
moved, but the second half could not be pulled proximally. The esophagus was accessed
through a purse string and removal resulted in it breaking into two halves. The dural
end was then grasped with a snare and removed through the mouth. After 5 hours both
stents were successfully removed.

Results: It is unclear why all of these stents fragmented. Gastric acid may have played a
role. The manufacturer recommendations were carefully followed. Multiple in vivo studies in
humans have demonstrated that Nitinol implants in other body locations do not corrode, even after two
months.

Conclusion: Based on our experience we recommend caution when placing SEMS for benign
esophageal disease.

P998

TPMT TESTING AND HEPATOTOXICITY IN THE ELDERLY

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Medical Center, Maywood, IL.

Purpose: Managing older patients with Inflammatory Bowel Disease (IBD) can be clinically
challenging due to co-morbid illnesses, atypical presentation and varying response to therapy. Most
therapies for IBD have not been studied specifically in the elderly. Current guidelines and
principles of medical treatment are the same irrespective of age. With improved diagnostic
modalities and increased treatment options, there is an aging population of IBD patients. Older
patients currently represent at least 15% of newly diagnosed IBD. The clinician must apply caution
when treating IBD in older patients, especially when monitoring for drug toxicity. We present
a case of a 69 year-old female with Crohn’s Colitis who developed elevated liver enzymes
due to Azathioprine (AZA) therapy. This occurred despite thiopurine S-methyltransferase
(TPMT) testing and appropriate dosing. This 69 year old female had a complicated course of
Crohn’s Colitis. She initially underwent a left transverse loop colostomy for a bowel obstruction.
She developed strictures, requiring resection of the distal colon and proximal rectum. Maintained on
Mesalamine, the patient presented five years later with hematocrit and abdominal
dysfunction, requiring a colostomy for a bowel obstruction. She was found to have an
elevated AST which increased to nearly 3.5x. No other etiology of hepatotoxicity was found.

Purpose: To conclude, there is a need for randomized studies on the TPMT enzyme testing and
appropriate dosing. This 69 year old female had a complicated course of Crohn’s disease and
was found to have an elevated AST which increased to nearly 3.5x. No other etiology of
hepatotoxicity was found. Lab values returned to normal after the enzyme was stopped because of
mild alopecia. She underwent TPMT enzyme testing, which revealed

35.2 Enzyme Units (normal activity). Her baseline liver enzyme and function tests were normal.

Plummer-Vinson Syndrome is defined by the classic triad of dysphagia, iron defi-
ciency anemia, and esophageal web. The patient had previously been tried on AZA, but
it was stopped because of mild alopecia. She underwent TPMT enzyme testing, which revealed

35.2 Enzyme Units (normal activity). Her baseline liver enzyme and function tests were normal.

Plummer-Vinson syndrome in association with ulcerative colitis.

Results: The patient underwent a laparoscopic appendectomy that revealed pathologically
confirmed acute appendicitis with a large amount of inflammation and adhesions around the
appendix. The remainder of the bowel appeared normal. Since appendectomy, the patient has
don’t have recurrent abdominal pain.

Conclusion: This case illustrates the importance of correlating endoscopic and CT findings as
well as recognizing the existence of recurrent appendicitis. Although this diagnosis is rare, iden-
tifying this entity is critical to the institution of appropriate treatment and the prevention of
possible peritonitis. This case serves as a reminder not to discount the diagnosis of appendicitis
in patients with prior episodes of similar abdominal pain.

P1000

METASTATIC CROHN’S DISEASE: A RARE CUTANEOUS MANIFESTATION

INFLAMMATORY BOWEL DISEASE

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Forest University Baptist Medical Center, Winston Salem, NC; 2. Dermatology, Wake Forest
University Baptist Medical Center, Winston Salem, NC.

Purpose: Case: A 29 yr old man with a history of Crohn’s disease presented with an ulcerat-
ing skin lesion on his right flank. He required an ileocolic resection two years ago. He had a
post-operative recurrence and was then in clinical remission on Azathioprine monotherapy.
The patient initially developed a subcutaneous nodule on his right flank. This progressively en-
larged, became erythematous, and finally ulcerated (see Figure A). Magnetic Resonance En-
terography revealed a minimally thickened ileum and a subcutaneous soft tissue lesion over
the right flank with no associated fistula. Skin biopsy revealed granulomatous dermatitis, con-
sistent with metastatic Crohn’s disease (see Figure B). The patient was treated with adali-
mumab with resolution of this lesion. Discussion: Metastatic Crohn’s disease is a rare cuta-
eneous manifestation of the disorder which involves granulomatous inflammation which is not
contiguous with the gastrointestinal tract. The hallmark histologic findings are sterile granulo-
mas, mimicking the classic intestinal findings of Crohn’s disease. Other conditions which must be
excluded include pyoderma gangrenosum, cutaneous sarcoidosis, and mycobacterial infec-
tion. The presence of these lesions typically parallels active intestinal inamiation. Metastatic
Crohn’s disease often arises in skin creases, including submammary, inguinal, and perineal
folds. However, lesions have been reported to occur on the limbs, trunk, vulva, penis, and face.
The treatment of metastatic Crohn’s disease includes standard Crohn’s disease therapies, such as
systemic steroids, antibiotics, azathioprine, and 6-mercaptopurine. Successful treatment with
infliximab has been reported. We believe that this is the first case report of metastatic Crohn’s
disease successfully treated with adalimumab.

Figure A

Figure B Disclosure - Dr. Bloomfeld: Abbott- speaker's bureau, Centocor- speaker's bureau, Prometheus-
speaker's bureau
MELAMINE INDUCED EOSINOPHILIC ORGANIZING PNEUMONIA

S Kumar, MD,1 E. Scherl, MD, V. E. Jacob, MD, R. P. Bosworth, MD,1 J. Gastroenterology and Hepatology, Robert wood Johnson Medical School, New Brunswick, NJ;2 NYU, New York; New York Presbyterian Hospital: Columbia Presbyterian Medical Center, New York, NY

Purpose: Introduction: The 5-aminoacyclates are first-line therapy for treating ulcerative colitis (UC), and are generally well-tolerated and safe. However, despite their minimal systemic absorption, adverse effects include pancreatitis, peptic ulcers, and intestinal neoplasia. This is the first case of eosinophilic organizing pneumonia as a result of 5-ASA treatment. Case Description: A 28 year old man was in good health until the age of 26, when he presented with bloody diarrhea and was diagnosed with left sided UC with no evidence of Crohn’s disease. He was initially treated with azathioprine. Although his symptoms persisted and he was later started on prednisone and an additional 2.4g of mesalamine (Lialda, Shire Pharmaceuticals Inc., Wayne, PA) for a total molar equivalent of 4.8g of mesalamine. He was sterile refluores and 6-MP 15mg/kg was added. Symptoms persisted and he was admitted for IV cyclophosphamide (CSA). He was induced into remission on 4mg/kg of CSA and placed on PPI prophylaxis. He was discharged on a prednisone taper, oral CSA for 4 months, and continued on his 6-MP, Lialda and balsalazine. Several months later, he developed a non-productive cough and dyspnea. Chest CT revealed lobes that were at a nodular infiltrate alleviuated by the sign of situs inversus. Demonstrated organ of eosinophilic organizing pneumonia, and chronic and non-necrotizing granulomatous inflammation. Initially, all medications were discontinued and he was treated with clarithromycin. His cough resolved, but his bloody diarrhea returned. He was treated with CSA and 6-MP, and presently remains in remission 8 months later on 6-MP monotherapy with symptomatic and radiographic resolution of the pneumonia. Discussion: Inflammatory bowel disease itself can cause pulmonary infiltrates that may be associated with granulomas, and reports of inflammatory lung diseases related to 6-MP exist. However, in those circumstances, there is <1-month between onset of symptoms and 6-MP initiation; this patient had been on 6-MP for >6 months at the time of presentation. The eosinophilic inflammatory infiltrate is consistent with a medication reaction, but is not described in those patients with 6-MP exposure. Specifically as well, the presence of non-necrotizing granulomas associated with interstitial pneumonia and connective tissue disease induced injury can occur whether the balance of anti-inflammatory and pro-inflammatory is altered. The presence of eosinophilic pneumonia best is recognized by its eosinophilic infiltrates and non-necrotizing granulomas.

Disclosure - Ellen Scherl: Consultant: Shire Pharmaceuticals, Inc.

Poster Abstracts – Tuesday, October 7

P1005

UTILITY OF BLOOD CULTURES AS ROUTINE ADMISSION ORDER FOR PATIENTS ADMITTED TO THE HOSPITAL WITH ACUTE DIVERTICULITIS

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Purpose: The purpose of this study is to assess the impact routine blood cultures have on the management / outcome of patients admitted with the working diagnosis of acute diverticulitis.

Methods: Retrospective chart review of all patients admitted to the Western Pennsylvania Hospital Main and Forbes Regional campuses from June 1, 2004 to June 30, 2007 with the diagnosis of acute diverticulitis and who had blood cultures obtained upon admission. Results: The charts of 30 patients admitted with the diagnosis of acute diverticulitis in whom blood cultures were obtained were reviewed. Cultures were followed for a minimum of 5 days before reports were finalized. None of the cultures obtained yielded growth of any organisms. This is irrespective of severity of illness based upon temperature, WBC count, presence of banality, or patient findings at presentation. However, they were obtained during their primary admission. There were no changes in antibiotic regimens until the patients were able to tolerate oral intake and prepared for discharge.

Conclusion: There is no evidence to support the routine order of blood cultures after the decision making or care of patients with acute diverticulitis. This is a clearly a misappropriation of hospital and patient financial resources. Based upon the results of this study it is suggested that blood cultures no longer be obtained as routine admission orders for patients with acute diverticulitis.

P1006

SURGICAL REPAIR VERSUS A REMOVABLE ESOPHAGEAL PLASTIC STENT FOR TREATMENT OF POST-SURGICAL ESOPHAGEAL LEAKS: A DECISION ANALYSIS

C. Givens, MD, A. A. Siddiqui, MD. Internal Medicine, UT Southwestern Medical Center, Dallas, TX.

Purpose: Surgical repair (SR) in patients with leakage after esophageal surgery anastomosis or perforation can be associated with poor results and carries a high morbidity and mortality. These patients may fare better with placement of a Polylene® esophageal plastic stent (PS). We designed a decision model to address whether SR verses PS is the optimal treatment modality in patients with post-surgical esophageal leaks.

Methods: The base cohort was patients presenting with post-operative esophageal leaks We assessed success rates, complication rates and costs of the two treatment modalities SR and PS. Baseline outcomes and costs were based on published reports. Success was defined as no major procedure-related and long-term complications over a 1-month period. Failure of therapy was defined as recurrent symptoms or death due to a procedural complication. Sensitivity analyses and cost-effectiveness analyses for the various strategies were performed.

Results: SR had a success rate in 51% whereas PS was successful in 69% of cases. The overall success rates, complication rates and costs of the two treatment modalities SR and PS. Baseline outcomes and costs were based on published reports. Success was defined as no major procedure-related and long-term complications over a 1-month period. Failure of therapy was defined as recurrent symptoms or death due to a procedural complication. Sensitivity analyses and cost-effectiveness analyses for the various strategies were performed.

Conclusion: SR was also studied.

Poster Abstracts – Tuesday, October 7

P1008

CONSISTENCY OF ESTIMATED UTILITIES FROM SF-36 SCORES IN PATIENTS UNDERGOING BIOFEEDBACK THERAPY FOR CHRONIC CONSTIPATION

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Purpose: Health-related quality of life (HRQOL) is commonly assessed using the validated short form (SF-36) health survey and is represented in 8 domains. Although useful, this assess-}

Poster Abstracts – Tuesday, October 7

P1007

CONSISTENCY OF ESTIMATED UTILITIES FROM SF-36 SCORES IN PATIENTS UNDERGOING BIOFEEDBACK THERAPY FOR CHRONIC CONSTIPATION

J T Go, MD, C. K. Brown, MS1, J. Paulson, BS, S. Rau, MD, PhD, FBCP1. 1. Internal Medicine, University of Washington Hospitals and Clinics, Iowa City, IA, 2. The Center for Research in the Implementation of Innovative Strategies in Practice (CRIPS), VA Iowa City Healthcare System, Iowa City, IA.

Purpose: Health-related quality of life (HRQOL) is commonly assessed using the validated short form (SF-36) health survey and is represented in 8 domains. Although useful, this assess-}

Poster Abstracts – Tuesday, October 7

P1004

ACUTE APPENDICITIS IN A PATIENT WITH SITUS INVERSUS

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Purpose: Situs inversus is a rare developmental anomaly anatomically with a frequency of 1 in 10,000 live births. In patients with situs inversus, there is transposition of the visceras in the tho- racic and abdominal cavity, contrary to normal. In patients with situs inversus, the right and left sides of the body appear on the left and right sides of the body in the right and left sides of the body. Multiple other congenital abnormalities are common in patients with situs inversus including cardiovascular malformations, bronchiectasis, asplenia or polysplenia, and duodenal or esophageal atresia. Kartagener’s syndrome is frequently found with ductopenia and some form of situs inversus.

Methods: Review of patient chart

Results: A 42 year old male presented with 3 day history of diffuse abdominal pain which became localized to the periumbilical area. He also complained of nausea, vomiting, and loss of appetite. He has a history of abdominal situs inversus and colon cancer diagnosed at the age of 27. At presentation, he was alebrile, not tachycardic, and had a WBC of 10.6. A CT scan showed edematous right-sided appendicitis with peritoneal fluid and thickening of the base of the appendix as well as a dial. A laparoscopy was performed and revealed acute appendicitis with 180 degree of situs inversus. Laparoscopic appendectomy was performed without complication. The patient had a routine postoperative course and was discharged on postoperative day 1. Conclusion: Patients presenting with atypical abdominal pathology and situs inversus can present a challenge in diagnosis. Specifically, patients with left-sided appendicitis can present with left lower quadrant pain that can be interpreted as a different process, such as diverticulitis. When this presentation is not straightforward, a CT scan is invaluable as an aid in the diagnosis of the correct disease process as it will show evidence of situs inversus. Laparoscopy can also be useful in defining the anatomy in these difficult situations.
differs widely with each of the 3 translation methods. After adjusting for type of biofeedback therapy and treatment phase, only translation method remains statistically different (p<.0001). Furthermore, pair-wise correlation coefficient varies: Brazier vs Fryback (r=0.41, p<.0001), Brazier vs. Nichol (r=0.84, p<.0001) and Fryback vs. Nichol (r=0.57, p<.0001).

Conclusion: The choice of translation method can affect estimated utilities and consequently may influence the interpretation of a cost-effectiveness study. These factors should be considered when analyzing data for cost effectiveness studies.

Office Biofeedback

<table>
<thead>
<tr>
<th>Baseline</th>
<th>Post-treatment</th>
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<tr>
<td>Median</td>
<td></td>
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<tr>
<td>25%</td>
<td>75%</td>
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</table>

Nichol 0.763 0.692 0.859 0.821 0.736 0.931
Fryback 0.688 0.624 0.740 0.698 0.650 0.757
Brazier 0.709 0.626 0.613 0.755 0.604 0.856

Home Biofeedback

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<td>Median</td>
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<tr>
<td>25%</td>
<td>75%</td>
</tr>
</tbody>
</table>

Nichol 0.854 0.747 0.900 0.866 0.761 0.937
Fryback 0.722 0.697 0.760 0.749 0.683 0.791
Brazier 0.771 0.630 0.869 0.801 0.685 0.931

P1008 PATIENTS WITH DIABETES MELLITUS, ELEVATED CHOLESTEROL AND INCREASED BMI WHILE ON MEDICATIONS DO NOT HAVE AN INCREASED RISK OF COLORECTAL ADENOMA

P. Kothawala, MBBS, T. Huang, MD, J. Tian, MD, A. Nagar, MD1. 1. Internal Medicine, University of Connecticut Health Center, Farmington, CT; 2. Gastroenterology, Yale University School of Medicine, New Haven, CT; 3. Internal Medicine, Bridgeport hospital and Yale University School of Medicine, Bridgeport, CT.

Purpose: Colorectal carcinoma (CRC) is a leading cause of cancer death in the USA. Screening reduces mortality, but there is poor compliance with guidelines. The metabolic syndrome increases the risk of colorectal cancer but this association with colorectal adenomas has not been extensively reported. The aim of this study is to describe the association of serum lipoproteins, diabetes and body mass index (BMI) in patients with colorectal adenoma.

Methods: Design: IRB approved single VAMC, retrospective study. Inclusion: Screening or diagnosis of CRC, > 50 yr, no colonoendoscopy within 10 yr and documented glucose, HbA1c and lipoprotein levels on medical treatment. Exclusion: CRC and IBD Data: EMR: adenoma finding, F/H of CRC, diabetes, serum lipoprotein levels, HbA1c, BMI, ASA, insulin and lipid medications. Advanced adenoma: villous, >1 cm or CIS; Obesity: BMI > 29; Elevated Cholesterol: >200 mg/dl Subjects had none, one, two or three risk factors studies (Obesity, DM and cholesterol). Univariate analysis was used to compare all variables that increase risk of polyps using X2 tests. P of <0.05 is significant. Multivariate logistic regression was used to evaluate the protective effect of independent risk factors on the adenoma incidence.

Results: A total of 734 patients were included in the study (table); with 96.7 % male and mean age of 60 years. 101 patients had no metabolic risk factors. The overall rate of adenoma incidence for all patients was 28% (211/734) and advanced adenoma was 10.9% (80/734). Among the 101 patients without metabolic risk factors, adenoma incidence was 25.7% (26/101) compared to an adenoma incidence of was 29.2% (185/633) with metabolic risk factors (p=0.47). Presence of 1, 2 or 3 metabolic risk factors did not increase the risk of adenoma or advanced adenoma incidence: 28%, 29%, 34% for adenoma (p=0.6) and 11%, 9%, 11% for advanced adenoma (p=0.19), respectively. Multivariate logistic regression demonstrated age (>= 65 vs. < 65 years old) was an independent risk factor for colon adenomas (OR 2.0). This is an ongoing study.

Conclusion: Despite having risk factors for metabolic syndrome, patients, who are on medications to control diabetes and dyslipidemia, did not have an increased risk of adenoma or advanced adenoma. This information is clinically useful to patients and primary care providers. Larger studies are necessary to confirm these findings and extend it to polyp recurrence.

Table of Age and Sex with Number of risk factors

<table>
<thead>
<tr>
<th>Age</th>
<th>Control/ Male</th>
<th>Control/ Female</th>
<th>1 risk factors/ Male</th>
<th>1 risk factors/ Female</th>
<th>2 risk factors/ Male</th>
<th>2 risk factors/ Female</th>
<th>3 risk factors/ Male</th>
<th>3 risk factors/ Female</th>
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<td>&lt;50</td>
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<td>2</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
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<td>63</td>
<td>5</td>
<td>188</td>
<td>5</td>
<td>161</td>
<td>10</td>
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<td>0</td>
</tr>
<tr>
<td>&gt;64</td>
<td>28</td>
<td>0</td>
<td>92</td>
<td>1</td>
<td>69</td>
<td>0</td>
<td>37</td>
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P1009 RANDOMIZED CONTROLLED TRIALS OF PROTON-PUMP INHIBITORS IN NIGHTTIME GERD: A SYSTEMATIC REVIEW


Purpose: To assess heterogeneity in enrollment criteria, methodology and methodological quality, and outcomes across randomized-controlled clinical trials (RCTs) evaluating the efficacy of proton-pump inhibitors (PPIs) in controlling nighttime symptoms of gastroesophageal reflux disease (GERD).

Methods: MEDLINE and EMBASE databases from 1990 to June 2007 were searched. Studies were included if the design was a RCT, at least one treatment arm was PPI, the subjects were adults with nighttime GERD, and nighttime symptoms were assessed. The methodological quality of trials was evaluated using the score devised by Jadad et al (ranging from 1-low to 5-high). We also assessed nighttime criteria used for patient enrollment, nighttime outcomes measured, and the nighttime definition used.

Results: Thirty-two RCTs compared the efficacy of PPI with placebo only (n=7), H2-receptor antagonist only (n=12), another PPI only (n=11) or both placebo and H2-receptor antagonist (n=2) in controlling nighttime GERD Methodological quality of trials was high with 26 of the 32 trials attaining a Jadad score of at least 3 points. Source of data collection was patient diaries across all studies. The majority of studies assessed nighttime symptoms as a secondary outcome; erosive esophageal healing was usually the primary endpoint. Most studies assessed efficacy at 8 weeks or less; only 3 studies measured the long-term efficacy of PPI (pantoprazole [n=2] and rabeprazole [n=1]) for a year. Criteria for enrolling nighttime GERD patients (frequency and/or severity of nighttime symptoms) lacked consistency. Thirty studies (94%) assessed nighttime heartburn; few studies evaluated overall nighttime symptoms (n=4) and only one study evaluated regurgitation as an independent outcome. Nighttime heartburn outcomes measured were percentage of patients without nighttime heartburn (n=18), percentage of heartburn-free nights (n=15), heartburn severity score (n=11) or time to heartburn relief (n=6). The time window for the assessment of nighttime symptoms was reported in only 3 studies (9%) and was not based on specific hours but on sleep or posture (retiring or lying down to heartburn).

Conclusion: RCTs of PPI therapy in nighttime GERD are of high methodological quality but are heterogeneous with respect to their definition of nighttime symptoms and outcomes. Consensus on diagnostic criteria for nighttime GERD would be anticipated to increase generalizability of results and guide the diagnosis and management of nighttime symptoms. Long-term observational studies may be helpful in translating the efficacy of PPI observed in clinical trials to real-world patients.

Disclosure - Drs. Kothawala and Dean, and Ms Aguilar are employees of Cerner LifeSciences, a provider of research and consulting services to pharmaceutical companies, including Wyeth. Drs. Lange and McGuigan are consultants to Wyeth. Drs. Morgenstern and Yan are employees and stockholders of Wyeth.

This research was supported by an industry grant from Wyeth Pharmaceuticals, USA.
HEPATITIS C VIRUS SPONTANEOUS CLEARANCE RATES IN A RURAL VA REFERRAL CLINIC

Title: P1010

Purpose: To assess patient compliance and satisfaction with treatments for inflammatory bowel disease (IBD), including Crohn's disease (CD) and ulcerative colitis (UC). To determine the impact of these treatments on patients' health-related quality of life (HRQOL) over a 52-week period.

Methods: A prospective, observational study of 52 patients with IBD, including CD and UC, who started adalimumab or infliximab therapy during a 6-month period. HRQOL was assessed using the Inflammatory Bowel Disease Questionnaire (IBDQ), the Functional Assessment of Chronic Illness Therapy–Fatigue scale, and a visual analogue scale for pain. When patients dropped out or switched to open-label therapy, the last observation carried forward was used. Differences in the changes in HRQOL from baseline to each time point were compared between adalimumab and placebo using an analysis of covariance method controlled for baseline score and Week 4 responder status.

Results: Among the 52 patients, 50 (96.2%) had a mean BMI of 27.6 ± 6.43 (SD). Among these veterans, females had a mean BMI of 27.6 ± 3.89 (SD), while males had a mean BMI of 26.6 ± 6.09 (SD). The difference among veterans with-Co morbid illnesses

Conclusion: Rural midwestern veterans had a 12% spontaneous clearance rate of HCV Veterans with SCRs were older when compared to veterans with viremia. There was a statistically significant difference in BMI, co-morbid illness, sex, and race between veterans with SCR and viremia.

Table 1: Shows the differences among HCV patients with spontaneous clearance of virus and patients with viremia

<table>
<thead>
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<th>SCR (n=46)</th>
<th>Viremia (n=107)</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>54.87 ± 8.43</td>
<td>49.54 ± 6.44</td>
</tr>
<tr>
<td>Body Mass Index</td>
<td>29.19 ± 6.43</td>
<td>30.85 ± 6.04</td>
</tr>
<tr>
<td>Co-morbid illnesses</td>
<td>67.39 %</td>
<td>73.83 %</td>
</tr>
<tr>
<td>Male</td>
<td>95.65 %</td>
<td>95.45 %</td>
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<tr>
<td>Caucasians</td>
<td>89.13 %</td>
<td>95.33 %</td>
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LABORATORY PREDICTORS OF SEVERE CLOSTRIDIUM DIFFICILE ASSOCIATED DIARRHEAL DISEASES

Title: P1011

Purpose: To evaluate the impact of adherence to adalimumab maintenance therapy on health-related quality of life (HRQOL) in patients with Crohn's disease (CD) receiving adalimumab therapy.

Methods: A retrospective analysis of 704 patients with CD included in a longitudinal patient database. HRQOL was assessed using the Inflammatory Bowel Disease Questionnaire (IBDQ), the Functional Assessment of Chronic Illness Therapy–Fatigue scale, and a visual analogue scale for pain. Patients who continued adalimumab maintenance therapy reported less depression, less pain, and fewer fatigue symptoms from Week 12 to Week 56 (all p<0.05). Adalimumab maintenance therapy also showed a significant benefit on the IBDQ at all time points after the induction period (p<0.05).

Results: For TNF-antagonist–naïve patients with CD, adalimumab maintenance therapy provided sustained improvements in IBDQ over 56 weeks of treatment. This research was funded by Abbott Laboratories, Abbott Park, IL.

Conclusion: TNF-antagonist–naïve patients with CD, adalimumab maintenance therapy provided sustained improvements in IBDQ over 56 weeks of treatment. This research was funded by Abbott Laboratories, Abbott Park, IL.

HEALTH-RELATED QUALITY OF LIFE IN TNF-ANTAGONIST-NAÏVE PATIENTS WITH CROHN’S DISEASE DURING SHORT- AND LONG-TERM ADALIMUMAB TREATMENT

Title: P1012

Purpose: To examine the relationship between lab values suggestive of CDIF infection and the severity of CDIF infection. Identifying lab values suggestive of CDIF infection can improve the timeliness of diagnosis, and reduce the relationship between leukocytosis, thrombocytosis, and severity of CDIF infection.

Methods: A retrospective analysis of 704 patients with CD included in a longitudinal patient database. HRQOL improved across all measures during the 4-week induction phase. Compared with placebo treated patients, patients who continued adalimumab maintenance therapy reported less depression, less pain, and fewer fatigue symptoms from Week 12 to Week 56 (all p<0.05). Adalimumab maintenance therapy also showed a significant benefit on the IBDQ at all time points after the induction period (p<0.05).

Conclusion: TNF-antagonist–naïve patients with CD, adalimumab maintenance therapy provided sustained improvements in IBDQ over 56 weeks of treatment. This research was funded by Abbott Laboratories, Abbott Park, IL.

Conclusion: TNF-antagonist–naïve patients with CD, adalimumab maintenance therapy provided sustained improvements in IBDQ over 56 weeks of treatment. This research was funded by Abbott Laboratories, Abbott Park, IL.

ASSOCIATION BETWEEN RACE AND THE PERCEPTION AND RESOLUTION OF HB SYMPTOMS (HBS) IN PATIENTS WITH HEPATITIS C

Title: P1013

Purpose: To examine the association between race and baseline HB status and resolution in patients with hepatitis C.

Methods: A retrospective analysis of 704 patients with hepatitis C included in a longitudinal patient database.

Results: The mean age of the 704 patients included was 46 y (38% men; 85% white). Baseline HB status was determined by a 90-day absence of claims for HBV, HBE, or HBS. For ADA, 48.6% patients were at or below the lowest labeled dose of 5 mg/kg, while few (9.4%) of IFX patients were above the labeled dose. Payers should analyze the differences in HRQOL from baseline to each time point were compared between adalimumab and placebo using an analysis of covariance method controlled for baseline score and Week 4 responder status.

Conclusion: The results of the CHARM trial had substantial impairment of HIFQOL at baseline, and HIFQOL improved across all measures during the 4-week induction phase. Compared with placebo treated patients, patients who continued adalimumab maintenance therapy reported less depression, less pain, and fewer fatigue symptoms from Week 12 to Week 56 (all p<0.05). Adalimumab maintenance therapy also showed a significant benefit on the IBDQ at all time points after the induction period (p<0.05).

Conclusion: TNF-antagonist–naïve patients with CD, adalimumab maintenance therapy provided sustained improvements in IBDQ over 56 weeks of treatment. This research was funded by Abbott Laboratories, Abbott Park, IL.

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Role of Immunonutrition (Alanyl-glutamine Dipeptide) in Critically Ill Patients


Methods: Critically ill patients admitted to Bhopal Memorial Hospital Research Centre between January 2006 and January 2007 were chosen to participate in the study, according to the inclusion and exclusion criteria. Inclusion criteria: Patients between 18 and 55 years of age requiring parenteral nutritional support for >7 days, with major abdominal surgery or severe abdominal pathology. Exclusion criteria: Patients with severe hepatic or congestive cardiac failure or renal dysfunction. Hyper hydration states. Disturbed electrolyte homeostasis. Unconscious patients. Uncooporative patients. Patients with any contraindication to parenteral nutrition informed written consent was obtained for the participation in the study. Patients were divided into 2 groups. Control group: received TPN (1 to 1.5L) for 7-10 days. Study group: received TPN as control group and additionally also received Alanyl-glutamine dipeptide (20% 100ml intravenously over 4 hours) for 7-10 hours. Alanyl-glutamine dipeptide was administered in a dose corresponding to >or= 0.2 gm/kg/day.

Results: 36 patients were enrolled in study group (patient which received Dipertiven) and 36 patients in control group (without Dipertiven). Study group had 24 males (M=21.5) aged between 18 to 55 years (average age 45.75 years). Control group had 19 males, aged between 18-55 years (average age 45.3 years). Diagnosis and treatment details of both the groups were comparable. There was significant decrease in C reactive protein level, APACHE II score and incidence of post operative chest infection in the study group. There was also improvement in serum albumin and total lymphocyte count in the study group. However, there was no significant improvement in weight gain, mid arm circumference, serum globulin level and total leucocyte count in the study group.

Conclusion: This is the first prospective controlled Indian study to compare the efficacy and safety of immunonutrition (dipeptide) in critically ill Indian patients. Parenteral immunonutrition (Dipeptiven) had beneficial (positive) effect on nitrogen balance of critically ill patients and reduces incidences of chest infection. Larger studies are required to confirm the beneficial effect of immunonutrition (glutamine) in critically ill patients.

Patient Perception of Disease Control in Ulcerative Colitis


Purpose: To compare patient perception of disease control in UC to the number and severity of disease flares.

Methods: A market analysis of patients and products (MAPP) study was conducted with UC patients and gastroenterologists. Patients were required to be at least 18 years of age, have a confirmed diagnosis of UC for at least 2 years, and be currently under a physician’s care.

Results: The study included 175 patients. The mean age was 42 years, and 73% of patients were female. Although UC patients claimed to be satisfied with their current conventional therapy, they still experienced regularly frequent symptoms from their UC. While a majority of patients perceived themselves to have their mild (80%) and moderate (76%) UC under control, only 25% of patients with severe disease believed that their UC was controlled. However, 88% of patients who considered their UC controlled and 94% of patients who considered their UC uncontrolled experienced 2 or more flares per year; 58% of all patients experienced 4 or more flares per year. Steroids were used to control two-thirds of these flares. The majority of mild (61%) and moderate (80%) UC patients indicated that their flares were moderate in nature, while 50% of patients with severe disease indicated their flares were severe. Over half (53%) of patients indicated that their flares lasted 1 to 2 weeks in duration. In addition, over half of the UC patients admitted to stockpiling steroids so that they could self-treat their future flares. Half of the patients indicated they were treated with their current conventional therapy on an as needed basis.

Conclusion: Although patients and physicians may consider that the disease is under control, the majority of UC patients reported having multiple disease flares each year. These flares were of moderate to severe intensity and lasted several weeks. Reasons for the disconnect between perceived disease control and actual control should be explored further to enable better treatment of UC.

This research was supported by an industry grant from Centocor Ortho Biotech Services, LLC.
To assess quality of life in patients with inflammatory bowel disease (IBD), including Crohn’s disease (CD) and ulcerative colitis (UC), the National Institutes of Health (NIH) survey was used. This survey is a validated, self-administered tool that assesses physical, emotional, and social well-being. The primary aim of the study was to retrospectively determine if a patient’s Charlson Comorbidity Index (CCI) correlates with survival after the placement of a percutaneous endoscopic gastrostomy (PEG). The CCI is a weighted score of comorbid conditions that is used to predict mortality in long-term longitudinal studies. A secondary aim of the study was to compare the outcomes at our institution with previously published national data.

Methods: The electronic medical records of all patients who underwent PEG placement between January 2004 and April 2007 at the GI Lab of Bay Pines VA Healthcare System (BVP-VAMHS) were reviewed. The 30-, 60-, 90-, and 365-day mortality rates after PEG placement were determined and the lowest values of physical (38.8 and 37.6, respectively) and mental (44.1, 44.8 and 45.2, respectively) QoL scores on patients taking other medications. Those taking steroids and antibiotics reported higher physical (43.2, 43.8 and 43.1 respectively) and mental (44.1, 44.8 and 45.2, respectively) QoL scores than those taking other medications. These results suggest that multi-drug class therapy may not, from the patient perspective, achieve optimal results. Disclosure - Dr. Panaccione - consultant, research support, advisory board, speakers’ bureau: Eli Lilly and Company; Dr. K. Kwon - employee: Taekwang Pharmaceutical Co., Ltd.
Our objective was to determine the association between health literacy, knowledge and adherence to colonscopy among veterans at high risk for colorectal cancer (CRC).

Methods: We conducted a retrospective chart review to undertake this objective. We included patients who were referred for diagnostic evaluation of hemato-positive stool, hematochezia, anemia, or a family history of CRC. We were recruited from the Durham VA Gastroenterology Clinic. Subjects completed a validated CRC knowledge questionnaire (total knowledge score ranged from 0-100) and were administered the Rapid Estimate of Adult Literacy in Medicine (REALM). The REALM was used to classify individuals as having adequate (>9th grade) or low (<8th grade) health literacy (LHL). The primary endpoint was adherence to colonoscopy, defined as an individual having undergone a complete colonoscopy. Chi-square statistic and T-test were used to evaluate differences between groups.

Results: A total of 619 subjects completed the study. Mean age was 59 years and 91% were male. 53% were White, 42% Black, 4% of subjects had LHL. Total knowledge score was slightly lower in the LHL group (76% vs 80%; p=0.02). Overall adherence rate was high: 518 (84%) completed their diagnostic colonoscopy. Adherence status between the 2 groups was lower in the LHL group but this difference was not statistically significant (82% versus 86%, p=0.24).

Conclusion: LHL is associated with less knowledge about CRC screening but this is the only study to date that has looked at the impact of health literacy on outcomes such as adherence to diagnostic colonoscopy. While LHL rates were high in this cohort of veterans, and this may have translated into less knowledge about CRC, importantly, it did not have an impact on adherence to diagnostic colonoscopy. These findings are especially significant since adherence to colonoscopic evaluation is imperative in this patient population referred for diagnostic evaluation.

P1023 RELEVANCE OF THE GASTROINTESTINAL SYMPTOM RATING SCALE (GSRS) IN PATIENTS WITH CELIAC DISEASE

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Purpose: While patient-reported outcome (PRO) measures are routinely used to evaluate clinical response in GI treatment trials, there is no PRO measure accepted for use in clinical trials of Celiac Disease (Cd). As there are no approved medicines for the treatment of Cd, clinical research using prospectively defined efficacy outcomes are in early development. Our objectives were to identify symptoms of concern for Cd patients and to determine if the Gastrointestinal Symptom Rating Scale (GSRS) (Omenas et al., 1993) would be a relevant and appropriate PRO for use in clinical trials of novel treatments for Cd.

Methods: Two iterative sets of in-depth interviews were conducted on 21 patients with Cd who had a diagnosis confirmed through upper endoscopy with biopsy and/or a serum antibody test (Anti-tTG). All participants completed an open-ended interview detailing their experiences with Cd, including all symptoms and their impacts. The participants also completed a cognitive debriefing of the GSRS, providing feedback and detailing the relevance and relative importance of each item within their personal experience of Cd.

Results: 6/6/2008 of which 56 were eligible to participate. The majority of screen failures were inpatients (N=54) and patients without sufficient GERD symptoms (N=30). Of the 56 eligible patients, 29 (52%) enrolled in the study [15 males (52%), mean age 48.7 years; LA grade B=23, C=3, D=3] and 12 (21%) declined. Evaluating the final study population did not allow comparison with CD patients due to a plan for twice daily dosing. Three potential subjects were identified after they had left the clinic. To date, 11 subjects have completed the trial of whom 6 (55%) were compliant and 5 (45%) non-compliant in taking their prescribed daily PPI. The mean number of capsules taken by the compliant group was 54 compared to 27 capsules by the non-compliant group (p<0.05). GERD symptoms resolved in 5 (83%) compliant subjects and 1 (20%) non-compliant subject.

Conclusion: Preliminary results indicate a large percentage of patients taking PPIs for symptomatic grade B, C or D erosive esophagitis are non-compliant in the short-term. The resolution of GERD symptoms appears to correlate with compliance. Capsule counts are a poor proxy for compliance with prescribed PPI use in patients with erosive esophagitis. This project was supported by an AstraZeneca Investigator Initiated Award.

P1025 MANAGEMENT OF DIVERTICULITIS IN YOUNG PATIENTS

P. Giagounidis, MD, P. Donnelly, MD, P. Cusaij, MD. The Western Pennsylvania Hospital, Pittsburgh, PA.

Purpose: Our objective was to evaluate their clinical presentation and management of patients under 45 years with acute diverticulitis.

Methods: Retrospective, single institution study with review of the literature. We reviewed all charts of patients under 45 years that were discharged from the hospital with a diagnosis of diverticulitis (ER-GI lab-Inpatient). Our inclusion criteria were those patients with CT scans diagnostic of diverticulitis. The inclusion criteria included patients with CT scan diagnosis and/or operative report of left sided diverticulitis. We excluded all patients in which symptoms were not due to diverticular disease and those with right side diverticulitis. Patient data, including demographics, Hinchey classification, non-operative and operative procedures performed, length of hospital stay, complications and recurrences were collected and studied.

Results: 153 patients under 45 years were discharged with diagnosis of diverticular disease. In 80 patients the main complaint was not due to diverticular disease and in 3 patients there was a right-sided diverticulitis and were excluded from the study. Seventy patients had one or more episodes of acute diverticulitis. The mean age was 35 years (Median 36 years; Range 22-43 years) and the male/female ratio was 46/24. Fifty patients (71%) were admitted to the hospital whereas 20 patients (29%) were treated as outpatients. Sixty two patients (89%) had a non-complicated or Hinchey II diverticulitis, 6 patients (9%) Hinchey II and 2 patients (2%) Hinchey III IV. Sixteen patients (23%) had a recurrence in a mean time of 8 months, (Median 4.5 Month, Range 1 week-4 years) and only two needed emergency surgery. All patients were non-complicated diverticulitis or Hinchey I in the first episode. In all except one patient who recurred with a Hinchey III had the same stage at the recurrent episode. Recurrence was based on readmission to the hospital. Overall, 17 patients (23 %) with diverticulitis had surgery; Ten surgeons (59%) were elective and 7 (41%) urgently.

Conclusion: Reviewing the literature and based in our experience, acute diverticulitis does not appear to be a more virulent disease in patients under 45 year of age than in older patients.
P1026

FACTORS ASSOCIATED WITH INCREASED COST IN PATIENTS HOSPITALIZED WITH ACUTE APPENDICITIS OVER THE LAST 15 YEARS

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Purpose: Acute appendicitis remains one of the most common abdominal diseases requiring hospitalization and emergency care. The cost of hospitalization from appendicitis continues to rise. Factors associated with this increased cost have not been previously assessed on a large scale basis. The study aim was to identify the factors associated with increased cost for hospital admissions due to acute appendicitis.

Methods: Retrospective analysis of the Johns Hopkins Hospital financial database was performed using appendicitis as the primary diagnosis with ICD9 codes 540.9, 541.0 and 542.0 between the years of 1988 to 2003. The financial database includes the following variables: patient discharge ID, age, gender, race (Medical-Surgi- cal), number of pre-operative and post-operative days, and source of admission (emergency room vs. non-emergency room) were evaluated as potential factors associated with increased cost.

Results: From 1993-2008, 792 patients were admitted with a primary diagnosis of acute appendicitis in our tertiary care center. Complete data were available for 753 patients. Mean hospitalization costs were higher in men vs. women ($18,800 vs $13,713 per patient; p<0.001). Patients admitted to the hospital from non-emergency room settings and to the Medical Service incurred greater costs by $2,689 (p<0.001) and $5,475 (p<0.001), respectively. The cost of hospitalization was lower among patients who underwent surgery within 48 hours of diagnosis by $6,979 per patient (p<0.001). Patients admitted for more than 2 days post-operatively incurred higher costs by $4,236 compared to those who spent less than 2 days in the hospital following their operation (p<0.001). Differences in mean cost were also seen among the categories of gender and race, but neither reached statistical significance (p>0.05).

Conclusion: Factors associated with higher cost of hospitalization due to acute appendicitis include admission from the Medical Service, patient stay ≥ 2 days before surgery, non-emergency room admissions and post-operative stay longer than 2 days. Changes in hospital policies to address these factors may significantly reduce overall hospitalization costs for patients with suspected appendicitis.

P1027

RESIDENT PHYSICIANS COMFORT WITH MANAGING GASTROINTESTINAL BLEEDING AT THE COMPLETION OF INTERNAL MEDICINE RESIDENCY

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Purpose: Gastrointestinal (GI) bleeding is a core topic in internal medicine residency training. It is critical that internal medicine residents are comfortable managing GI bleeding because it is potentially life-threatening. This study evaluated internal medicine resident physicians’ comfort with gastrointestinal bleeding management as well as the effectiveness of various teaching modalities.

Methods: An anonymous survey addressing core gastroenterology topics was distributed to all PGY-3 internal medicine resident physicians at an urban university medical center. Information was collected about the benefit of various teaching modalities during residency training and resident physicians’ comfort level with regards to managing gastrointestinal bleeding. The teaching modalities evaluated included attending rounds, autopsy conference, didactic rounds, direct patient care (inpatient and outpatient), grand rounds, individual reading, journal club, morning report, and the non-attending resident. A database was developed. Statistical analysis was performed using Chi-square tables with statistical significance set at p≤0.05.

Results: Twenty of 29 (69%) completed surveys were returned. Inpatient care, individual readings, and direct interactions were reported to be the most helpful teaching modalities for resident physicians to learn GI bleeding management. Each of these teaching modalities was found to be superior (p=0.0015) to outpatient care for learning GI bleeding. When resident physicians were surveyed about the comfort level with GI bleeding management, 63% of the residents said they were very comfortable with GI bleeding management. However, no resident physician cited GI bleeding as an area needing improvement in the residency curriculum and 30% of the resident physicians listed GI bleeding management as an area of strength in the curriculum.

Conclusion: GI bleeding is a core topic in residency training and a frequent cause of hospitalization. It is critical that resident physicians are able to manage GI bleeding. This study revealed that certain teaching modalities were more helpful than others for understanding GI bleeding. However, approximately one-third of the resident physicians reported that they were not comfortable with their GI bleeding management skills upon completion of residency. Further study is necessary to define methods to improve internal medicine resident physicians’ comfort level with GI bleeding.

P1028

FAVORABLE GI PROFILE OF CELECOXIB VS NSNSAIDS BASED ON POOLED ANALYSIS OF 21 CELECOXIB RANDOMIZED CONTROLLED TRIALS


Purpose: To compare the gastrointestinal (GI) tolerability of celecoxib with that of nonselective (nS) NSAIDs in patients with osteoarthritis (OA), adult rheumatoid arthritis (RA) or ankylosing spondylitis (AS).

Methods: Randomized, controlled trials from the Pfizer Corporate Clinical Trials Registry, available as of October 31, 2004 were selected using the following criteria: (1) Parallel-group study design and planned treatment duration of ≥8 weeks (2) At least one nNSAID (naproxen, ibuprofen or diclofenac) as a comparator (3) At least one arm with 200 mg or 400 mg celecoxib per day. Data was pooled by treatment and by subject from the safety analysis population of each included study. The primary end point of the analysis was the combined incidence of tolerability-related GI adverse events (AEs) (abdominal pain, dyspepsia, nausea, diarrhea and vomiting). The incidence of all AEs, GI and tolerability-related GI AEs, and time to study discontinuation due to GI AEs and due to GI tolerability AEs.

Results: Twenty-one studies involving 23,545 patients (mean age ≥67.0 (1.0) years) met the selection criteria. In total 85.9%, 12.1% and 1.9% of patients were treated for OA, RA and AS, respectively, with a median (mean) treatment exposure of 0.21 (0.2) years. Most patients were female (72.6%) and Caucasian (72.7%). The table shows the incidence of AEs, GI AEs, and GI tolerability-related AEs. Significantly more patients treated with each nNSAID than the comparator experienced a tolerability-related GI AE, or a general GI AE (each comparison: p<0.0001 vs each nNSAID). Starting at week one, significantly fewer patients treated with celecoxib discontinued due to GI AEs compared with those treated with naproxen (1.7% vs 3.7%, p<0.001). The difference in discontinuations due to GI AEs for celecoxib versus ibuprofen and versus diclofenac reached statistical significance at week 4 (vs ibuprofen 3.1% vs 5%, p=0.0156; vs diclofenac 3.1% vs 7.3%, p=0.041). The time to discontinuation due to a tolerability-related GI AE followed a similar pattern. Conclusion: In this pooled analysis, OA, RA and AS patients treated with celecoxib had fewer discontinuations due to tolerability-related AEs Celecoxib treated patients had fewer withdrawals due to adverse events (AEs) and fewer discontinuations due to GI AEs and GI tolerability AEs than patients treated with naproxen, ibuprofen or diclofenac.

Incidence of GI AEs

<table>
<thead>
<tr>
<th></th>
<th>Celecoxib</th>
<th>Naproxen</th>
<th>Ibuprofen</th>
<th>Diclofenac</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEs n (%)</td>
<td>6542 (45.3)</td>
<td>7300 (58.6)</td>
<td>7000 (p=0.001)</td>
<td>7000 (p=0.001)</td>
</tr>
<tr>
<td>GI AEs n (%)</td>
<td>2891 (20.0)</td>
<td>932 (31.6)</td>
<td>932 (p=0.001)</td>
<td>155 (p=0.001)</td>
</tr>
<tr>
<td>GI tolerability AEs n (%)</td>
<td>2519 (16.0)</td>
<td>717 (24.3)</td>
<td>717 (p=0.001)</td>
<td>121 (p=0.001)</td>
</tr>
</tbody>
</table>

p value is compared to celecoxib group; *pooled doses

Disclosure: L. Nicolas, C. Li, J. Huang and S. Mallen are all employees of Pfizer Inc, who manufacture the product celecoxib.
EBV viral replication and disease activity

<table>
<thead>
<tr>
<th>EBV viral replication</th>
<th>Low No. (%)</th>
<th>Intermediate No. (%)</th>
<th>High No. (%)</th>
<th>CDAI (N=42)</th>
<th>P &gt; 0.05 (NS)</th>
<th>IBDO (N=46)</th>
<th>P &lt; 0.01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(&lt;40)</td>
<td>(41-1000)</td>
<td>(&gt;1000)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;220</td>
<td>23 (62.2%)</td>
<td>9 (24.3%)</td>
<td>5 (13.5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥220</td>
<td>2 (40%)</td>
<td>2 (40%)</td>
<td>1 (20%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IBDO</td>
<td>&lt;170</td>
<td>13 (40.6%)</td>
<td>14 (43.8%)</td>
<td>5 (15.7%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥170</td>
<td>13 (32.9%)</td>
<td>0</td>
<td>1 (7.2%)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

CDAI = Crohn’s Disease Activity Index; IBDO = Inflammatory Bowel Disease Questionnaire

Table 1. Clinical Characteristics

<table>
<thead>
<tr>
<th>N (No.)</th>
<th>Age, years, mean</th>
<th>Male/Female</th>
<th>Crohn’s disease</th>
<th>Ulcerative colitis</th>
<th>Race</th>
<th>Ethnicity</th>
<th>Medications at enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>53.0 (range 21-70)</td>
<td>13/16</td>
<td>24 (82.8%)</td>
<td>5 (17.2%)</td>
<td>25 (86.2%)</td>
<td>2 (5.7%)</td>
<td>1 (3.4%)</td>
</tr>
</tbody>
</table>

Purpose: The management of polypos dysplasia in ulcerative colitis (UC) is evolving. Currently, the presence of dysplasia in flat mucosa is regarded as an indication for colectomy in pts with UC. The management of high grade dysplasia in polyloid lesions is not well characterized.

Methods: Pathology and clinical databases were systematically searched for the presence of dysplastic lesions in inflammatory bowel disease (IBD) from 1997-2004. Nine previously reported pts were identified with UC who had HGD in DALLMs in the absence of any synchronous flat dysplasia. Their pathology, endoscopy and clinical records were reviewed and updated from 2004-2008.

Results: Seven of 9 (77%) pts had pancolitis. There were a total of 9 ALMs with HGD (polyps in the area of active colitis) in 8 pts and 1 sporadic adenoma (outside the region of active colitis) in 1 pt. The polyps were found in various locations in the colon: 1(10%) in cecum, 3(30%) in ascending colon, 1(10%) in descending colon, 3(30%) in sigmoid colon, and 2(20%) in rectum. All polyps were adenomatous. The mean duration of disease was 23.3 yrs (10-46 yrs). There were 52 surveillance colonoscopies performed in this cohort (mean 5.8 colonoscopies/patient) between 1997-2008. The pts were followed for a mean of 124.5 months (100-147 months). Three of 9 pts (33%) had colectomy. No pts in this cohort were detected to have carcinoma in surveillance biopsies and/or in their resection specimens.

Conclusion: Our follow-up data confirms and strengthens our previous findings that the presence of high grade dysplasia in ALMs does not mandate colectomy. Continued close observation is suggested in this pt cohort after complete excision of polyps is performed. Future prospective studies on large cohort of pts are required to fully validate our findings.
**P1033**

**FACTORS PREDICTIVE OF RELAPSE IN PATIENTS WITH ULCERATIVE COLITIS (UC): A SYSTEMATIC REVIEW**

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**Purpose:** The incidence of UC is characterized by periods of activity and inactivity. The aim of this study was to perform a systematic review of factors predictive of UC relapse in the literature.

**Methods:** We performed a combined Medline, EMBASE, Ovid, ISIJ, PubMed and Cochrane Review search. We examined full text articles, written in English, published between Jan 1960 and Dec 2008 using keywords: UC, relapse, recurrence and exacerbation. Only studies using multivariable logistic regression analysis (MLVA) in pts with UC were included in the analysis.

**Results:** We identified 1095 articles of which 1073 were excluded based on title and abstract. We performed a combined Medline, EMBASE, Ovid, ISI, PubMed and Cochrane database search. We included 22 articles in full text review of which 11 were excluded due to lack of MLVA. There were 11 studies identified which met inclusion criteria (Table).

**Conclusion:** There are still not enough studies to conclusively judge which factors are responsible for greater relapse rates. Significant limitations exist because of shortcomings of the published studies. Future adequately powered, well designed studies are required to conclusively assess which factors confer higher relapse rates.

**P1034**

**EFFICACY OF IMMUNOSUPPRESSIVE THERAPY WITH CERTOLIZUMAB PEGOL IN CROHN’S DISEASE PATIENTS INCLUDED IN A COMPASSIONATE-USE PROGRAM**

J. Fernandez-Blanco, MD, J. Hinojosa, MD, J. IBD Unit, Clinica Moncloa, Madrid, Spain; 2. Gastroenterology Unit, Hospital de Segovia, Valencia, Spain.

**Purpose:** A compassionate-use program allows physicians to use certolizumab pegol (CZP) in patients with suspected Crohn’s Disease of the small bowel (SB-CD) despite a normal exam on colonoscopy.

**Methods:** We prospectively recorded the findings of patients who have undergone both a colonoscopy (CLN) with exam of the terminal ileum and a VCE and the evaluation of suspected SB-CD at our institution between January 2006 and March 2008. Positive findings on colonoscopy and VCE suggestive of CLN included the presence of ulcers, erosions, inflammatory polyps, and inflammatory strictures. Isolated erythema was considered a normal finding in this study. NSAIADs use was recorded.

**Results:** A total of 47 patients with suspected SB-CD underwent CLN with ileoscopy and VCE. 34 patients were female and 13 patients were male, with a mean age of 38 years. Patient's symptoms included abdominal pain, blood in the stool, and diarrhea. It remains unknown whether there is a PET signal in clinically quiescent disease.

**Conclusion:** PET/CT is a valuable tool for the diagnosis of SB-CD and the evaluation of the extent of SB involvement with CD in a subset of patients whose diagnosis would have been missed if it was solely based on a normal exam on colonoscopy.

**P1035**

**THE ROLE OF VIDEO CAPSULE ENDOSCOPY IN PATIENTS WITH SUSPECTED SMALL BOWEL CROHN’S DISEASE DESPITE A NORMAL ILEOSCOPY**

G. D. Litt, MD, H. Charbel, MD, K. Ball-Henry, MD, A. Charabaty, MD. Gastroenterology, Georgetown University Hospital, Washington, DC.

**Purpose:** To evaluate the benefit of performing video capsule endoscopy (VCE) in patients with suspected Crohn’s Disease of the small bowel (SB-CD) despite a normal exam of the ileum on colonoscopy.

**Methods:** We retrospectively recorded the findings of patients who have undergone both a colonoscopy (CLN) with exam of the terminal ileum and a VCE and the evaluation of suspected SB-CD at our institution between January 2006 and March 2008. Positive findings on colonoscopy and VCE suggestive of CLN included the presence of ulcers, erosions, inflammatory polyps, and inflammatory strictures. Isolated erythema was considered a normal finding in this study. NSAIADs use was recorded.

**Results:** A total of 47 patients with suspected SB-CD underwent CLN with ileoscopy and VCE. 34 patients were female and 13 patients were male, with a mean age of 38 years. Patient's symptoms included abdominal pain, blood in the stool, and diarrhea. It remains unknown whether there is a PET signal in clinically quiescent disease.

**Conclusion:** PET/CT is a valuable tool for the diagnosis of SB-CD and the evaluation of the extent of SB involvement with CD in a subset of patients whose diagnosis would have been missed if it was solely based on a normal exam on colonoscopy.

**P1036**

**PET/CIT IDENTIFIES SUBCLINICAL INFLAMMATION IN PATIENTS WITH QUESCENT ULCERATIVE COLITIS**

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**Purpose:** Positron emission tomography (PET) using 18fluorodeoxyglucose (FDG) is a non-invasive, functional imaging modality most often used to assess cancer. Prior research in patients with active inflammatory bowel disease has shown that PET/CIT correlated with active bowel inflammation. It remains unknown whether there is a PET signal in clinically quiescent disease.

**Methods:** We identified patients diagnosed with UC who were in remission, strictly defined as those who had recent endoscopy showing only histologic quiescence as well as a Mayo Clinic UC Disease Activity Index score of 0 and at least 6 month recall of no flares. PET/CIT correlated with active bowel inflammation. It remains unknown whether there is a PET signal in clinically quiescent disease.

**Conclusion:** The aim of this study was to perform PET/CIT on patients with quiescent ulcerative colitis (UC) in order to understand the limits of this technology for the assessment of inflammatory activity.

**Results:** Ten patients participated: median age 60yo, range 36-73yo; 6 male. Patients had pan-colitis (n=9) or extensive colitis (n=1) and median disease duration was 32y (range 8-91y). PET scan was performed mean 37 d after the endoscopy (range 12-84 d). Six patients had no increased uptake on PET; 3 patients had increased PET signal in the r/s region (scores of 1.2 and 1.1); 1 patient with a r/s score of 1 also had an ascending colon score of 1; and 1 patient had an ileal signal of 1 and no colonic signal. The patient with ileal uptake also had a focal marked PET signal in the liver and later was found to have focal low grade dysplasia and underwent colectomy and liver biopsy which revealed Crohn's ileocolitis with high grade dysplasia and a hepatic adenoma.

**Conclusion:** In this study of UC patients in stable endoscopic, histologic and symptomatic remission, 33% had a PET signal in the rectosigmoid colon, suggesting subclinical but active in-
SILEAL CALPROTECTIN LEVELS PREDICT COLON ENDOSCOPIC ACTIVITY IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE

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Purpose: Calprotectin is a calcium-binding protein found in the cytoplasm of neutrophils: it is elevated in fecal specimens of patients with colonic inflammation such as those with Crohn’s disease (CD) or Ulcerative Colitis (UC). Fecal calprotectin correlates with endoscopic severity and histologic inflammation in the colon. The goal of this study was to determine if ileal calprotectin more accurately predicts endoscopic disease activity in patients with ileal involvement of their IBD.

Methods: Subjects diagnosed with IBD undergoing colonoscopy were enrolled. Samples for calprotectin were aspirated from the terminal ileum and colon. Levels were analyzed using Genova Diagnostics ELISA. Biopsies were taken from the terminal ileum and colon. Clinical disease activity was measured via Harvey Bradshaw Index (CD) and Mayo score (UC); endoscopic activity index (EAI) was measured via Mayo score. This study was approved by the Weill Cornell Medical College IRB. all patients gave informed consent.

Results: 15 patients were included in this study: 13 had CD, 2 had UC, and 1 had indeterminate colitis. Median age was 34, disease duration 5 years. Most of patients were male. Ileitis was present on biopsy in 27% of patients. Ileal endoscopic scores were normal in 53% of patients, mild in 33%, and moderate/severe in 13%. Colon endoscopic scores were normal in 47%, mild in 27%, and moderate/severe in 27%. Ileal and colonic calprotectin levels strongly correlated with colon EAI (r=0.76, p=0.001 and r=0.74, p=0.002, respectively). Using linear regression analysis, ileal calprotectin had a significant association with increasing colon EAI (p=0.05) that appeared to be independent of age, gender, and disease duration (p=0.07). Ileal and colonic calprotectin levels >50 µg/mL were predictive of abnormal colon EAI for ileal calprotectin (sensitivity 63%, specificity 100%, ROC AUC 0.81) and colonic calprotectin (sensitivity 100%, specificity 71%, ROC AUC 0.86). No associations were observed between calprotectin levels and ileal endoscopic activity or symptom scores.

Conclusion: Ileal calprotectin did not predict ileal endoscopic disease. However both ileal and colonic calprotectin levels were predictive of abnormal colonic endoscopic disease activity. This may reflect that terminal ileal aspirates could be colonic in origin and thus be reflective of a backwash of colonic contents. Further studies investigating the role of ileal calprotectin in patients with more extensive ileal disease are warranted.

Patient Characteristics

| NUMBER OF PATIENTS ENROLLED | 15 |
| AGE(Range) | 34(19-57) |
| GENDER | Female 6(40%) Male 9(60%) |
| DIAGNOSIS | Ulcerative Colitis 3(20%) Crohn’s Disease 12 (80%) |
| DURATION OF DISEASE(years) | 5.50(2.35) |
| DISTRIBUTION OF DISEASE | Ileum 7(47%) Ileum & Colon 5(33%) Colon 3(20%) |
| PRIOR SURGICAL RESUCTION | 4(27%) |
| THERAPY | Biologics 6(40%) Immunomodulators 3(20%) Mesalamine 7(47%) |

Endoscopic Findings

| ENDOscopic ACTIVITY INDEX | ILEUM | COLON |
| Normal | 8(53%) | 7(47%) |
| Mild | 5(33%) | 4(27%) |
| Moderate/Severe | 2(13%) | 4(27%) |
DYSPLASIA AND LIPOPROTEIN PROFILES IN INFLAMMATORY BOWEL DISEASE (IBD)

Methods: Medical records of 784 patients diagnosed with IBD at an academic medical center between 2000-2007 were retrospectively reviewed for lipoprotein profiles, serum albumin levels, risk factors modifying LDL treatment levels, frequency of different combinations of lipoprotein values and risk factors are based on the Third National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III) report. Only patients with documented IBD diagnosis and lipoprotein profiles are included in the study. Values are expressed as percentages.

Table 1: Lipoprotein profiles of IBD patients (percentages).

Table 2: Risk factors modifying LDL treatment goals (%).

Table 3: Frequency of different combinations of abnormal lipoprotein values (Total cholesterol ≥200 mg/dL, LDL ≥130 mg/dL, LDL <40 mg/dL and triglycerides >150 mg/dL in percentages).

A DYNAMIC MODEL OF COLONIC CONCENTRATIONS OF DELAYED-RELEASE 5-AMINOSALICYLIC ACID (ASA/CO)

Poster Abstracts – Tuesday, October 7

P1043 EARLY TRANSABDOMINAL ULTRASOUND EVALUATION CAN PREDICT INTESTINAL MUCOSAL INJURY IN A CD PATIENT WITH ULCERATIVE COLITIS TREATED WITH ABDOMINAL ELECTROMAGNETIC STIMULATION

Results: 501 patients (186 males and 315 females) diagnosed with IBD (229 Crohn’s disease (CD) and 272 ulcerative colitis (UC)) qualified for the study. 283 patients without complete lipoprotein profiles are included in the study. Values are expressed as percentages.

Methods: Using published data on gastrointestinal motility, 5-ASA absorption and clearance of colonic contents with defecation, the levels of 5-ASA in the four major segments of the colon were predicted after Asacol administration by a dynamic model using STELLA software. 5-ASA levels were predicted in the healthy colon as well as during variations in motility and the frequency of defecation, designed to simulate active ulcerative colitis.

Conclusion: To date, this is the only study describing dysplasia, characterizing lipoprotein profiles and their treatment trends in IBD patient population. More aggressive approach in profiling and treating dysplasia using NCEP-ATP III guidelines in IBD seems warranted.

Table 1: Lipoprotein profiles of IBD patients (percentages).

Table 2: Risk factors modifying LDL treatment goals (%).

Table 3: Frequency of different combinations of abnormal lipoprotein values (Total cholesterol ≥200 mg/dL, LDL ≥130 mg/dL, LDL <40 mg/dL and triglycerides >150 mg/dL in percentages).

P1041 A DYNAMIC MODEL OF COLONIC CONCENTRATIONS OF DELAYED-RELEASE 5-AMINOSALICYLIC ACID (ASA/CO)

Poster Abstracts – Tuesday, October 7

Methods: This was a retrospective observational study of IBD patients (n= 951) followed in a review period from October 1992 until August 2007. For each patient, usual demographics and initial presenting symptoms of CD, and the areas of Crohn’s involvement were assessed. IRB approval was obtained.

Results: The average chart review period was 66.0 ± 42.7 months. All patients were Caucasian and 15 (45.5%) were male. Evidence of UGI involvement of CD was confirmed by traditional methods of capsule endoscopy, upper endoscopy with biopsy, or imaging studies. Mean age of initial presentation with CD was 25.5 ± 11.3 years, and 20 patients (60.6%) had upper GI manifestations of Crohn’s disease at initial presentation. 10 (30.3%) patients had a positive family history for IBD. The most common initial complaint was abdominal cramping (25 patients, 75.8%) followed by increased frequency of bowel movements (18 patients, 54.5%) and nausea/vomiting (13 patients, 39.4%). Weight loss was reported in 10 (30.3%) patients. Most patients with esophageal involvement reported reflux or odynophagia. The most common areas of UGI involvement in these patients were the duodenum (25 patients, 72.7%) and the stom- ach (20 patients, 60.6%).

Conclusion: Symptoms of abdominal cramping, nausea, heartburn, or odynophagia in patients with known or suspected CD should trigger workup to evaluate UGI CD. Patients with persistent epigastric pain or heartburn despite treatment with proton pump inhibitors should also be evaluated for CD. Early recognition and proper treatment of UGI CD can ensure adequate surveillance and potentially reduce the morbidity of the disease.

P1042 COMMON PRESENTING PATTERNS IN PATIENTS WITH UPPER GASTROINTESTINAL CROHN’S DISEASE

Purpose: The aim of this study was to describe the prevalence of dysplasia and characterize the lipoprotein profiles in IBD patient population.

Methods: Using published data on gastrointestinal motility, 5-ASA absorption and clearance of colonic contents with defecation, the levels of 5-ASA in the four major segments of the colon were predicted after Asacol administration by a dynamic model using STELLA software. 5-ASA levels were predicted in the healthy colon as well as during variations in motility and the frequency of defecation, designed to simulate active ulcerative colitis.

Conclusion: To date, this is the only study describing dysplasia, characterizing lipoprotein profiles and their treatment trends in IBD patient population. More aggressive approach in profiling and treating dysplasia using NCEP-ATP III guidelines in IBD seems warranted.
EARLY TRANSABDOMINAL ULTRASOUND EVALUATION CAN PREDICT CLINICAL RESPONSE TO THERAPY IN PATIENTS WITH ACTIVE ULCERATIVE COLITIS

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Purpose: CONTEXT: Lack of objective measures to evaluate response to initial treatment of active ulcerative colitis frequently causes delay in modification of treatment. Transabdominal ultrasound (TAUS) is a convenient non-invasive procedure and measured bowel wall thickness is known to correlate with degree of inflammation. However, whether findings on TAUS in early phase of treatment can predict outcome of active ulcerative colitis has not been determined.

QUESTIONS: Can TAUS measurement of bowel wall thickness predict outcome of patients with active ulcerative colitis?

Methods: Design: Prospective analysis of a cohort followed for 8 weeks. Setting: Primary and referral center of a hospital in urban area in Japan. Patients: Twelve patients with active ulcerative colitis who received usual pharmacological therapy as well as cytapheresis.

Results: Mean UC-DAI score was 9.8 before enrollment. Prognostic factor: Total colonic wall thickness and submucosal thickness measured by TAUS performed at 2 to 3 weeks after initiation of the treatment. Outcomes: UC-DAI score measured at 8 weeks after initiation of treatment. Score less than 4 defined as response to treatment.

Conclusion: Early application of TAUS may predict clinical response later in the course of therapy in patients with active ulcerative colitis.

CERTOZILUMAB PEGOL THERAPY IN A PATIENT WITH CROHN'S DISEASE

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Purpose: The purpose of the certolizumab pegol (CZP) compassionate-use program, COM-PASS, is to allow physicians to use CZP to CD patients who failed other approved therapies.

Methods: Patient: Female (22 years) diagnosed with extensive CD aged 7 years, localised at the ileoceleal area in Japan. Patients: Twelve patients with active ulcerative colitis who received usual pharmacological therapy as well as cytapheresis. Setting: Transabdominal ultrasound (TAUS) is a convenient non-invasive procedure and measured bowel wall thickness is known to correlate with degree of inflammation. However, whether findings on TAUS in early phase of treatment can predict outcome of active ulcerative colitis has not been determined. FIGURE: Can TAUS measurement of bowel wall thickness predict outcome of patients with active ulcerative colitis?

Results: MAIN RESULTS: Total colonic wall thickness adjusted by body surface areas (1.8 vs. 2.9 mm) and submucosal thickness (1.3 vs. 2.2 mm) were significantly lower in a group of 7 responders, compared to a group of 5 non-responders (P<0.05). LIMITATIONS: The trial size was small, and blinded evaluation was not done.

Conclusion: Early application of TAUS may predict clinical response later in the course of therapy in patients with active ulcerative colitis.
A NOVEL MTOR INHIBITOR IS EFFICACIOUS IN A MURINE MODEL OF COLITIS
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Purpose: Ulcerative colitis is an autoimmune-inflammatory disease characterized by increased proliferation of epithelial cells, dysregulation of signal transduction pathways, elevated mucosal T-cell activation, increased production of pro-inflammatory cytokines (e.g., TNF-α, IFN-γ), and enhanced leukocyte infiltration into colonic interstitium. Several compounds that possess anti-proliferative activities (e.g., rapamycin and its analog everolimus) as a molecular target of mTOR (mammalian target of rapamycin) inhibitors and/or inhibit IFN-γ production (NCX-1015, a nitric oxide derivative of prednisolone) exhibit a therapeutic effect in murine models of colitis. In this study, we report the effect of P2281 (NPS31807) in a DSS model of IBD in mice and is efficacious in a murine model [the dextran sulfate sodium (DSS)] model of human colitis.

Methods: Cell-based ELISA. Western blot analysis and DSS-model of colitis were employed.

Results: In vitro studies using western blot analysis and cell-based ELISA assays each showed that P2281 inhibits mTOR activity (69% inhibition of mTOR phosphorylation at 10 μM in ELISA assays). In vitro and in vivo assays of pro-inflammatory cytokine production revealed that P2281 diminishes induced IFN-γ synthesis/release (IC50 ~ 20 μM) but not TNF-α synthesis/release (IC50 ~ 1000 μM). In the disease model of colitis (1) macroscopic colon observations revealed that P2281, administered intraperitoneally, significantly inhibited DSS-induced weight loss (5.70 ± 2.4 % for P2281-treated mice vs. 17.35 ± 3.07 % for control mice), improved rectal bleeding index (0.42 ± 0.08 for P2281-treated mice vs. 0.67 ± 0.17 for control mice), decreased disease activity index (3.92 ± 0.8 for P2281-treated mice vs. 6.83 ± 0.76 for control mice) and reversed DSS-induced shortening of the colon (colon lengths: 11.15 ± 0.3, 8.65 ± 0.39, and 7.88 ± 0.3 cm for naive, control and P2281-treated mice, respectively). In histological analyses of colonic tissues revealed that P2281 attenuated DSS-induced edema, prominently diminished the leukocyte infiltration in the colon mucosa and resulted in protection against DSS-induced crypt damage.

Conclusion: These results provide direct evidence that P2281, a novel mTOR inhibitor, suppresses DSS-induced colitis by inhibiting synthesis/release of pro-inflammatory mediators (e.g. IFN-γ) and potentially contributes to therapeutic benefits in the colitis.

Disclosure - All authors are employees of PLSL. P2281 was synthesized by PLSL.
were pANCA positive. Of the 6 patients who were pANCA positive, 33.3% (2/6) were also ASCA positive and 66.7% (4/6) were either ASCA and/or OmpC positive. The 4 patients who were IFX non-responders had no significant change in UCDAI (mean change in UCDAI of 0.5. p=0.182) and all were only positive for pANCA with high titers. The combination of ASCA and OmpC together showed a trend towards infliximab response.

Conclusions: Serologies in colitis patients suggesting a Crohn’s phenotype – either ASCA positive alone or pANCA positive in combination with ASCA or OmpC – may identify an immunologically vulnerable subset who are likely to respond to anti-TNF therapy. Further study in a larger group of colitis patients with the addition of other markers, including anti-CBir1, to stratify therapeutic responses, is warranted.

Disclosure: Dr. Judah-No conflict; Dr. Ahmad-No conflict; Mr. Hammond-No conflict; Dr. Polyak-No conflict; Dr. Valentine-Speakers Bureau: Centocor, Inc.

P1052

LARAZOTIDE ACETATE (AT-1001) INHIBITS EPITHELIAL PERMEABILITY INDUCED BY TNF-α AND IL-4

Methods: Caco-2 and T84 cells were cultured on 12-well Transwell® plates for 21-28 and 7-14 days, respectively. The cells were treated with TNF-α and IL-4 with and without AT-1001. After cytokine treatment, the cells were treated with Lucifer yellow for 60 minutes to monitor paracellular permeability.

Results: After 24 hours, TNF-α induced Lucifer yellow permeability across Caco-2 cells 3-fold, and IL-4 induced Lucifer yellow permeability across T84 cells 2-fold. AT-1001 reduced TNF-α induced permeability across Caco-2 cells by 40%. Additionally, AT-1001 reduced the IL-4 induced permeability across T84 cells by 80%.

Conclusion: This study demonstrates AT-1001 inhibition of increased permeability mediated with TNF-α and IL-4, which suggests the potential of AT-1001 as a therapeutic agent for the treatment of IBD.

Disclosure: Dr. Niranjani Pandey - Employee; Dr. Kelly M. Kitchens - Employee; Dr. Neil Poloso - Employee; Dr. Mark Ginski - Employee; Dr. Blake Paterson - Employee; Dr. Sejfi S Alkan - Employee; Dr. Amir P. Tamiz - Employee.

P1054

BUDESONIDE AS SECOND-LINE THERAPY FOR MICROSCOPIUC COLITIS

Purpose: Microscopic colitis (MC) whether collagenous colitis (CC) or lymphocytic colitis (LC) is a well recognized cause of chronic diarrhea. Traditional treatment has been with 5-ASA compounds. We previously published data showing not only clinical remission but also histological remission in the majority of patients. This paper is a pilot study demonstrating efficacy of budesonide in mesalazine failures.

Methods: 20 patients treated with mesalazine at a starting dose of 2-4gr presented to clinic at 1 month for a follow-up visit with persistent diarrhea. All were given instructions to increase the dose to 4-8gr/day. At the second month clinic visit, patients still experiencing diarrhea were given 9mg/day of budesonide.

Results: At the second month follow-up 10 patients had persistent diarrhea despite the increase in mesalazine, 10 patients were in remission (9 female, 1 male) and 10 had continued diarrhea (all females). These 10 patients received budesonide. All were in remission by the 8 week clinic visit. Rates of remission were as follows: 3 at 2 weeks; 5 at 4 weeks; and 2 at 6 weeks.

Conclusion: Budesonide is effective therapy for mesalazine failures in MC. Benefits are seen within 8 weeks. 3. Long-term remission can be expected.

P1055

THE COEXISTENCE OF CROHN’S DISEASE AND TAKAYASU ARTERITIS: DIAGNOSIS AND TREATMENT OF COMBINED DISEASE WITH INFlixIMAB IN THREE PATIENTS

Purpose: Crohn’s disease is an inflammatory bowel disease classically causing granulomatous, transmural inflammation of the bowel wall, producing abdominal pain, obstruction, and fistula formation. Takayasu arteritis is a chronic granulomatous vasculitis that causes inflammation and stenosis of large and medium-sized arteries including the aorta and its primary branches. The purpose of this case series is to describe three cases of coexisting Crohn’s disease and Takayasu arteritis and the response to anti-tumor necrosis factor therapy at a tertiary care medical center.

Methods: A case series design was used.

Results: We report on three patients with coexisting Crohn’s disease and Takayasu arteritis. The diagnosis of Crohn’s disease was made by combining patient symptoms, laboratory data, radiographic imaging, endoscopic evaluation and pathological evaluation of luminal mucosal biopsy. All of these patients also met classification criteria for Takayasu arteritis as defined by the American College of Rheumatology. Unique to this case report is the treatment of these patients with infliximab for their combined disease. All three patients experienced successful control of symptoms related to Crohn’s disease and Takayasu arteritis after treatment with infliximab.

Conclusion: Evidence is building in the medical literature for a subgroup of patients with coexisting Crohn’s disease and Takayasu arteritis. A common autoimmune etiology has been hypothesized. The three patients in this report received infliximab therapy, which has previously not been described in the literature as treatment for patients with these combined diseases. The similarities in pathophysiology of these diseases allow exploration into the role of biological agents as therapy for patients who have coexisting Crohn’s disease and Takayasu arteritis.
This research was supported by an industry grant from Research by Shire Pharmaceuticals Inc.

Purpose: Many delayed-release formulations of 5-aminosalicylic acid (5-ASA) utilize pH-dependent coatings to resist gastric breakdown, and release active drug at intestinal pH values. However, in patients with ulcerative colitis, the pH of ileo-caecal region of the gastrointestinal tract can vary between 6.8-7.2. Here, we analyse coating thickness and release characteristics of MMX™ mesalamine 1.2g tablets (Lilia®, Shire Pharmaceuticals Inc., Wayne, PA, USA) in different pH conditions and put the results into context using published literature for another pH-dependent delayed-release mesalamine formulation.

Methods: Three batches of MMX mesalamine tablets were analysed using non-destructive three-dimensional terahertz pulse imaging to determine film coat thickness and morphology. Dissolution testing using USP II apparatus (50rpm) was subsequently performed at pH 6.8 and 7.2. Findings were put into context using previous data for pH-dependent, delayed-release mesalamine tablets (400mg) that were obtained using a similar methodology (Spencer et al. J Pharm Sci. 2007).

Results: The mean (± standard deviation) coating thicknesses of MMX mesalamine tablets from each of the three batches were 109.2 (±16.8), 113.1 (±19.5) and 113.8 (±19.8), with a maximum variance of 17.2% of the total coating thickness. MMX mesalamine tablets demonstrated steady release of 5-ASA at both pH values, with complete release achieved over 13.8 hours at pH 6.8 and over 12 hours at pH 7.2. Spencer et al. (2007) reported coating thicknesses of 76.8 (±18.2), 78.9 (±10.4) and 80.5 (±12.5) with a maximum variance in total coating thickness of 23.7% for three test batches 5-ASA release from these batches was consistent over the initial 2 hours at pH 7.2, but at pH 6.8 5-ASA release was variable. Complete release of 5-ASA was variable, with 80-100% tablet disintegration occurring within 2 hours.

Conclusion: The release profile of 5-ASA from pH-dependent formulations is of utmost importance since it determines the concentration of active drug delivered to the site(s) of inflammation. MMX mesalamine tablets appear to have consistent coating thickness which, with MMX drugs delivery technology, may contribute to the consistent and steady release of 5-ASA both at pH 6.8 and 7.2 noted here. These characteristics do not appear to be common to all pH-dependent formulations, as evidenced by previously published data.

This research was supported by an industry grant from Research by Shire Pharmaceuticals Inc.

P1057

UNDERSTANDING 5-AMINOSALICYLIC ACID (5-ASA) RELEASE FORMULATIONS FROM PH-DEPENDENT DELAYED-RELEASE FORMULATIONS: A MULTIDISCIPLINARY APPROACH

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Purpose: To investigate factors that may affect the release of 5-ASA from MMX™ mesalamine (Lilia®; Shire Pharmaceuticals Inc. Wayne, PA, USA) and other pH-dependent delayed-release 5-ASA formulations for the treatment of ulcerative colitis (UC). Published literature was evaluated and considered in light of data from in vitro and in vivo studies.

Methods: Study 1 (scintigraphic): eight healthy subjects were randomized to MMX mesalamine or a pH-dependent, delayed-release mesalamine formulation (Asacol®[Giuliani SpA, Italy]) in an open-label, two-way cross-over study. Study 2 (dissolution): three batches of MMX mesalamine tablets were analyzed using non-destructive three-dimensional terahertz pulse imaging to determine film coat thickness and morphology. Dissolution testing using USP II apparatus (50rpm) was subsequently performed at pH 6.8 and 7.2 (found in the GI tract of UC patients) using the technique reported by Spencer et al (J Pharm Sci, 2007) for Asacol® delayed-release tablets (P&G, Cincinnati OH, USA).

Results: Study 1: Initial disintegration of both tablets generally occurred between the distal small bowel and ascending colon. Initial tablet disintegration (mean hours ± standard deviation [SD]) occurred earlier in the GI tract for MMX mesalamine (4.75±1.31) than for the comparator formulation (6.1±1.80). Complete disintegration occurred later in the GI tract for MMX mesalamine compared with the comparator formulation (17.3±3.6 vs 7.2±2.12). Study 2: the mean coating thickness (µm±SD) of MMX mesalamine tablets ranged from 109.2 (±16.8) in batch 1 to 113.8 (±19.8) in batch 3. MMX mesalamine tablets demonstrated steady release of 5-ASA at both pH values, with complete release achieved over 13.8 hours at pH 6.8 and over 12 hours at pH 7.2. Spencer et al. (2007) reported Asacol coating thickness ranging from 76.8 (±18.2) in batch 1 to 80.5 (±12.5) in batch 3. 5-ASA release was consistent over the initial 2 hours at pH 7.2, but was highly variable at pH 6.8. Between 80-100% tablet disintegration occurred within 2 hours.

Conclusion: MMX mesalamine demonstrated steady 5-ASA release at pH 6.8 and 7.2 in vitro and in vivo using scintigraphic analysis. This was not reported for Asacol (Spencer et al. 2007).

Disclosure - All authors - Employees of Shire Pharmaceuticals Inc.

This research was supported by an industry grant from Research by Shire Pharmaceuticals Inc.

P1058

EFFICACY, SAFETY AND DURABILITY OF ANTI-TNF THERAPY IN THE TREATMENT OF INFAMMATORY BOWEL DISEASE

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Purpose: The purpose of this study was to evaluate the efficacy and safety of anti-TNF therapy as well as the durability of response to therapy in patients with inflammatory bowel disease (IBD) from a single academic institution.

Methods: We retrospectively reviewed 75 charts of patients who had been treated with anti-TNF drugs during 2006 - 2008. Efficacy was determined using standard definitions of remission (i.e. Crohn’s disease activity index score (CDAI) <- 150 or Ulcerative colitis activity index score (DAI) <- 2). Response was defined as at least 75 points decrease in CDAI score or 2 points decrease in DAI score. Hypotension, cardiopulmonary compromise and serious infections were graded as major complications of therapy, whereas serum sickness like reactions, nausea, headache and abdominal pain were graded as minor complications.

Results: Of the 75 patients, 52 (36 CD and 16 UC) were treated with infliximab and 23 (20 CD and 3 UC) were treated with adalimumab. Twenty four patients (32%) required a dose greater than 5 mg/kg every 8 weeks for infliximab or 40 mg qv every other week for adalimumab. Overall, response rates for CD and UC patients treated with anti-TNF therapy were 63.8% and 68.4% respectively. There was no significant difference among response rates in CD patients treated with infliximab or adalimumab. 16/23 patients on adalimumab had been previously exposed to infliximab. None of these patients had refractory disease on infliximab and 5 had developed serious hypersensitivity reactions. The remission and response rates in this subgroup were 43.75% (7/16) and 12.5% (2/16) respectively. The majority of our patients (81.33%) tolerated anti-TNF therapy without any side effects.

Conclusion: This study provides a single center’s experience in the long-term efficacy, safety and durability of anti-TNF therapy in the treatment of IBD. Our results are comparable to previously published data from randomized control trials. Fifty six percent of patients who developed resistance or hypersensitivity to infliximab responded to therapy with adalimumab.

Disclosure - All authors - Employees of Shire Pharmaceuticals Inc.

This research was supported by an industry grant from Research by Shire Pharmaceuticals Inc.

P1059

COMPARISON OF CLINICAL FINDINGS IN INTESTINAL BEHÇET DISEASE AND SIMPLE ULCER

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Purpose: Intestinal Behçet disease (BD) and simple ulcer (SU) are refractory diseases of unknown etiologies that often develop in the ileocecal region. Although they are usually considered as separate diseases with distinct pathogeneses and treatments, there is no universally accepted grounds by which they are clinically distinguished. The aim of this study is to clarify the diagnosis of both diseases by their clinical presentations, endoscopic findings, and respective treatment.

Methods: Sixty-six patients with BD and 141 patients with SU were compared. Patients were evaluated in terms of sex, age, symptoms, endoscopic features and complications. All patients were subjected to colonoscopy with multiple biopsies.

Results: Twenty patients were enrolled with BD, 25 of them were males and 5 were females, and the mean age was 34 ± 8 years. Eighty-one percent of patients were under 40 years old. All patients complained of abdominal pain and 95% of patients had diarrhea. Inflammatory symptoms were very prominent in BD patients: rectal bleeding in 40% of patients with BD and only 10% of them with SU, perianal lesions in 70% of patients with BD versus only 21% of SU patients, and pyoderma gangrenosum in 30% of BD patients versus none of SU patients.

Conclusion: BD is characterized by a high prevalence of inflammatory symptoms and rectal bleeding, which may differentiate BD from SU. Differentiation between BD and SU is very important as the treatment of BD is more aggressive than that for SU.

Disclosure - All authors - Employees of Shire Pharmaceuticals Inc.

This research was supported by an industry grant from Research by Shire Pharmaceuticals Inc.
RESULTS: 1) There was no significant difference in the age of onset of the two diseases. 2) The percentage of men experienced incidence of SU was higher than the percentage of men experienced incidence of BD in both diseases. 3) The incidence of SU was higher in men than women in all age groups. 4) SU patients tended to exhibit several ulcers, whereas multiple ulcers were frequently observed in BD. 5) The gross appearance of ulcers was similar, with punched-out lesions and similar shapes observed in both diseases. 6) In BD lesion in upper gastrointestinal tract was observed in three cases, whereas no such cases were observed for SD. Lesions appeared in the large intestine in six cases and one case of BD and SU, respectively. Among the six cases with BD small ulcer was scattered in five of the cases, while one case showed deep and large ulcer. 6) Only one surgery was performed in a case of SU with a previously described lesion of the large intestine. 7) Long manifestation periods for both diseases were more likely to be severe.

CONCLUSION: There are no significant differences between BD and SU, except in the age of onset and gender distribution. However, since the number of reported cases is small, it is difficult to specify the precise differences between BD and SU. Therefore, further investigations and development of effective treatment for both diseases will be necessary in the future.

P1060

INCIDENCE OF CARCINOID SYNDROME, FUNCTIONAL GI DISORDERS, AND MEDICATIONS: WHAT RISKS WILL PATIENTS TAKE?

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PURPOSE: Patients with functional GI disorders (FGID) and medications are prone to side effects. This study was designed to evaluate IBS patients' knowledge of medication risks, potential interactions in the late 1990s were reported, but it is unknown whether opioid prescribing in the community had increased. This study assessed opioid prescribing in the community between 1994-2005 and whether bowel dysfunction or functional GI disorders have also increased in patients prescribed opioids.

METHODS: Data were derived from the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Care Survey (NHAMCS) for 1994-2005. GI symptom related visits (diarrhea, constipation, nausea, vomiting, dyspepsia, bloating or abdominal pain) were identified by using the reason for visit codes, while opioid use was identified using the Drug Codes for medications in the Opioid Analgesics drug class. Functional GI disorders (irritable bowel syndrome, dyspepsia, and constipation) and GERD were identified using ICD-9 diagnosis codes. The associations between any narcotic use and GI symptom related visits were assessed using logistic regression analysis, adjusted for the complex survey design of both the surveys.

RESULTS: Any visits with opioid prescription accounted for 99,530, 1,134,048 (8.8%) outpatient visits during this time period. Opioid use increased from 4.2% (95% CI: 3.8, 4.9) of all outpatient visits in 1994 to 6.8% (95% CI: 6.2, 7.3) in 2005 (p<0.05 for trend). Although the proportion with GI symptoms remained relatively stable (p value for trend = 0.44), a significantly higher proportion of GI symptoms were detected in any subjects on opioids versus no opioid users. There was no association between opioid prescribing and functional GI disorders or between opioid prescribing and bowel dysfunction.

CONCLUSION: The use of opioids increased significantly over 12 years, and opioid prescribing was associated with increased GI symptoms; however, we did not observe an increase in GI symptom-related ambulatory visits over this time period.

Proportion of reporting GI symptoms in visits with narcotic vs. without narcotics

<table>
<thead>
<tr>
<th>Results on narcotics</th>
<th>Results, no narcotics</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>GI Symptoms</td>
<td>5.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Nausea</td>
<td>2.5</td>
<td>0.9</td>
</tr>
<tr>
<td>Vomiting</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Bloating</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>Constipation</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Dyspepsis</td>
<td>2.4</td>
<td>3.1</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>0.3</td>
<td>0.5</td>
</tr>
</tbody>
</table>

P1061

IBS AND MEDICATIONS: WHAT RISKS WILL PATIENTS TAKE?

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PURPOSE: Opiates slow gastrointestinal motility. Increases in opioid prescribing for patients making a pain-related visit to the emergency department after national quality improvement initiatives in the late 1990s were reported, but it is unknown whether opioid prescribing in the community based on outpatient visits has increased, and further whether this increase in opioid prescribing has negatively impacted bowel dysfunction or functional GI disorders in ambulatory patients. Aim: To determine whether opioid prescribing in ambulatory patients has increased between 1994-2005 and whether bowel dysfunction or functional GI disorders have also increased in patients prescribed opioids.

METHODS: Data were derived from the National Ambulatory Medical Care Survey (NAMCS) and the National Hospital Ambulatory Care Survey (NHAMCS) for 1994-2005. GI symptom related visits (diarrhea, constipation, nausea, vomiting, dyspepsia, bloating or abdominal pain) were identified by using the reason for visit codes, while opioid use was identified using the Drug Codes for medications in the Opioid Analgesics drug class. Functional GI disorders (irritable bowel syndrome, dyspepsia, and constipation) and GERD were identified using ICD-9 diagnosis codes. The associations between any narcotic use and GI symptom related visits were assessed using logistic regression analysis, adjusted for the complex survey design of both the surveys.

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CONCLUSION: The use of opioids increased significantly over 12 years, and opioid prescribing was associated with increased GI symptoms; however, we did not observe an increase in GI symptom-related ambulatory visits over this time period.
THE EFFECT OF SHIFT WORK ON THE PREVALENCE AND CLINICAL IMPACT OF FUNCTIONAL BOWEL DISORDERS IN NURSES
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Purpose: The gastrointestinal (GI) tract undergoes circadian fluctuations in a variety of physiologic parameters. There is evidence that disruption of the sleep cycle can impact upon normal gastrointestinal functions. The aim of this study was to determine the effect of shift work on the prevalence and clinical impact of functional gastrointestinal disorders (IBS, functional constipation and diarrhea) in nurses.

Methods: Nurses engaged in direct patient care who were employed at a large University Health System within the US were invited to anonymously complete a set of online validated surveys (Rome 3, IBS-QOL, modified sleep 50 questionnaire). Based upon their work schedules, respondents were classified as: permanent night-shift workers, permanent night-shift workers and those rotating between day and night shifts. Participants with self-reported organic GI diseases, previous major GI surgery, or who were pregnant were excluded.

Results: Complete data were available for 399 nurses (214 day shift, 110 night shift, and 75 rotating shifts). The main study results can be found in the table. More than 85% of respondents were female. Night shift and rotating nurses were younger than day shift nurses (p<0.0001). There were no significant differences in BMI between groups. Rotating shift nurses had a significantly higher prevalence of IBS compared to day shift nurses (p=0.009). Multivariable logistic regression correcting for age & gender (OR=2.1, 1.2-3.4) as well as sleep quality (OR=2.1, 1.3-3.4) in association to the prevalence of IBS on rotation vs. day shifts. The prevalence of functional constipation and diarrhea was similar between the groups.

Conclusion: When evaluating patients with IBS, it may be important to consider work schedule. These results support the notion that circadian rhythm and sleep disturbances may play a role in GI symptoms & IBS.

P1065 SEVERITY OF IRRITABLE BOWEL SYNDROME–RELATED SYMPTOMS PREDICTS CLINICAL RESPONSE TO THE NONSYSTEMIC ANTIBIOTIC RIFAXIMIN
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Purpose: Symptom-based criteria are used for enrolling patients with irritable bowel syndrome (IBS) in clinical trials. These criteria are broad and often lead to enrollment of individuals with symptoms ranging from mild to severe, despite the possibility that patients with severe IBS symptoms may respond differently to therapeutic intervention compared with individuals with moderate complaints. In a recent study of rifaximin vs placebo in patients with diarrhea-predominant IBS (IBS-D), a supplemental analysis examined the association between severity of baseline IBS symptoms and clinical response to rifaximin.

Methods: The primary comparison involved 2 groups of adult patients with IBS-D (Rome II) who received rifaximin 550 mg twice daily or placebo for 14 days, followed by an additional 14 days of placebo in both groups. The coprimary endpoints assessed weekly yes/no responses to questions regarding adequate relief of global IBS symptoms and IBS-associated bloating. Clinical response was defined as adequate relief for at least 1 of the final 3 treatment weeks (wk 2, 3, or 4). Severity of baseline IBS symptoms was evaluated as a potential confounder of clinical response and was categorized as mild/moderate or severe based on a mean score of ≥4 vs ≤3, respectively.

Results: A significantly larger percentage of patients who received rifaximin vs placebo reported adequate relief of global IBS symptoms (52% vs 44%, respectively; P=0.03) and bloating (46% vs 40%, respectively; P=0.01). In patients with mild/moderate abdominal pain, rifaximin produced a greater degree of improvement vs placebo in symptoms of IBS (50% vs 39%, respectively; P=0.04) and bloating (44% vs 35%, respectively; P=0.09). In patients with mild/moderate bloating, rifaximin also achieved greater improvement vs placebo in symptoms of IBS (56% vs 41%, respectively; P=0.006) and bloating (74% vs 65%, respectively; P=0.003).

However, rifaximin did not significantly improve global IBS symptoms or bloating versus placebo in patients who had severe baseline abdominal pain or bloating.

Conclusion: Severity of baseline symptoms of abdominal pain and bloating influenced the response to rifaximin 1100 mg/d for 14 days. Patients with mild/moderate IBS symptoms had a greater likelihood of relief of global IBS-related symptoms with rifaximin treatment vs individuals with severe IBS symptoms. Clinical trials evaluating the efficacy of IBS therapies should account for baseline symptom severity because of the potential impact of these symptoms on therapeutic efficacy. Extension of severity assessments to clinical practice may improve treatment success in patients with IBS.

Disclosure - Pimentel (Salix Pharmaceuticals) Consultant, speakers bureau Ringel (Salix Pharmaceuticals) Consultant, speakers bureau Cash (Salix Pharmaceuticals) Consultant, speakers bureau Forrester (Salix Pharmaceuticals) Employee

This research was supported by an industry grant from Salix Pharmaceuticals

P1066 INCREASED PREVALENCE OF METHANOGENIC FLORA IN SMALL INTESTINAL BACTERIAL OVERGROWTH
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Purpose: About 35% of the US population has enteric bacteria that produce methane. In animal models, methane infusion has been shown to decrease small intestinal transit and increase small intestinal contractile activity (Am J Physiol 2006, 290(6):G1089-95). Methane may play a role in the pathogenesis of functional gastrointestinal disorders (FGID), but there is limited data on the prevalence of methanogenic flora in small intestinal bacterial overgrowth (SIBO) and in fructose (FM) and lactose malabsorption (LM). Aims: To evaluate the prevalence of methanogenic flora in SIBO, FM, and LM and to quantify methane production.

Methods: We reviewed charts of consecutive patients with SIBO, fructose or lactose breath tests performed as part of their clinical evaluation for gastrointestinal symptoms over 12 months. SIBO was diagnosed if H2 and/or CH4 increased by 20 ppm over baseline during the gas collection test. Similar criteria were used to diagnose FM and LM. Presence of methanogenic flora was defined as a baseline CH4 value of 3 ppm. ANOVA and t test were performed to compare data between groups.

Results: There were 51 pts with SIBO (M:F=20:31, mean age 51 ± 11 yrs), 33 with FM (M:F=13:20, mean age 42 ± 14 yrs) and 43 with LM (M:F=17:26, mean age 39 ± 15 yrs). There were no significant age or sex differences (p > 0.05). Methane testing identified methanogenic flora in 41% of patients with SIBO (45%), 10% with FM (30%) and 15% with LM (34%). The prevalence of methanogenic flora was significantly higher (p < 0.05) in SIBO when compared to FM or LM. The baseline, peak and area under the curve (AUC) of methane production were significantly higher in SIBO when compared to FM and LM (p < 0.05).

Conclusion: The prevalence of methanogenic flora and amount of CH4 produced in response to carbohydrate challenge were higher in subjects with SIBO. The prevalence in FM and LM subjects were similar to healthy subjects. It is unclear if methanogenic flora through its effects...
A very low carbohydrate diet provides adequate relief of symptoms and improves quality of life in overweight and obese individuals with diarrhea-predominant irritable bowel syndrome (IBS-D)

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Purpose: Patients with irritable bowel syndrome (IBS) frequently identify worsening of symptoms after meals, citing certain foods including increased carbohydrates as triggers of their symptoms, particularly among those with diarrhea-predominant IBS (IBS-D). Patients with IBS-D anecdotally report improvement in symptoms after initiating a very low carbohydrate diet (VLCD), but no study has investigated the effect of a VLCD in overweight and obese individuals with IBS-D. The purpose of this study is to determine the effect of a VLCD in overweight and obese individuals with IBS-D.

Methods: Eligible patients were those with a body mass index >25 kg/m2 who met Rome II criteria for IBS-D and had at least moderately severe IBS, as defined by a score of >36 on the Functional Bowel Disorder Severity Index. Participants were provided a standard diet for 2 weeks, followed by a VLCD (20 grams of carbohydrates/day) for 4 weeks. The primary outcome was adequate relief (AR) as assessed by a weekly one-item questionnaire during the 4 weeks of the VLCD. A responder was a participant who reported AR at all GI symptoms and at least 2 of the 4 weeks during the VLCD. Using daily diary cards for all 6 weeks, participants were randomized into treatment groups of either the multi-strain probiotic or placebo. Individuals who qualified for study participation according to Rome II criteria were randomized into treatment groups of either the multi-strain probiotic or matched placebo. The ten center study included 62 females and 22 males 18 years and older meeting the inclusion criteria. An IRB approved the study protocol and related study materials.

Results: The average number of daily diarrheal episodes in the probiotic group significantly decreased from day 1 to day 28, from 3.91 to 2.18 (P=0.003). The daily average decreased faster during the period from day 1 to day 16 (3.91 to 2.56). By comparison, the average number of diarrheal episodes in the placebo group decreased only slightly during the same period (3.56 to 2.94), then decreased to 2.38 by day 28. Using GEE random effect longitudinal regression, we found that the rate of decrease in the probiotic group was more than double that in the placebo group (P=0.005).

Conclusion: The multi-strain probiotic administered daily for 28 days significantly decreased diarrheal episodes in IBS-D patients compared to placebo. The probiotic preparation was well tolerated and without significant side effects. The multi-strain probiotic evaluated in this study may be useful for the treatment of patients with IBS-D.

Disclosure: Dr. Friedman-Consultant, Kenwood Therapeutics, a subsidiary of Bradley Pharmaceuticals, Inc. Mr. Biancone-Company employee.

This research was supported by an industry grant from Kenwood Therapeutics, a subsidiary of Bradley Pharmaceuticals, Inc.

P1069

CLINICAL IMPACT OF IDENTIFYING LACTOSE MALABSORPTION OR FRUCTOSE MALABSORPTION IN IRRITABLE BOWEL SYNDROME AND OTHER CONDITIONS

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Purpose: The role of carbohydrate malabsorption or maladaption remains unclear in patients with irritable bowel syndrome (IBS). The purpose of this study was to examine the impact of identifying lactose malabsorption (LM) and fructose malabsorption (FM) on patients with and without IBS. Methods: Patients who received lactose and fructose challenge testing formed the study group. Carbohydrate challenge testing was performed with 50g lactose and 25g fructose. Breath samples were collected and analyzed for hydrogen, methane and CO2 for correction) samples using a Quintron Microlyzer model SC. Questionnaires were used to assess Rome III IBS criteria, compliance with carbohydrate dietary modifications, and changes in symptoms. Results: 125 of the 181 (67%) study subjects were able to be contacted 8 months to 4 years after carbohydrate testing. LM (21) and FM (2) were present in 35% of the 66 IBS subjects. LM (12) and FM (9) were seen in 38% of the 55 subjects without IBS. 77% of those without IBS reported compliance with dietary advice. Of the subjects who reported compliance, 47% of IBS and 77% of those without IBS reported that after identifying LM or FM their symptoms resolved or improved. Conclusion: Carbohydrate malabsorption has a similar incidence in patients with and without IBS and both populations have similar compliance with therapeutic dietary recommendations. However, patients without IBS are more likely to report improvement in symptoms when dietary changes are instituted when compared to IBS patients.
Conclusion: The patients experiencing treatment failure were of younger mean age group. The treatment failure was associated with low density of *H. pylori* and mild inflammatory changes. There appears to be no association with genotypes but these are preliminary results.

P1073

SPINAL INJECTIONS FOR FUNCTIONAL GASTROINTESTINAL DISORDERS

B C Kramm, MD, Paul C Kramm M D D L L, Baton Rouge, LA

Purpose: Spinal injections are a functional GI disorder treatment that is often performed by injections into posterior spinal ligamentous structures. Cases of GERD, IBS, recurrent daily vomiting and esophageal spasm have all been resolved with injections of hypertonic solutions that induce an inflammatory repair of these ligaments. This stops somatic nociception which is known to sensitize spinal cord neurons to colonic distention.

Methods: Intraspinal ligamentous and bilateral facet joint capsules of various thoracic and/or lumbal spinal segments were injected with I-2 ccs of a 25% dextrose and 0.5% lidocaine solution using fluoroscopic guidance.

Results: Case 1 GERD was a 54 y.o. female with a multiyear Hx of daily episodic pain associated with reflux. Daily esomeprazole would mostly control these symptoms except when exacerbated by spicy foods or tomato based sauces. Severe epigastric pain ensued hours after missing a dose of esomeprazole. Upper and lower endoscopy revealed only mild esophagitis and gastritis. Tx Injected from T2 through T6 and between T10 and S1. Results Complete resolution of all symptoms for over three years. Case 2 IBS had a 43 y.o. female with a several year Hx of constipation predominant IBS. Several days after the previous bowel movement she would develop nausea, occasional vomiting, anorexia, cramping, bloating and abdominal pain relieved by passing hard stools followed by diarrhea. Tx Injected at L5-S1, both sacroiliac joints and between T4 and T10. Results Complete resolution of all symptoms for last three years. Case 3 Recurrent daily vomiting Hx Pt is a 55 y.o. male who would have bouts of vomiting two or three times per day with little warning for years. Extensive work-up including blood chemistry, upper and lower GI endoscopy were negative. Tx Twice injected at T1-T2 and all rib joints. Results Complete resolution of his symptoms for last 11 months. Case 4 Esophageal spasm Hx Pt is a 45 y.o. female who has a multi-year history of dysphagia associated with the sensation of food sticking subterminally. After an initial swallow, she would sometimes regurgitate triggering coughing spells. Complaints of subterminal pressure led to a negative cardiac, pulmonary and upper GI endoscopic work-up. Tx Injected between C2 and L1 all rib joints. Results Complete resolution of all symptoms for last 10 months.

Conclusion: These case studies demonstrate a safe and effective treatment for various functional GI disorders. Additionally, these case reports imply that the spastic symptom generation and adverse GI motility seen in the functional GI disorders may be induced by abnormal somatic posterior spinal afferentation. This may occur via visceralsomatic convergence that occurs normally in the spinal cord.

P1074

A COMBINATION OF RIFAXIMIN AND NEOMYCIN IS MOST EFFECTIVE IN TREATING PATIENTS WITH METHANE ON LACTULOSE BREATH TEST

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Purpose: During lactulose breath testing in patients, methane has become important in the evaluation of constipation and constipation predominant irritable bowel syndrome (IBS). While rifaximin has been a very effective antibiotic in the treatment of hydrogen producing IBS subjects, its benefit has not been evaluated in methane producers. In this retrospective study, we evaluate three antibiotic treatments for subjects who produce methane.

Methods: A retrospective chart review was conducted to identify subjects who were historically noted to have a breath test that was positive for methane. Subjects were excluded if they had no evaluable follow up or if their antibiotic treatment preceded the first consultation at the medical center. Three methods for treating subjects who were positive for methane on their lactulose breath test were identified and evaluated. These were neomycin alone at 500mg bid for 10 days, rifaximin alone at 400mg tid for 10 days and the combination of rifaximin and neomycin for 10 days. The charts were further reviewed to determine if subjects were deemed to be a responder to the therapy and whether or not methane was eliminated on a follow up breath test.

Results: During the review, 119 charts made mention of methane in the clinical history. After exclusion criteria were applied, 69 subject charts remained (among these some subjects had received more than one type of therapy). Out of 8 subjects that received neomycin alone, 5 (63%) were deemed to have a clinical response to therapy. Among the 39 subjects with clinical follow up data who received rifaximin alone, 22 (56%) responded clinically (P=0.05 compared to neomycin). However, 23 out of 27 (85%) subjects who received the combination of rifaximin and neomycin had a response (P=0.01 compared to rifaximin alone). Methane on breath test was also most likely to be eliminated with the combination of rifaximin and neomycin (87%) compared to rifaximin alone (28%) and neomycin alone (33%) (P<0.001). Of the patients who failed to eliminate methane with rifaximin alone, 66% eliminated methane with a combination of rifaximin and neomycin.

Conclusion: In the treatment of bacterial overgrowth, therapy needs to be tailored to optimize therapy based on the type of gas seen on breath test. While rifaximin alone has been shown to be highly effective for hydrogen only patients, a combination of rifaximin and neomycin is more effective in the eradication of methane.

Disclosure: Dr. Mark Pimentel-Consultant and Advisory Board, Salix Pharmaceuticals; Cedars- Sinai Medical Center-licensing agreement: Salix Pharmaceuticals.

This research was supported by an industry grant from Salix Pharmaceuticals
THE MULTINATIONAL TRANSLATION & VALIDATION OF THE SPANISH ROME III ADULT DIAGNOSTIC QUESTIONNAIRE

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Purpose: The translation and validation of the Rome III Adult Diagnostic Questionnaire (R3DQ) into Spanish is needed for the investigation of theFunctional Gastrointestinal Disorders (FGIDs) in Hispanic-Latin populations, as studies are limited. Country-specific Spanish translations, locally validated, preclude multicenter studies and comparisons. The unified translation for diverse Spanish-speaking populations facilitates investigations into the epidemiology, pathophysiology, and therapy of the FGIDs.

Methods: The multinational working group includes Spain, Mexico, Chile, Nicaragua, Honduras, and the U.S. The Rome Committee translation standard is followed: two independent forward (English to Spanish) translations, reverse translation, reconciliation, and independent pilots and validation.

Results: A unified Spanish Rome III instrument was developed. Eight independent Spanish to English translations were completed, two each from each region (Mexico, Spain, Chile, Central America). The translations demonstrated 70% homogeneity, and were consolidated into a unified instrument by consensus. The pilot (both clinic-based & population-based) is complete in each region (n=124), with mean age 41 (range 18-78). The instrument was administered by trained interviewers, with study team observation. The majority (95%) of the Spanish Rome III questions (77/81 of FGID questions) were well understood. The concepts of retching and rumination (Q33-38) and anal relaxation (Q88) were problematic. Also, 75% of health questions (Q80-93) were understood. Limitations included: ‘celiac disease’ (Q39,3) which is uncommon, ‘black stools’ (Q39,3) which is frequent with regional foods, and ‘anemia’ (Q45) a synonym for ‘fatigue’. Synonyms were needed as single word substitutions in 24% of questions (22/93) given differences in literacy and socioeconomic status within each region. Time-frequency concepts were confusing to half of subjects, particularly ‘rarely’, ‘sometimes’, ‘often’ - wherein a visual analog scale was helpful.

Conclusion: Testing the unified Spanish Rome III Adult Diagnostic Questionnaire was developed to facilitate coordinated investigations in Spain and Latin America. A single core translation of each question is feasible. The use of validated synonyms, as single word substitutions in a subset of questions, lends itself to a software platform for each region for the instrument, either with an interviewer or self-administered. Funding: Rome Foundation.

THE UTILITY AND SAFETY OF ENDOCUTANEOUS RESECTION FOR NODULAR LESIONS DETECTED AFTER ENDOCUTANEOUS ABLATION OF ESPHAGEAL DYSPLASIA AND CARCINOMA

2008 ACG Presidential Poster Award Recipient

C. Ponsalle, MD, S. A. Gross, MD, M. Raimondo, MD, M. B. Wallace, MD, T. Woodward, MD, T. Wolferman, MD, Gastroenterology, Also Clinic: Jacksonville, Jacksonville, FL.

Purpose: Introduction: Nodular lesions in Barrett’s esophagus [BE] are suspicious for harboring invasive carcinoma. Endoscopic resection [ER] is of diagnostic and therapeutic importance for the management and histologic staging of these lesions. There is little data available, however, regarding the safety and utility of ER for nodular lesions detected at surveillance endoscopy after ablation therapy.

Methods: After IRB approval, patients were identified who had undergone ER after ablation therapy. Identified patient’s medical records were abstracted for demographics, BE histology, pre ablation endoscopic ultrasound [EUS] findings, ablation and EMR procedure details including complications, and disease recurrence.

Results: Between 2001-08, eight patients underwent attempted ER after previous endoscopic ablation using periformal sodium photodynamic therapy (PDPT) (7 were men; mean age 73 years [range: 62-90]). PDPT was performed for Barrett’s high grade dysplasia (6 pts); Barrett’s esophagitis (1 pt) and benign hypertrophic glandular mucosa (2 pts). ER findings prompted further therapy (repeat endoscopic ablation in 3 pts, esophageal resection in 1 pt, and failed esophageal resection in 1 pt due to adhesions from a previous surgery). Mean follow up after successful ER and negative histology was 27 months (2-60). Time-frequency concepts were confusing to half of subjects, particularly ‘rarely’, ‘sometimes’, ‘often’ - wherein a visual analog scale was helpful.

Conclusion: Conclusions: In our series of patients with nodular lesions detected at surveillance endoscopy after endoscopic therapy for esophageal dysplasia or carcinoma, ER was safely performed in most patients and yielded important results leading to further ablation therapy and surgery.

THE UTILITY OF ENDOCUTANEOUS RESECTION FOR NODULAR LESIONS DETECTED AFTER ENDOCUTANEOUS ABLATION OF ESPHAGEAL DYSPLASIA AND CARCINOMA

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Purpose: Introduction: Nodular lesions in Barrett’s esophagus [BE] are suspicious for harboring invasive carcinoma. Endoscopic resection [ER] is of diagnostic and therapeutic importance for the management and histologic staging of these lesions. There is little data available, however, regarding the safety and utility of ER for nodular lesions detected at surveillance endoscopy after ablation therapy.

Methods: After IRB approval, patients were identified who had undergone ER after ablation therapy. Identified patient’s medical records were abstracted for demographics, BE histology, pre ablation endoscopic ultrasound [EUS] findings, ablation and EMR procedure details including complications, and disease recurrence.

Results: Between 2001-08, eight patients underwent attempted ER after previous endoscopic ablation using periformal sodium photodynamic therapy (PDPT) (7 were men; mean age 73 years [range: 62-90]). PDPT was performed for Barrett’s high grade dysplasia (6 pts); Barrett’s esophagitis (1 pt) and benign hypertrophic glandular mucosa (2 pts). ER findings prompted further therapy (repeat endoscopic ablation in 3 pts, esophageal resection in 1 pt, and failed esophageal resection in 1 pt due to adhesions from a previous surgery). Mean follow up after successful ER and negative histology was 27 months (2-60). Time-frequency concepts were confusing to half of subjects, particularly ‘rarely’, ‘sometimes’, ‘often’ - wherein a visual analog scale was helpful.

Conclusion: Conclusions: In our series of patients with nodular lesions detected at surveillance endoscopy after endoscopic therapy for esophageal dysplasia or carcinoma, ER was safely performed in most patients and yielded important results leading to further ablation therapy and surgery.

P1078

IS THERAPEUTIC ENDOSCOPY FOR UPPER GI CANCER SAFE IN THE ELDERLY?

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Purpose: Maintenance of nutrition and hydration plays an important role in symptom palliation and improving quality of life in patients with inoperable upper GI malignancies. Nearly two thirds of these patients will need intervention to relieve dysphagia or stop upper GI bleeding. Therapeutic endoscopy (1) forms the mainstay in symptom palliation. We assessed the safety of therapeutic endoscopy in the geriatric age group in 2 community hospitals.

Methods: All patients aged 70 (age limit for geriatric services in our hospitals) and above diagnosed with or treated for oesophageal or gastric cancer between 1st January 2004 and 1st December 2006 were included. Data was collected from two Community hospitals serving a population of 500,000. Palliation techniques included argon plasma coagulation, bougie and balloon dilatation, expandable metal stent or Celestin tube insertion, nasogastric tube (NG) or percutaneous endoscopic gastrostomy insertion (PEG) and YAG laser. All endoscopists were Consultant gastroenterologists.

Results: Over the 3 year period, 232 patients were diagnosed to have Upper GI Cancer. Of these, 161 fell into the study group (oesophageal-86, gastric-75). 29 patients were found to be suitable for surgery with curative intent (Oesophageal-17, Gastric-12). The rest were treated palliatively. 267 therapeutic Upper GI Endoscopies were done on 132 patients; 9 patients required a combination of different modalities. Different modalities are used in table 1. There were 4 perforations following dilatation (2 each with balloon and bougie). Of these, 3 could be managed with stents while one required Celestin tube insertion. There were 3 significant GI bleeds requiring hospital admission (1 following laser & radiotherapy and 2 following bougie dilatation).

Conclusion: 94% of our patients with upper GI cancers were in the geriatric age group. 83.2% required therapeutic endoscopy over a 3 year period. Our unit has a low perforation rate of 3.5% for dilatations compared to other published data (1,2,3). Severe complication (major bleed, death) rate was low at 1.1%. Our results support the safety and efficacy of therapeutic endoscopy in the palliation of symptoms for Upper GI cancers in the elderly. References: 1. ‘Scoping our Practice’*. 2004 Report of the National Confidential Enquiry into Patient Outcome and Death (NCEP4). 2. ‘Complications of Upper Gastrointestinal Endoscopy’. BSG guidelines, November 2006. 3. Quinn MA, Bell GD, McCloy RE, et al. Prospective audit of perforation rates following upper gastrointestinal endoscopy in two regions of England. Br J Surg 1995;82:530-3 (III).

Endoscopic modality used by frequency

<table>
<thead>
<tr>
<th>Modality</th>
<th>Number of procedures</th>
<th>% of procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dilatation (balloon/bougie)</td>
<td>124</td>
<td>46.4</td>
</tr>
<tr>
<td>YAG-laser</td>
<td>97</td>
<td>36.3</td>
</tr>
<tr>
<td>Expandable metal stent insertion</td>
<td>26</td>
<td>9.7</td>
</tr>
<tr>
<td>Argon Plasma/unblocking/NG or PEG</td>
<td>20</td>
<td>7.6</td>
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**Poster Abstracts – Tuesday, October 7**

**P1079**
**MAGNESIUM CITRATE (MAGC) PREPARATION FOR COLONOSCOPY: ONSET AND DURATION OF BOWEL ACTIVITY**
E. O. Tuyovv, MD, P. Rahman, MD, 1. Division of Medicine, New York University School of Medicine, New York, NY; 2. Division of Gastroenterology, Mount Sinai School of Medicine, New York, NY.

**Purpose:** Background: Sodium phosphate has been the standard low volume preparation for colonoscopy bowel cleansing. The risk of renal toxicity has caused many to switch to magnesium citrate. Patients need information about onset and duration of activity of this cathartic. This study was designed to develop practical prescribing information.

**Methods:** Methods: Two hundred and forty-one patients who completed a questionnaire took a liquid diet the day before colonoscopy and 300 mL of MagC the evening before and again on the morning of the procedure.

**Results:** Results: Bowel activity began 2.0 hours (range 0.25 to 15) after the first dose and continued for 4.0 hours (0.25 to 13.25). For the second dose the time to onset was 0.75 hours (0.25 to 8), and bowel activity continued for 2.0 hours (0.25 to 10). Bowel activity was completed four hours after ingestion of the second dose in 82% of patients and within five hours in 92%. Ten of the 241 patients reported the need for bowel evacuation during transit.

**Conclusion:** Conclusion: The activity from the second dose of MagC starts and ends sooner than the first. Patients may take the first dose of MagC as close to 5 PM as possible, and the second dose 4 hours prior to the procedure or 5 hours for those with long commutes. This schedule should provide adequate time for almost all patients to avoid bowel activity during travel.

**P1080**
**RETAINED ENDOCOLONIC A POTENTIAL DANGER**
A. Volfoon, MD, J. Mukarreyus, MD, P.S. Berg, MD, J. Rochester, MD, G. S. Weissman, MD, M. T. Mckeen, MD. ProHEALTH Associates, 1. La Lake Success, NY; 2. Internal Medicine, North Shore University Hospital, Manhasset, NY.

**Purpose:** Endoscopic hemoclipping is a potentially lifesaving procedure for gastrointestinal (GI) bleeding. However, stricture formation of the hemoclipped (HC) site is longer than the expected two week period, however, may interfere with magnetic resonance imaging (MRI). In our experience with patients who underwent this therapy, we found a significant number of patients with retained HC beyond two weeks. In some cases, this limited diagnostic evaluation.

**Methods:** In this retrospective chart review study we collected data from 23 patients who had HC placed, between 4/07 and 4/08. We recorded patient age, gender, bleeding site, indication for procedure, and HC type used. We reviewed follow up records, looking specifically at HC retention time and any documented interference with medical management due to prolonged HC attachment.

**Results:** Data was collected on a total of 23 patients treated endoscopically with HC, of which 15 were males and 8 females. The average age was 63.2 yrs (SD 17.1 yrs). Indications included GI bleed (9), colon polyps (6), screening (4), family history of colon cancer (3), and FAP (1). Resolution of HC were used in 21 patients, while Olympus/HC were used in the other 2. Clip site was as follows: proximal colon (9), cecum (7), descending colon (3), sigmoid colon (2), rectum (2), and duodenum (1). One patient had HC in both the cecum and proximal colon. On review of records, 5 patients had imaging or repeat endoscopy after endoclipping. Of these, 3 showed no HC at 2 weeks, 3 months, and 6 months after the procedure; 1 had HC that were attached 4 weeks later, and passed at 5 weeks; and 1 had HC in place at over 8 weeks after therapy. In the latter 2 patients, prolonged HC retention interfered with diagnostic MRI, postponing it until it was confirmed that HC had passed. A 6th patient had ileocoloectomy 3 months after hemoclipping, with HC still attached on review of the specimen. Therefore, at least 3 out of 23 patients (13%) had retained HC much longer than expected. Since the other 17 patients have not had a follow up to date, this could be an underestimation.

**Conclusion:** To our knowledge, there are currently no prospective studies available that look at HC retention time in human subjects. It has been widely accepted that endoscopic HC detach within a two week period. Although HC manufacturers stipulate that MRI should not be used, most clinicians rarely advise their patients to abstain from diagnostic procedures otherwise contraindicated with a stainless steel HC in place, given its presumed short retention time. Our study shows 3 cases during the past year in which HC were retained well over the two week period, twice interfering with a much needed MRI. Realizing that a larger study is needed, we aim to raise awareness of this potential problem.

**P1081**
**SUBMUCOSAL ISOLATION OF A CONGENITAL TRACHEOESOPHAGEAL FISTULA IN AN ADULT USING CONCEPTS OF THE SELF-APPROXIMATING TRANSLUMENAL ACCESS TECHNIQUE (STAT)**
N. J. Yared, MD, M.T. Moyer, MD, A. Mathew, MD. 1. Internal Medicine, The Penn State University Milton S Hershey Medical Center, Hershey, PA; 2. Gastroenterology and Hepatology, The Penn State University Milton S Hershey Medical Center, Hershey, PA.

**Purpose:** The self-approximating translumenal access technique (STAT) is a procedure in which an endoscopic submucosal tunnel is created in Z tract fashion for translumenal access during natural orifice translumenal endoscopic surgery (NOTES) procedures. Traditionally, correction of a congenital H-type tracheoesophageal fistula (TEF) in an adult includes major surgery, thoracoscopy or thoracoscopic approach. Techniques using traditional endoscopic devices for closure of respiratory-oesophageal fistulas have been unsatisfactory results. Our purpose is to describe a technically feasible endoscopic approach to isolating and repairing a TEF in an adult using concepts of the STAT.

**Methods:** A 56-year-old female with a congenital H-type TEF who refused traditional surgical intervention underwent unsuccessful endoscopic repair using endoclips after abrading the mucosa surrounding the portion of the TEF. A novel endoscopic approach using concepts of STAT was then proposed. Under general anesthesia, a 9mm gastroduodenoscope was retroflexed in the esophagus allowing clear visualization and India ink marking of the fistula for future identification using a submucosal injection needle. STAT technique was then begun. Again using the injection needle, epinephrine diluted with saline was injected at a site 2cm proximal to the fistula. A 4mm triple-lumen needle knife was used to incise the mucosal seal and careful dissection along the submucosal plane was performed using rotatable tooth-touc- cepts to create tunnels on either side of the fistula for isolation.

**Results:** The fistula was successfully isolated within the plane between the esophageal mucosa and submucosa (Fig.) and permanent occlusion was planned using endoscopic clipping. However, difficulty with ventilation was encountered and the procedure was unable to be continued. Closing the fistula could not be safely undertaken.

**Conclusion:** STAT may offer a method for isolating not only a TEF whereby an ablative device may then be applied to achieve durable closure, but also other submucosal esophageal lesions using a traditional endoscope. Further refinements including the use of CO2 for insufflation and perhaps the development of effective endoscopic devices offering suturing capability will be required for this to be done safely and effectively.

**P1082**
**ENDOSCOPIC REDUCTION OF DILATED GASTROJEJUNAL ANASTOMOSIS STRICTURES USING ROUX-EN-Y GASTRIC BYPASS USING A NOVEL APPROACH**
A. J. Waye, MD, M.T. Moyer, MD, A. Mathew, MD. 1. Internal Medicine, The Penn State University Milton S Hershey Medical Center, Hershey, PA; 2. Gastroenterology and Hepatology, The Penn State University Milton S Hershey Medical Center, Hershey, PA.

**Purpose:** As the obesity epidemic in the United States continues to worsen, the number of bariatric procedures performed continues to grow with over 150,000 performed in 2004. Gastrojejunal bypass using Roux-en-Y gastrojejunostomy is currently the most commonly performed bariatric procedure. Unfortunately, many patients experience weight gain post-operatively due to a variety of reasons, some technical including dilatation of the gastrojejunal anastomosis. Here we examine a novel approach to endoscopically reducing the G-J anastomosis aperture using readily available endoscopic devices.

**Methods:** Two patients with significant weight gain five and one year after initially successful Roux-en-Y procedures were included in this proof-of-concept study. A triple lumen needle knife was used to create the appropriate debridement of one-half the circumference of the aperture, with endoclips then placed at 1cm increments using the Endoloop device (Olympus, Inc.) to connect each pair of contiguous clips. Loop cinching then closed the anastomosis diameter well (Fig.).

**Results:** The first patient did not report any meaning full weight loss and follow-up endoscopy indicated breakdown of the repair. The second patient experienced decreased appetite for several weeks following the procedure; however the anastomosis did not appear not to be clearly reduced on follow-up endoscopy.

**Conclusion:** Endoscopic therapy to tighten a dilated gastrojejunal anastomosis using the clip and endoloop method is technically feasible, safe, and illustrates the potential of this approach. However, we feel that the availability of an endoscopic suturing device allowing a full-thickness, traditional plication will be required for a durable approximation and long term benefit.

**P1083**
**CAN HELICOBACTER PILOI INFECTION WITHOUT EROSIONS OR ULCER CAUSE ANEMIA?**
T. M. Buonposi, MD, S. Komanduri, MD, MS, Medicine, Rush University Medical Center, Chicago, IL.

**Purpose:** H. pylori infection has been associated with anemia, however, it is not well understood whether H. pylori can cause anemia without evidence of gastric erosion/ulcer. We set out to determine whether H. pylori infection without endoscopic mucosal lesions can cause microscopic anemia.

**Methods:** Pathology database was queried and all consecutive patients who had H. pylori infection on their gastric biopsies between Jan. 2007 and April 2008 were identified. Laboratory database was queried for CBC result and then medical charts of those patients who had CBC result within 120 days of their EGD were reviewed to look for anemia and potential causes of anemia.

**Results:** We identified a total of 306 consecutive patients who had H. pylori infection in their gastric biopsies. One hundred thirty-seven patients were excluded (no recent CBC, n = 124; hematological causes for anemia, n = 13). Eighty one of the remaining 169 patients had H. pylori infection (48% and anemia - 30/51 (59%) males and 51/118 (43%) females. There was no cause of anemia in 21 of the 81 anemic subjects. Thus, 21/169 (12.4 %) of anemic patients with H. pylori infection [ages 33 to 78] had anemia of unknown etiology.

**Conclusion:** Our data suggests that H. pylori infection without endoscopic mucosal breakdown can be associated with anemia. Thus, routine gastric biopsy may be warranted when EGD is done as part of the investigation of anemia. Further prospective studies are needed to validate our retrospective study and determine the cost-effectiveness of routine gastric biopsy in patients with anemia of unknown cause.
ENDOSCOPIC MANAGEMENT OF COMPLETE COLONIC ANASTOMOTIC STRICTURES USING ANTEGRADE-RETROGRADE RENDEZVOUS TECHNIQUE. A REPORT OF TWO CASES
D. S. BouHaidar, MD, M. B. Reid, MD, R. S. Sandhu, MD, A. Zifis, MD. Division of Gastroenterology, Virginia Commonwealth University, Richmond, VA.

Methods: Two complete colo-rectal anastomotic stenoses were addressed endoscopically using the antegrade-retrograde rendezvous technique.

Results: Both patients had an 18 months follow up with no recurrence of the stricture.

Conclusion: This rendezvous technique may be used early in the learning curve for colonoscopy. Further studies should be done to validate the simulator performance.
**Poster Abstracts — Tuesday, October 7**

**P1089**

**CAN THE LIKELIHOOD OF GI ADVERSE EVENTS ASSOCIATED WITH 4L POLYETHYLENE GYCOL + ELECTROLYTES (PEG) BE PREDICTED?**

R. Marino, MD, S. Herrera, MD, T. Hynd, PhD, A. Infantiom, MD1, L. C. Kac, MD, D. Loren, MD, C. L. Miller, RN, D. Moretti, RN, D. Kastenberg, MD, J. Jefferson Medical College; Philadelphia, PA; 2. Gastroenterology and Hepatology, Thomas Jefferson University, Philadelphia, PA.

**Purpose:** To evaluate the effect of patient (pt) characteristics on PEG-related GI adverse events (AEs).

**Methods:** A single center, prospective, double-blind, randomized, placebo control study evaluating the effect of a proton pump inhibitor (PPI) (40 mg esomeprazole, daily) on PEG-related GI AEs. Eligible pts were scheduled for elective outpatient colonoscopy and were not taking acid suppression therapy. Pts received placebo or PPI for 7 consecutive days ending on the day of colonoscopy. Cherry flavored PEG (NuLYTELY®) was taken the evening prior to colonoscopy. Symptom (abdominal pain, bloating, nausea, vomiting) incidence and severity, using a 10 point Likert scale, were measured at baseline and immediately prior to colonoscopy. A validated quality of life (QOL) scale (QOLRAD) was administered at baseline and before colonoscopy. Logistic regression models for post-treatment symptoms (adjusted odds ratio), and linear models for symptom severity (difference in least squares means) controlled for treatment assignment and pre-treatment symptoms. Multivariate modeling considered QOL scale, age, gender, BMI, and personal history of colonoscopy. This study was approved by the TJU IRB.

**Results:** 539 pts were enrolled between 3/04-12/06. and 339 (PPI-166, placebo-173) were included in this analysis. The two groups were well matched for age (mean±5 yrs), gender (~50% female), BMI (28), and baseline GI symptoms (both incidence and severity). Female gender was independently associated with an increased risk for both incidence and severity of PEG-related symptoms. Women were significantly more likely to experience any GI symptom or an individual symptom - abdominal pain, bloating, nausea, or vomiting (table). Similarly, women reported greater severity of abdominal pain, nausea, and vomiting with PEG both the mean (OR 0.65, p<0.001) and maximum (OR 1.15, p<0.001) severity of GI symptoms were greater in females. Furthermore, PEG-related abdominal pain, nausea, and vomiting occurred significantly more often when the respective symptom was present at baseline (table). Pre-existing symptoms were also associated with greater symptom severity – mean (OR 0.59, p<0.001), and maximum (OR 0.33, p<0.001). Advanced age was associated with an increased risk of GI symptoms (OR 0.97, p=0.005), and an individual symptom – abdominal pain (OR 0.97, p=0.005), nausea (OR 0.97, p=0.003), vomiting (OR 0.96, p=0.001). Finally, pre-existing sleep disturbance predicted a greater incidence of any GI symptom (OR 2.52, p=0.01).

**Conclusion:** The likelihood of GI symptoms complicating a PEG purgative is greater in women, in pts who are older, and in those who have GI symptoms or sleep disturbance at baseline.

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**The effect of patient characteristics on PEG-related symptom incidence and severity.**

<table>
<thead>
<tr>
<th>Symptoms / Pre associated</th>
<th>Baseline Characteristics</th>
<th>Pre-Tx Abdominal Pain</th>
<th>P</th>
<th>Pre-Tx Blowing</th>
<th>p</th>
<th>Pre-Tx Nausea</th>
<th>p</th>
<th>Pre-Tx Vomiting</th>
<th>p</th>
<th>Any Symptoms Pre-Tx</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Abdominal Pain</td>
<td>Baseline</td>
<td>1.89 (1.03, 3.59)</td>
<td>0.04</td>
<td>0.34 (0.23, 0.45)</td>
<td>&lt;0.001</td>
<td>0.64 (1.61, 1.11)</td>
<td>0.009</td>
<td>0.35 (0.27, 0.52)</td>
<td>&lt;0.001</td>
<td>0.03 (0.57, 0.78)</td>
<td>&lt;0.001</td>
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<tr>
<td>Female</td>
<td>1.89 (1.03, 3.59)</td>
<td>0.04</td>
<td>0.34 (0.23, 0.45)</td>
<td>&lt;0.001</td>
<td>0.64 (1.61, 1.11)</td>
<td>0.009</td>
<td>0.35 (0.27, 0.52)</td>
<td>&lt;0.001</td>
<td>0.03 (0.57, 0.78)</td>
<td>&lt;0.001</td>
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<tr>
<td>Nausea</td>
<td>1.58 (1.00, 5.20)</td>
<td>0.05</td>
<td>0.79 (0.27, 0.52)</td>
<td>&lt;0.001</td>
<td>0.03 (0.36, 0.78)</td>
<td>&lt;0.001</td>
<td>0.03 (0.95, 1.30)</td>
<td>0.05</td>
<td>0.83 (0.45, 1.21)</td>
<td>0.001</td>
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<tr>
<td>Female</td>
<td>1.64 (1.05, 2.55)</td>
<td>0.03</td>
<td>0.95 (0.35, 1.54)</td>
<td>0.002</td>
<td>0.03 (0.95, 1.30)</td>
<td>0.05</td>
<td>0.83 (0.45, 1.21)</td>
<td>0.001</td>
<td>0.03 (0.95, 1.30)</td>
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<tr>
<td>Vomiting</td>
<td>2.43 (1.32, 4.59)</td>
<td>0.005</td>
<td>0.66 (0.19, 1.14)</td>
<td>0.006</td>
<td>0.03 (0.95, 1.30)</td>
<td>0.05</td>
<td>0.83 (0.45, 1.21)</td>
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<td>0.03 (0.95, 1.30)</td>
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<tr>
<td>Any Symptom</td>
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<td>1.72 (0.89, 3.32)</td>
<td>0.86</td>
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<td>0.02</td>
<td>1.72 (0.89, 3.32)</td>
<td>0.86</td>
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</table>

*Tx: Treatment, refers to placebo or esomeprazole (40 mg daily) for seven days

**P1090**

**PROPHYLACTIC USE OF COVERED METAL STENT TO PREVENT STRicture FORMATION AFTER LONG SEGMENT CIRCUMFERENTIAL EMR**

S. Moode, MD, A. Mathew, MD. Division of Gastroenterology, HO45 Hershey Medical Center, Hershey, PA.

**Purpose:** Endoscopic mucosal resection (EMR) and ablation are alternatives to surgery for Barrett’s esophagus (BE) with high grade dysplasia (HGD) and intramucosal carcinoma. Endoscopic therapies may have an advantage over esophagectomy given the associated mortality and morbidity. But circumferential EMR of the esophagus for long segment BE with HGD has been shown to be complicated by stricture formation. We describe a case of circumferential EMR with prophylactic covered stent placement.

**Methods:** A 57-year old male with coronary artery disease was diagnosed with long segment Barrett’s (8cm) with HGD. EUS showed no invasion into the muscularis mucosa or lymphadenopathy. The patient declined surgery and elected EMR. He underwent circumferential EMR of the BE from 42cm to 34cm. The BE mucosa was suctioned up into a band ligator to create pseudopolyps. These pseudopolyps were resected with a hot snare. A Roth net was then used to retrieve the tissue and bands. 48cc of saline mixed with 10cc of epinephrine was flushed into the lumen to decrease oozing. A 22x120mm alveous stent was placed over a guide wire positioned paradoxically to the scope, under direct endoscopic visualization. The patient complained of severe heart burn in the post procudural period and hence the stent was pulled proximally to have distal tip lay above the GE junction with the proximal tip at 28cm. He later complained of chest pain. In spite of narcotic treatment, he continued to experience moderate pain requiring removal of the stent on Day 5.

**Results:** The patient recovered well after the stent removal and had no further pain. On follow up at 5 weeks, he had no significant structures despite extensive EMR. Some residual BE mucosa was again resected to achieve what appeared to be a complete removal of BE mucosa. Patient remains asymptomatic after 3 months on a regular diet.

**Conclusion:** Prophylactic stent placement after circumferential EMR has not been reported to our knowledge. Most common complications of EMR include bleeding, perforation and stricture formation. Stuctures when they occur are usually treated with bouginage. Complete loss of lumen will be more difficult to treat. A case of complete esophageal stenosis which eventually required esophagectomy is described (ref). Prophylactic temporary stent placement, even short term, may be an effective way to prevent stricture formation. It should be noted that our patient experienced significant pain requiring stent removal after 5 days. Further experience on a larger patient population is needed to prove efficacy of this strategy.

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**Figure:** Endoscopic View of the Ampulla

**Cystic Dilation with Proximal Short Stricture**

**Disclosure:** Dr. Schmelkin - Consultant: Given Imaging

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**P1101**

**ENDOSCOPIC TREATMENT OF AN UNUSUAL USE OF BILIARY DUCTAL DILATION: REPORT OF A CASE OF ADENOMATOUS HYPERPLASIA OF THE PAPILLA**

S. Herrine, MD, A. Mathew, MD. Division of Gastroenterology, HO45 Hershey Medical Center, Hershey, PA.

**Purpose:** Benign tumors of the bile duct are rare and occasionally mimic malignancy. We report a case of ampullary adenomatous hyperplasia presenting with abdominal pain, abnormal liver tests along with a cystic mass in the duodenum.

**Methods:** A 81 year old lady presented with abdominal discomfort, abnormal liver tests and biliary ductal dilation on imaging. Malignant biliary disease was suspected, given the age and EUS performed. There was a submucosal bulge involving the papilla raising concern for a choledochocle. On tracing the CBD, a stricture was noted leading into a dilated, thick walled chamber involving the papilla, seen as a bulge. Biopsy and FNA revealed no diagnosis. Cholecystography was performed and direct biopsy of the stricture obtained. This revealed benign tissue. On a separate occasion, complete endoscopic resection of the bulging tissue was performed, effectively accomplishing an extended ampullectomy. Brushings and biopsies from the distal ducts were also obtained. Final pathology showed adenomatous hyperplasia. Duodenal and ampullary mucosa with focally dilated cystic mucosal glands with a prominently thickened muscularis mucosa was seen. There was no dysplasia.

**Results:** Patient symptoms and abnormalities of liver tests resolved completely. Follow up ERCP at 6 months showed wide open CBD/PD and normal ampullary tissue.

**Conclusion:** Adenomatous hyperplasia can present as a benign stricture and mimic a neoplasm. Endoscopic resection is feasible and can be curative.
P1092
DEMOCRATICS OF MAJOR UPPER GASTROINTESTINAL DISORDERS OF A COHORT OF ADULT SRI LANKAN POPULATION BASED ON ENDOSCOPY EXPERIENCE IN A MEDICAL UNIT OF A SUBURBAN SECONDARY REFERRAL CENTER – A 4 YEAR STUDY
R. L. Sathasinghe, MD, MACG, R. Fernando, MD. Department of Medicine, Ward 6, Sri Jayawardenepura General Hospital & Post Graduate Training Center, Nugegoda, Sri Lanka.
Purpose: To study the demographics and related matters of major upper gastrointestinal disorder's of adult Sri Lankans based on endoscopy as in Sri Lanka endoscopic facilities are restricted to a handful of institutions and in a vast majority the significant upper GI symptoms are treated blandly due to lack of resources and trained personnel.
Methods: Case notes of 1200 patients who had undergone gastroscopy for various reasons in the medical unit of District General Hospital – Panadura, Sri Lanka, from 7.3.1997 to 7.3.2001 were reviewed retrospectively.
Results: Hiatus herniae (70%), oesophagitis (29%), non ulcer dyspepsia (NUD) (16%), histological antral gastritis (13%), peptic ulcer disease (PUD) (12%), oesophageal malignancies (2%), oesophageal varices (1.5%), gastric malignancies (0.8%) were found in the descending order. A mild male dominance was noted in oesophagitis, oesophageal carcinoma, NUD while a striking difference was seen in varices, gastric malignancies, PUD and antral gastritis. Hiatus herniae showed a slight female dominance. The most prominent peak incidence (25%) of antral gastritis was noted in the 51-60yr age group while a smaller peak (21%) was observed in the 31-40yr age group. H. pylori was detected only in 46% with parallel peaks in the same age groups (11% & 13% respectively). Oesophagitis showed peaks in 51-69yrs and 61-70yrs age groups (21% respectively) with a mean age of 61.7±SD8.9. Five patients had histological Barrett’s oesophagitis Oesophageal malignancies showed an age distribution of 41-69yrs 89% in 51-70yrs age group with a mean age of 62±6.9yrs while 9% were in the 31-40yr age group with a mean age of 38.0±11.0 yrs. SD8.9. Eighty eight percent had gastric adenocarcinoma. NUD had an age range of 20-80yrs with a peak incidence of 20% in 41-50y age group, and a mean age of 53.5±17.3 SD yrs. PUD was found only in 2% while non steroid anti-inflammatory drugs (NSAIDs) caused 1%. H. pylori was detected only in 9% of (NSAID) ulcers 91% were in the 55-80 yr age group with an incidence of 80% in 51-60yrs. Varices were noted in 1.5% of the total endoscopies and were exclusively in alcoholic males, 93% being in the 41-70y age group.
Conclusion: Hiatus herniae, oesophagitis, NUD and antral gastritis constituted 87% of endoscopic diagnoses of adult Sri Lankans. 51-70 age group had the peak incidence of above, with strikingly different demographics related to PUD & H pylori compared to west and neighbours. The cohort effect could have influenced certain demographics of the study population.

P1093
THE DIAGNOSTIC YIELD OF PILCAM ESO IN PATIENTS WITH CHRONIC GERD IN A COMMUNITY BASED PRIVATE GASTROENTEROLOGY PRACTICE
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Purpose: Chronic GERD is a common disorder affecting millions of Americans. 30% of patients with chronic reflux have erosive esophagitis on traditional endoscopy, while approximately 10% of chronic GERD patients have Barrett’s esophagus on EGD. Chronic reflux is a known risk factor for Barrett’s adenocarcinoma, and has been shown to be a rate of 20-50% in the middle aged Caucasian man, over the past 20 years. Given Imaging’s Pillcam ESO has been shown in previous studies to have extremely high positive and negative predictive values when compared to traditional endoscopy. This study demonstrates a comparable diagnostic yield of Pillcam ESO with traditional endoscopy in the outpatient, community based setting.
Methods: 50 patients with chronic GERD symptoms referred to an outpatient private gastroenterology practice underwent Pillcam ESO studies. These patients had GERD for over 5 years and were originally referred for traditional endoscopy, all of whom refused EGD for various reasons (fear of procedure, anesthesia or complications). Pillcam ESO was performed, using the standard protocol. These patients were then compared to histology findings recorded. Patients with capsule findings consistent with Barrett’s esophagus underwent EGD and biopsy at a later date.
Results: Barrett’s esophagus was seen in 5 cases (10%) and confirmed on follow up EGD with biopsy. All were short segment Barrett’s Erosive esophagitis was noted in 12 cases (24%). LA classification Grades A and B. There were no cases of Grade C or D esophagitis 2 cases (4%) had non obstructive Schatzki’s rings; one patient (2%) had an inlet patch. One patient was noted to have esophageal varices.
Conclusion: This study demonstrates that the diagnostic yield of Pillcam ESO mirrors that of traditional endoscopy, when performed in chronic GERD patients who have refused EGD, in the community setting. The yield of 10% with Barrett’s esophagus and 24% with erosive esophagitis are identical to the rates seen in traditional endoscopic studies. Many patients with chronic reflux who require endoscopy are not being seen by gastroenterologists due to their fears and apprehension of having an invasive procedure. Pillcam ESO gives physicians a valuable, accurate diagnostic tool to utilize in this group of patients hopefully leading to an earlier diagnosis, improved treatment plan, and a better outcome.
Disclosure - Dr. Schmelkin - Consultant: Given Imaging

P1094
LUBIPROSTONE IS ASSOCIATED WITH GASTRIC RETENTION, PROLONGED GASTRIC EMPTYING TIME AND INCOMPLETE STUDIES IN PATIENTS UNDERGOING SMALL BOWEL CAPSULE ENDOSCOPY
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Purpose: Various preps and prokinetics have been studied in small bowel capsule endoscopy, without proving a definite benefit in visualization of lesions and in the small bowel often causes inadequate visualization of the mucosa, and therefore suboptimal studies. We studied the effect of Lubiprostone in patients undergoing CE, as it enhances intestinal clear fluid secretion by the activation of chloride channels and may possibly improve small bowel motility.
Methods: 35 CE were performed in patients undergoing CE, who were given a 24mg dose of Lubiprostone one hour prior to capsule ingestion. (Peak plasma levels have been shown to occur at 1.1 hours). Patients were gastroscopists, diabetics, or patients receiving anticholinergic/anxiolytics were excluded CE was performed in usual manner, recording Gastric Transit Time (GTT), Small Bowel Transit Time (SBTT), findings, as well as subjectively grading the quality of visualization of small bowels mucosa inadequate, poor, good and excellent.
Results: In 5 of 33 patients (15.2%), the capsule was retained in the stomach for the duration of the examination. An additional 3 patients had a prolonged GTT, and the capsule did not reach the colon (total of 24.2% of all patients had an incomplete exam). Average GTT was 90.5 minutes (range 6 to 222 minutes). Average Small Bowel Transit Time was 176 minutes (range 16 to 389 min.). SB visualization was deemed good or excellent in all patients.
Conclusion: In our study, Lubiprostone was shown to be associated with an extremely high rate of incomplete CE. Lubiprostone caused prolonged GTT (90.5 minutes), twice as long as previous reported studies. These effects resulted in incomplete CE studies in 24% of all patients. Interestingly, Lubiprostone may have a positive prokinetic effect on SBTT, with a shortened SBTT of 176, compared with previously reported average times of 240 minutes, when no propranolol was utilized. Furthermore, Lubiprostone seemed to have a beneficial effect on the quality of SB visualization, with all studies being judged to be of good or excellent quality. Therefore, at this point, Lubiprostone should not routinely be used in patients undergoing small bowel capsule endoscopy. Further studies using Lubiprostone along with known gastric prokinetics may be interesting.
Disclosure - Dr. Schmelkin - Consultant: Given Imaging
ACUTE UPPER GASTROINTESTINAL BLEEDING IN ELDERLY POPULATION


Purpose: The purpose of this study is to evaluate the incidence of UGIB within the elderly population and assess whether there is a significant difference in patients older than 75 years of age compared with those less than 75 years of age.

Methods: The study was conducted in a 272-bed community hospital over a 20-month period with approval by the hospital and city IRB. Retrospective chart reviews of all patients admitted sequentially to the hospital or the emergency room with a diagnosis of upper gastrointestinal bleeding were reviewed. Hemoglobin, hematocrit, and electrolyte levels were obtained and used to calculate the intravascular volume. All patients had a complete blood count, liver function tests, coagulopathy tests, and upper endoscopy. Data collected included: patient demographics, hemoglobin levels and hematocrits on admission and discharge, number of rebleeds, intervention methods, and length of stay.

Results: There were a total of 104 patients out of whom 91 were women and 13 men. Group 1 (ICU patients) consists of 44 patients, (M=6, F=38). Group 2 (Floor patients) consists of 60 patients, (M=15, F=45). Both PEG complications were between ICU and non ICU patients. Group 2 compared with group 1 showed more PEG complication (20 vs. 6, p=0.02). Mortality unrelated to PEG was lower 14 vs. 8, p=0.02), wound infection 5 vs. 2 (p=0.44), peristomal leakage 3 vs 1 (p=0.46). Bleeding, necrotizing fasciitis, wound infection, and septicemia were more common in non ICU patients.

Conclusion: In conclusion, PEG placement was done in both ICU and non ICU patients. There were no significant differences in the complication rates between ICU and non ICU patients. There were total 94 patients underwritten for PEG placement. Mortality rates were lower in ICU patients compared to non ICU patients. Length of stay was significantly lower in ICU patients compared to non ICU patients. There were no significant differences in major complications such as PEG site infections, peristomal leakage, or others. This study indicates the PEG was an effective and safe method for enteral nutrition in the ICU patients.

ACCUPET: A NOVEL MULTI-PERFUSED MICRO-TECHNOLOGY GASTROSTOMY TUBE WITH VISCOELASTIC BANDING FOR HOME USE


Purpose: Accupet tube is a new gastrostomy tube designed for home use in critically ill patients, with the potential to reduce complications. We aimed to evaluate the use of Accupet gastrostomy tube to restore enteral nutrition in critically ill patients compared with the traditional gastrostomy tube.

Methods: We retrospectively reviewed medical records of all patients who underwent PEG in ICU/telemetry and floor at the tertiary care inner city hospital from January 2005 to March 2007. All patients who had PEG placement as ambulatory patients were excluded from the study. Indications for PEG in non ICU included various neurologic impairment like Alzheimer’s dementia 20 (38.5%), Cerebrovascular accident 26 (43.3%), chronic ventilator dependency 5 (8.9%), and others. Indications for PEG in ICU patients were CVA 11 (22%), Alzheimer’s de- mentia 18 (36.9%), and Vent dependent 12 (23.1%). Bed side PEG placement was performed in 14 ICU patients (31.8%). All non ICU PEG placements were performed in endoscopy suite.

Results: There were total 104 patients out of whom 91 were women and 13 men. Group 1 (ICU patients) consists of 44 patients, (M=6, F=38). Group 2 (Floor patients) consists of 60 patients, (M=15, F=45). The study demonstrated that patients with Accupet gastrostomy tube had better clinical outcomes compared with patients with traditional gastrostomy tube. This study indicates that PEG in non ICU was significantly decreased compared with ICU patients. The Accupet gastrostomy tube is a promising device for home use in critically ill patients.
RESULTS OF A NATIONAL SURVEY OF ENDOSCOPIC SEDATION PRACTICE

**Disclosure** - Dr. Smith - none  Dr. Chang - none  Dr. Stevens - Consultant: Boston Scientific, Inc.

*Trainees were unable to progress to the deployment phase of banding during pre-test

**P1101**

RESULTS OF A NATIONAL SURVEY OF ENDOSCOPIC SEDATION PRACTICE FOR PATIENTS WITH OBSTRUCTIVE SLEEP APNEA

**S Vymura, MD, J Caschieri, MD, G Cooper, MD, A Chak, MD. Gastroenterology, Case Medical Center, Cleveland, OH.**

**Purpose:** Conscious sedation used during endoscopic procedures is thought to be associated with an increased risk for cardiopulmonary complications in patients with obstructive sleep apnea. We performed a national survey of gastrointestinal endoscopists to determine sedation practices in OSA patients.

**Methods:** A two page survey was initially mailed to members of the regional endoscopy society. The survey was then revised to eliminate ambiguous questions and mailed to a random subset of ASGE members. Most questions were multiple choice and included items on physician demographics, training, and reported practice for sedation during endoscopic procedures in patients with diagnosed or suspected OSA. Results: A total of 187 (39%) of 480 mailed surveys were returned. Most endoscopists (66.8%) reported no difference in their anesthetic approach for EGD versus colonoscopies in OSA patients. Thirty-six percent felt that lighter conscious sedation was adequate for all OSA patients, whereas 18% of endoscopists used anesthesia services for all procedures. Sedation practices for patients known to use CPAP or home oxygen varied with the largest proportion of endoscopists reporting lighter sedation as the only special precaution (28% and 25% respectively). Twenty-three and 33.8% felt that either a hospital endoscopy unit or anesthesia assistance was required for OSA patients and patients on home oxygen, respectively. Forty-six percent of respondents reported patients for OSA evaluation if they had apneic episodes during endoscopy.

**Conclusion:** There is a wide variation in conscious sedation practices for OSA patients among gastrointestinal endoscopists. Lighter sedation rather than anesthesiologist administered sedation appears to be the preferred management approach for gastrointestinal endoscopy in these patients.

**P1102**

FINDINGS OF ENDOMETRIOSES BY CAPSULE ENDOSCOPY

**E Atfal, MD, A Bayat, MD, FACC. Advocate Christ Medical Center, Oak Lawn, IL.**

**Purpose:** A 17 year old female was seen in consultation for multiple episodes of intermittent small bowel obstruction.

**Methods:** Each time the patient improved with conservative management. Upper and lower endoscopies were non diagnostic. A small bowel follow through x-ray was reported as normal. There was no evidence of inflammatory bowel disease. The patient then underwent a capsule endoscopy. The capsule study revealed a mass lesion in the distal ileum. The overlying mucosa appeared normal. Some of the images suggest a central depression. There was no ulceration or bleeding. The capsule was retained at the site for approximately 45 minutes and then spontaneously passed. The patient was subsequently referred for exploratory laparotomy. She underwent a partial ileal resection to remove the mass. Histopathology revealed small bowel endometriosis.

**Results:** Endometriosis is a relatively common condition characterized by implantation and proliferation of endometrial glands outside the uterus. There can be intestinal involvement in relatively common. It is reported in 12% to 37% of individuals with the disease. Of these cases, only 7% involve the small bowel. Most small bowel cases involve the distal ileum. Conclusion: To our knowledge there are no reports of finding of endometriosis by capsule endoscopy. Search was made on PubMed and the capsuleendoscopy.org atlas websites. Our case represents an advance case where the lesion appeared as a mass leading to intermittent small bowel obstruction. Since small bowel endometriosis is relatively rare, more subtle findings will be documented as more cases are diagnosed. We suspect that many cases of ileal endometriosis may not yield any luminal findings by capsule endoscopy. One must have a high index of suspicion in the subgroup of patients that this disorder afflicts. A small normal size capsule endoscopy does not rule out endometriosis of the small bowel. We don’t belive that possible small bowel endometriosis is an indication to perform capsule endoscopy. History of small bowel obstruction should not preclude capsule endoscopy. Many times it may lead to a definitive diagnosis.

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**P1103**

ACUTE MYOCARDIAL INFARCTION AND GASTROINTESTINAL BLEEDING IN AN AFRICAN AMERICAN INNER CITY POPULATION

**M Bumbaru, MD, A. Goodman, MD, M. Rein, MD, D. O’Brien, MD, S. Abougu, MD, F. Green, MD, J. Medicine, SUNY Downstate Medical Center, Brooklyn, NY; 2. Medicine, Staten Island University Hospital, Staten Island, NY; 3. Gastroenterology, SUNY Downstate Medical Center, Brooklyn, NY.**

**Purpose:** Patients with concomitant gastrointestinal bleeding (GB) and acute myocardial infarction (AMI) have been well described in literature; however the majority of these studies were performed in non-minority populations. The aim of our study was to characterize patients with GB and AMI in a predominantly underserved, minority, African American inner city population.

**Methods:** A retrospective chart review was conducted at two large teaching hospitals of a major university medical center in Brooklyn, NY. Patients were identified by using ICD-9 codes for GB (occur and overt) and AMI, admitted 2001 through 2007. A total of 115 patients were identified, of which 102 (88.7%) were African American. This subset of patients was analyzed for patient characteristics, co-morbidities, endoscopy results as well as clinical outcomes. Results: The median age was 71.4 years, 59.8% were women. The co-morbidities most frequently identified were: arterial hypertension (73.5%), diabetes mellitus (35.3%), congestive heart failure (21.6%), history of CVA (16.7%), history of coronary artery disease (36.3%), and chronic kidney disease (22.5%). 36.3% of patients were taking aspirin, 22.6% plavix, and 4.9% coumadin. 74.5% of patients presented with overt GB. Median peak troponin was 54.1 and the median of the lowest hemoglobin was 7 g/dl. 62 patients had endoscopic procedures (52 upper endoscopies and 18 colonoscopies). Endoscopy revealed 16.7% gastric ulcers, 6.7% duodenal ulcers, 3.3% Mallory Weiss tears, 16.7% esophagitis, 40% gastritis, 11.7% duodenitis, 1.7% gastric cancer, 1.7% varical bleed and 1.7% Dieulafoy lesion were found. Ulcers were described as: clean base (62.5%), adherent clot (20%), viable vessel (6.3%), active bleeding (6.2%). 7 repeat endoscopies and 2 surgeries were required for rebleeding. The majority lesions found at colonoscopy included internal hemorrhoids, rectal ulcers, vascular malformations, diverticula. There were 19 cardiac catheterizations performed. Occult GB was associated with significantly less mortality than overt GB (3.8% versus 19.7%, p<0.05). Although our patient population had a significant amount of chronic kidney disease, this did not affect the mortality rate (p=0.28).

**Conclusion:** Inner city, African Americans presenting with acute MI and GB have a significant amount of arterial hypertension and chronic kidney disease, but a surprising low rate of varical bleeding. The type of GB, rather than co-existing conditions significantly affected patient mortality. The endoscopic findings were consistent with the trend recorded in the literature showing a decrease in the prevalence of peptic ulcer disease.

**P1104**

MELANOPHAGES IN THE RECTUM, NOT MELANOMA!

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**Purpose:** Melanocytes are known to populate the anal squamous mucosa and infrequently the mucosa above the dentate line. These cells represent the precursor lesions of anal melanomas. Melanomas are more abundant in the African American population, however, anal melanomas are more frequent in Caucasians. Of interest, only one case of benign melanocytic lesion has been reported in this area (a nevus within an external hemorrhoid) (Am J Gastroenterol 102:2668). Herein we describe a flat pigmented lesion of the rectum composed of nests of melanocytes.

**Methods:** A 40 year old African American female underwent colonoscopy for abdominal pain. The colon mucosa appeared normal and in particular there was no evidence of melanosis coli. Upon retroflexion in the rectum, a 10 x 4 mm flat area of dark pigmentation was noted just proximal to the dentate line. The lesion was removed by cold electrocautery biopsy.

**Results:** Histological examination revealed numerous melanin filled macrophages (melanophages) with no evidence of melanoma. Further staining of the specimen did not demonstrate iron or lipofuscin deposition which further excludes melanosis coli.

**Conclusion:** Melanomas have been reported to involve the anorectal area. They are usually pigmented and can masquerade as thrombosed hemorrhoids. These tumors grow insidiously and are clinically aggressive with early metastases. Unfortunately, precursor melanocytic lesions are rare. In this case, a dark pigmented macule was removed. Although this was proved to be benign, any suspicious pigmented lesion in the rectum must be biopsied to exclude more sinister melanoma.
RECTAL ENDOSCOPIC ULTRASOUND TO GUIDE THE COMBINED MEDICAL AND SURGICAL MANAGEMENT OF PEDIATRIC PERIANAL CD: A SINGLE CENTER EXPERIENCE

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S. E. Morrow, MD, A. J. Herlinger, MD, R. L. Muldoon, MD, P. E. Wise, MD, D. Polk, MD
D. A. Schwartz, MD

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Purpose: Perianal fistulas are a debilitating manifestation of Crohn’s disease (CD) in the pediatric population. Rectal endoscopic ultrasound (REUS) accurately defines perianal lesions and improves outcomes when used to guide management. It is not known whether EUS can be used effectively in pediatric patients with perianal CD (PCD). The aims of this study were 1) to describe our pediatric experience using EUS to evaluate and guide management of PCD, and 2) to determine whether using EUS to guide surgical therapy improves outcomes.

Methods: We conducted a retrospective study of two cohorts: pediatric subjects with CD who had a rectal EUS between 2002 and 2007 ( Aim 1) and pediatric patients who had a seton placed between 2002 and 2007 ( Aim 2).

Results: For Aim 1, we identified 25 children (mean age 14.2 ± 4.5 years, 56% male) who underwent 42 EUS procedures (60% had 1 EUS). 28 EUS were performed on subjects with suspected PCD, identifying fistulas or abscesses in 19. Setons were placed in 58% (10/17) of those with complex fistulizing disease versus 9% (1/11) of those with simple fistulas or no lesions (p=0.016). 14 EUS were performed to monitor healing after seton placement, and 7% (30/430) demonstrated persistent post-seton infllts with or without tract. The seton was more likely to be left in place if EUS revealed persistent inflammation (86% vs 0%, p<0.001), and the patient was more likely to have a biologic initiated or changed (57% vs 0%, p<0.001). For Aim 2, we identified 14 subjects who underwent seton placement. 10 subjects had at least one follow-up EUS while the seton was in place (EUS-directed care) and 4 received standard care. Time from seton removal to recurrence was longer in the EUS-directed care group (Figure 1); however, we were not powered to test for significance. 5 subjects (50%) in the EUS-directed care group initiated or changed biologics versus zero in the standard care group (p=0.2).

Conclusion: At our institution, EUS helped determine which children were referred for seton placement and may have influenced the decision to start biologic therapy. While there is a suggestion of benefit in our cohort, larger prospective studies are needed to determine if EUS-directed management of PCD improves outcomes in pediatric patients with PCD.

Figure 1. Kaplan-Meier plot of time from seton removal without recurrence.

COMPARISON OF RADIOLOGIC STUDIES IN PEDIATRIC PATIENTS WITH CROHN DISEASE AND UCERATIVE COLITIS

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T. Korvay, MD
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Purpose: The prevalence of the disease among the siblings, it is needed to find CD in them as soon as possible. The families with children on the follow-up of CD can be useful. The existence of CD can lead to the second attacks. The most serious problem is the development of malignancies.

Methods: In the present study, we aimed to compare the prevalence of the disease among the siblings, it is needed to find CD in them as soon as possible. The families with children on the follow-up of CD can be useful. The existence of CD can lead to the second attacks. The most serious problem is the development of malignancies.

Results: Fifty patients were identified: 29 were identified as CD and 16 as UC. The mean age at diagnosis was 15.3 yo (range 0.1-18 yr). The mean duration of disease was 3.9 yr. Factors associated with significant CT scan and SEB utilization among CD pts include: UC ileal disease (OR: 6.2; 2.3-15.2) and inflx/am immuno/modulators use (3.9; 1.9-7.7).

Conclusion: The present study highlights the unique challenges of managing patients with inflammatory bowel disease (IBD): radiologic studies enable providers to associate symptoms with disease and can help guide therapy. However, imaging studies expose patients to varying levels of ionizing radiation and increase the long term risk for malignancy. This is of particular concern in pediatrics: children will both have a longer course and may require more imaging studies. The cumulative risks of radiation exposure have import throughout their adult lives. Our results suggest that children with CD’s disease undergo more dose radiation studies than children with UC, and those with UC disease or on immunologic therapy have highest exposure.

LANGERHANS CELL HISTIOCYTOSIS PRESENTING AS PROTEIN LOSING ENTEROPATHY AND MASQUERADING AS CROHN’S DISEASE

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Purpose: Langerhans Cell Histiocytosis (LCH) is a rare disease with annual paediatric incidence of 2.5 cases per million per year. We report a case of LCH with gastrointestinal involvement.

Methods: Retrospective analysis was done of a case presenting with bloody diarrhoea, vomit- ing and failure to thrive, diagnosed to be LCH and successfully treated.

Results: A 10 month old female child, presented with recurrent loose motions, vomiting (non bilious) and failure to thrive for 3 months, and fever with pedal edema for 1 month. There was no history of rash, jaundice, dermatitis, ear infection joint swelling or contact with Koch’s. On physical examination child was mala-nourished (weight 8 Kg i.e.<5 th percentile, height 83 cm i.e.25th percentile), had pallor, pedal edema and hepatoplenomegaly (liver 6 cm and spleen 2 cm below costal margin). Investigations revealed anaemia (Hb-8.7 gm/dl), deranged LFT (SGOT 57 IU/dl, SGPT 48 IU/dl, S.protein/albumin 3.1/1.5, triglycerides 909 mg/dl).Stool microscopy showed 25-30 pus cells, with mucus and RBCs. Mantoux test, Elisa for tuberculosis, immunoglobulin profile, HIV status, ANA, p-ANCA, were negative. Bone scan, chest x ray and skeletal survey were also negative. CT scan abdomen had hepatomegaly with small bowel edema. Liver biopsy showed marked steatosis. Repeated endoscopy showed duodenal ulcer and oedematous, friable colonic mucosa. Biopsy was suggestive of duodenal ulcers, chronic cystitis with non-specific inflammation infiltration, no inclusions granuloma /AFB. Barium meal follow through showed duodenal ulcer and segmental jejunal dilatations. Antischistosomia anti bodies (ASCA) (IgA and IgG) were positive. Thus in view of clinical symptoms, ASCA positiv- ity (98% specificity) and endoscopic findings a diagnosis of CD was made. Patient showed im- provement after onset of mesalamine and Ivu mesalpinoidine therapy. However persistent hepatoplenomegaly was unexplainable and suspicious and third biopsy of duodenal ulcer and colonic mucosa unveiled the mystery. Presence of crypts, inflammatory extrudes and histio- cytes (positive staining for S100 protein, CV 68 negative) was diagnostic of LCH. A bone mar- row biopsy done thereafter showed infiltration by histiocytes. Patient responded to chemother-
apy (LCH – II protocol for 1 year) and repeat endoscopy and bone marrow after chemotherapy was unremarkable. She’s doing well presently on a follow up of 12 months post chemotherapy.

Conclusion: Thus though the child was diagnosed as CD and even responded to treatment, a high index of suspicion due to persistent hepatosplenomegaly was the key factor leading to diagnosis of LCH with rare presentation with GIT symptoms.

P1109
A SINGLE CENTRE EXPERIENCE OF 23 PEDIATRIC LIVING DONOR LIVER TRANSPLANTATIONS FROM INDIA

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Purpose: Living donor liver transplantation (LDLT) has become an established procedure for children with acute liver failure, some metabolic diseases and end stage liver disease. The aim of this study is to present our experience of pediatric LDLT.

Methods: Twenty three children: 15 males, 8 females with a median age of 8 years (range 1 months to 16 years) underwent LDLT between September 2004 to June 2008. The indications for LDLT were acute liver failure 5 (Wilson’s disease 2, Hepatitis – A, 2, Idiopathic 1), chronic liver disease 16, (Wilson’s disease 2, progressive familial intrahepatic cholestasis 2, biliary atresia 6, cryptogenic cirrhosis 2, auto immune hepatitis-2) and haemangioendothelioma 1. 2 patients had primary hyperoxaluria type-1 with end stage renal disease and under went a combined liver and kidney transplant. The donor were mother 9, father 4, grand mother 4, uncle 2, cousin 2, grand father 1 and aunt 1. Twelve received left lobe, 7 received left lateral lobe and 3 received right lobe. Biliary reconstruction was done using duct to duct anastomosis in 13 and Roux-en-y hepaticojejunostomy in 10. All the patients were managed in a dedicated liver intensive care unit by pediatric hepatologists, pediatric intensivists and transplant surgeons. Post transplant immunosuppression was with a triple drug regimen of tacrolimus, mycophenolate mofetil and steroids.

Results: There was no donor or recipient mortality at a median follow up of 14 months (range 1-46 months) . Complications in immediate post transplant period were lung collapse / effusion in 2, pyloric stenosis 1, sepsis 2, multi organ failure 1, wound infection 1, delayed gastric emptying 1, sinus tract 1 and cutaneous wound 1. Post operative cholestasis was seen in 1 patient. Two patients were reexplored due to biloma 1 and bile leak 1. Three patients had bile leak were reexplored on day 3 in 2 day1 in 1. Duct-duct anastomosis was converted to Roux-en-Y, though the leak was from cut surface in 2 and caudate lobe duct in 1. Most of the recipients are doing fine at a median follow up of 14 months (range 1-46 months) . Complications in long term follow up include hepatitis C virus infection with cirrhosis 1, chronic supplicative otitis media with mastoiditis necessitating mastoidectomy 1, small bowel adhesions 1, small bowel obstruction 3, ventriculoperitoneal shunt 1, splenomegaly 1, hemangiomas 1 and cutaneous wound 1.

Conclusion: Pediatric liver transplantation is an established procedure with a promising outcome. Continuous education and dedicated pre and post transplant care is a successful pediatric LDLT programme has been established in India with 100% survival to date.

P1111
PREVALENCE OF CELIAC DISEASE AMONG SIBLINGS OF CELIAC PATIENTS

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Purpose: Celiac disease (CD) is a problem which leads to malabsorption of nutrients, many subsequent complications and malnutrition. There is clear evidence of family tendency toward CD, and 5-10% of the first-degree relatives (parents, children, and siblings) of diagnosed patients may develop CD. The aim of this study was to determine the prevalence of CD among siblings of previously diagnosed patients.

Methods: We reviewed all the files of confirmed celiac patients which are kept in the Pediatric Gastroenterology ward of Ahvaz Children’s Hospital, Ahvaz University of Medical Sciences in South-western of IRAN and then identified their siblings. We measured anti-tissue transglutaminase antibodies (IgA, IgG) in siblings, and took a duodenal biopsy of them for pathologic changes of CD. Serum samples were tested for IgA & IgG, anti-tTG by enzyme-linked immunosorbent assay (ELISA), and the biopsy results were reviewed using the Marsh classification system. The confirmation of CD was made by biopsy results.

Results: During 7 years (1999-2006) we had 42 confirmed CD-patients. We could found 39 sibs of these patients and anti-tTG test performed in all of them. Small-bowel biopsy obtained in 30 siblings. 16 siblings had clinical findings of CD such as abdominal pain, fatigue, growth retardation and chronic diarrhea. The results of celiac screening in siblings of the patients were as follow: two of the siblings were found to have positive serology and biopsy results, 5 had high tTG levels without positive biopsy findings. The results showed that 6.6% of the studied group had celiac disease, which is the same as previous studies.

Conclusion: Celiac disease is a disease which it’s early diagnosis could prevent serious complications such as growth retardation, short stature, chronic diarrhea and malignancy. Because of the high prevalence of the disease among the siblings, it is needed to find CD in them as soon as possible.
**P1112**

**ASSESSING VARIABILITY IN SURVEILLANCE RECOMMENDATIONS FOR FAIR ADEQUATE BOWEL PREPARATIONS**

S. R. Kangil, MD, A. Harries, MD, A. Lolas, MD, C. R. Tombazzi, MD. Gastroenterology and Hepatology, University of Tennessee, Memphis, TN.

**Purpose:** The Clinical Outcomes Research Initiative (CORI) system defines a fair adequate bowel preparation (prep) as one having “enough feces to liquid to prevent a completely reliable exam”. Prior studies have defined an acceptable prep quality as one that is considered excellent, good, fair, or adequate. In addition, firm guidelines do not exist regarding appropriate surveillance intervals after fair adequate prep. The aim of this study is to determine if fair adequate preps are truly acceptable and if there is a consensus among endoscopists regarding recommended surveillance intervals for these preps.

**Methods:** All colonoscopies performed at the Memphis Veterans Affairs Medical Center from January 1, 2006 through April 30, 2008 were retrospectively evaluated. Only outpatient screening colonoscopies were included in the review. Exclusion criteria included prior colonoscopy, inpatient status, nursing home residence, incomplete endoscopy report, and any colonoscopy performed for indications other than routine colorectal cancer screening (acute intestinal bleeding, iron deficiency, abdominal pain, constipation, diarrhea, and abnormal imaging findings). Bowel preparation adequacy was subjectively defined by the endoscopy at the time of the procedure as excellent, good, fair, adequate, fair exam compromised, or poor. All patient data were obtained from the CORI and the Computerized Patient Record System (CPRS) databases. Chi-squared tests were performed to determine statistical significance.

**Results:** A total of 623 patients met all selection criteria and were included in the study. Of these, 79% had a fair adequate prep. No significant difference was seen in the percentage of patients having fair adequate preps with adenomas (30%) as compared to patients with good (25%) and excellent (16%) preps. Interestingly, no clear consensus was seen in terms of recommended follow for fair adequate preps with or without adenomas (see Table).

**Conclusion:** A significant number of patients undergoing colonoscopy have fair adequate preps. These should be considered acceptable since there is no difference in the percentage of patients having fair adequate preps that detect adenomas as compared to patients with good and excellent prep. However, a consensus does not exist regarding recommended surveillance intervals for fair preps. This lack of consensus may be due to the fact that a fair adequate prep is defined as not being “a completely reliable exam”. Therefore, formal guidelines need to be developed for surveillance intervals in patients with fair adequate bowel preparations.

**Recommended Follow Up Intervals for Fair Adequate Bowel Preparations**

<table>
<thead>
<tr>
<th>#adenomas(#patients)</th>
<th>51 year (%)</th>
<th>1 year (%)</th>
<th>5 years (%)</th>
<th>10 years (%)</th>
<th>Not specified</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 (127)</td>
<td>10 (8%)</td>
<td>17 (15%)</td>
<td>43 (35%)</td>
<td>35 (28%)</td>
<td>20 (16%)</td>
</tr>
<tr>
<td>1-2 (30)</td>
<td>13 (18%)</td>
<td>9 (30%)</td>
<td>16 (55%)</td>
<td>7 (27%)</td>
<td>2 (7%)</td>
</tr>
<tr>
<td>&gt;2 or 2 cm (26)</td>
<td>10 (42%)</td>
<td>11 (46%)</td>
<td>3 (12%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

**Significant predictors of use of colonoscopy in female Medicare beneficiaries**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>OR (CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>65-69 yrs</td>
<td>1.00</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>70-74 yrs</td>
<td>1.00(0.85 - 1.24)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>75-79 yrs</td>
<td>0.83(0.69 - 1.01)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>&gt;80 yrs</td>
<td>0.54(0.44 - 0.67)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1.00</td>
<td>0.05</td>
</tr>
<tr>
<td>Black</td>
<td>0.97(0.92 - 1.00)</td>
<td>0.66(0.47 - 0.93)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicare income &lt;$20,000</td>
<td>0.78</td>
<td>0.06(0.88)</td>
</tr>
<tr>
<td>Age of office visits (continuous variable)</td>
<td>1.03</td>
<td>1.02(1.04)</td>
</tr>
<tr>
<td>Flu vaccine received last yr</td>
<td>1.23</td>
<td>1.55(1.04 - 1.25)</td>
</tr>
<tr>
<td>Mannmrot received last yr</td>
<td>1.76</td>
<td>1.55(2.05)</td>
</tr>
<tr>
<td>Current tobacco use</td>
<td>0.75</td>
<td>0.60(0.94)</td>
</tr>
</tbody>
</table>

**P1113**

**LOW EFFECTIVENESS OF CT COLONOSCOPY FOR DETECTION OF COLON POLYS AFTER FAILED COLONOSCOPY**

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**Purpose:** CT colonoscopy is approved as an alternative method of screening for colon polyps and is used frequently as a salvage method after an incomplete colonoscopy. The effectiveness of this approach was investigated. We evaluated the utility of CT colonoscopy (CTC) as a salvage screening method after failed colonoscopy at a tertiary care center with easy access to radiology.

**Methods:** Data from all imaging studies ordered following colonoscopy was collected from June to October 2007. Median follow up period was 310 days. Results of the imaging studies, outcome, effect on clinical care and alternative findings were retrieved and followed by data analysis.

**Results:** From a total of 1628 colonoscopy reports, 50 patients had imaging studies requested after the ecwm was not reached (3% of total), 46 after their first and 4 after their second colonoscopy. Technical difficulty in reaching the cecum (78%) was the most common reason for requesting an imaging study. Proximal colon was reached in 82.3% of failed colonoscopies that led to a request for CT colonoscopy (CTC). CTC was ordered in 29 patients; in 21 a combination of abdominal CT, barium enema and MR enterography comprised the remaining requests. Of the total procedures (50) requested, 14 (28%) were not performed, including 41% of requested CTC. Imaging studies in 36 patients revealed a total of 37 luminal and 42 non-luminal findings. No polyps were reported by CTC. Only one colon polyp was identified by MRI that on repeat colonoscopy was removed and found to be inflammatory. In multivariate logistic regression analysis, while controlling for other variables, female gender (OR=3.04, p=0.0064), and indication for colonoscopy (bleeding vs screening) (OR=2.73, p=0.025) were independent predictive factors for a request for an imaging study after failed colonoscopy.

**Conclusion:** When CTC was requested following an incomplete colonoscopy, it was often not performed. Following a failed colonoscopy, the yield of CTC or other imaging studies in detecting neoplasia was poor. Large population based studies would be necessary to evaluate the effectiveness of this approach in the general population. The high rate of unperformed CTC and its poor yield question the value of this procedure in the setting of an incomplete colonoscopy.

**P1114**

**PREDICTORS OF COLONOSCOPY USE AMONG FEMALE MEDICARE BENEFICIARIES**

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**Purpose:** Despite the fact that effective screening tests for colorectal cancer exist, when compared with breast and cervical cancer test screening rates colorectal cancer test screening rates are much lower among women. Especially, colonoscopy rates for colon cancer screening are lower in women compared to men. Examining the predictors of lower endoscopy use for cancer screening among female Medicare beneficiaries yield information useful to assess and improve colon cancer preventive care among women.

**Methods:** We used Medicare Current Beneficiary Survey 2003(MCBS) data to identify demographic, socioeconomic, health and behavioral factors that predict use of colonoscopy in the last 5 yrs among female Medicare beneficiaries 65 years and older. The MCBS is a survey of a nationally representative sample of Medicare beneficiaries, which provides comprehensive information of their demographies, socioeconomic status, behavioral characteristics, health status & physical function and health services. Potential predictor variables known to predict colonoscopy use, identified from literature review were fitted to the multivariable logistic regression model.

**Results:** The predictors positively associated with colonoscopy use were higher frequency of office visits in the current year, receipt of other preventive care which include influenza vaccine in the last year, pneumococcal vaccine ever, receipt of mammogram in the last year. The factors which were significantly negatively associated with colonoscopy use were older age, race, low education, low income and and current tobacco use. Race, Marital status, self reported health status, HMO enrollment, receipt of Pap were not associated with use of colonoscopy.

**Conclusion:** Predictors tailored to target the subset of women with low screening rates are needed to improve the colon cancer screening rates in Medicare female beneficiaries.

**P1115**

**COLONIC MICROBIOTA FOLATE PRODUCTION: ANOTHER PIECE OF THE FOLATE-COLON CANCER PUZZLE?**


**Purpose:** There is substantial experimental evidence that folate plays a pivotal role in the prevention and propagation of the neoplastic process through its effects on gene methylation and DNA synthesis and replication. It is therefore difficult to understand why studies have observed that a moderately low dietary folate intake is associated with low colon cancer risk in some populations. A possible explanation may involve the ability of the microbiota to synthesize folate as mucosal folate transporter mechanisms have recently been identified in the colon. To investigate this, we compared the folate content of high and low risk populations in the gut.

**Methods:** Colonoscopy and duodenal biopsies were collected from a high-risk and low-risk patient population. Folate levels were assessed using high performance liquid chromatography. Folate concentrations in the microfluidic lumen of the gut were compared with folate concentrations in the pancreatic juice and other potential risk factors (RF) were adjusted for. Serum folate levels were measured using an automated colorimetric assay. Folate levels in the microfluidic lumen and serum folate levels were compared using a Pearson correlation coefficient analysis.

**Results:** Folate levels in the microfluidic lumen of the gut were significantly lower in the high-risk patients compared to the low-risk patients. Serum folate levels were also significantly lower in the high-risk patients compared to the low-risk patients. The apparent paradox of low colon cancer risk in dietary folate deficient populations may be explained by the rich source of topical folate synthesized by the microbiota.

**Conclusion:** This study supports the hypothesis that a low dietary folate intake is associated with a low colon cancer risk and that the microbiota may play a role in this process. Future studies should investigate the role of the microbiota in colon cancer risk and the potential for microbiota modulation to reduce colon cancer risk.
Conclusion: The apparent paradox of low colon cancer risk in dietary folate deficient populations may be explained by the rich source of topical folate synthesized by the microbiota.

Africans
African Americans

Dietary folate (mg)
201 (23)
401 (47)**

Colonic folate (mg)
623 (95)
699 (131)

RBC folate (mg/dl)
181 (20)
336 (26)***

Group means (SE). Statistics: ** p<0.001, *** p<0.001 vs. Native Africans unpaired Student’s t test

P1116
RISK FOR COLONIC ADENOMA OR DYSPLASIA IS NOT INCREASED IN PATIENTS WITH MICROSCOPIC COLITIS
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Purpose: Microscopic colitis is considered as a form of inflammatory bowel disease. Surveillance colonoscopy is indicated in patients with ulcerative colitis and Crohn’s colitis which are associated with increased risk for colon neoplasm. The risk for colonic adenoma or dysplasia in patients with microscopic colitis has not been investigated. Whether the patients should have routine screening colonoscopy or surveillance colonoscopy is not known. The aims of the study were to compare the prevalence of colonic adenoma or dysplasia between the patients with microscopic colitis and those with an average risk and to assess risk factors associated with adenoma.

Methods: Patients charts with a histopathological diagnosis of lymphocytic or collagenous colitis from the pathology database between 1993 and 2004 (N = 314) were reviewed. Consecutive patients with an average risk for colon cancer who underwent screening colonoscopy (N = 983) from 1999 to 2004 served as controls, with a 1:3 ratio. Patients with ulcerative colitis or Crohn’s disease or patients with an increased risk for colon adenoma or cancer (such as personal or family history of colon adenoma or cancer, presence of personal and family history of HNPPC-associated cancer) were excluded. Medical records including endoscopy and pathology reports were reviewed and a total of 23 demographic, clinical, endoscopic, and histopathological variables were collected. Outcome measurements were any colonic neoplasm or dysplasia or adenoma. Univariate and multivariable analyses were performed.

Results: In both univariable and multivariable (adjusted for age, gender, and use of aspirin, NSAIDs, and mesalamines) analyses, the prevalence of microscopic colitis was not found to be associated with an increased risk for colon adenoma/dysplasia or advanced adenoma (Table). In multivariable analyses, older age was shown to be associated with an increased risk for colon adenoma/dysplasia, while female gender had a lower risk for colon adenoma.

Conclusion: Conclusion: Patients with microscopic colitis have no more than average risk for dysplasia or adenoma of colon. Routine screening colonoscopy may suffice for this patient population. Age and gender were independent factors associated with colon adenoma.

Association between Microscopic Colitis or Other Factors and Colon Adenoma/Dysplasia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio (95% CI)</th>
<th>P-value</th>
<th>Odds Ratio (95% CI)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microscopic Colitis Group*</td>
<td>1.25 (0.83 - 1.87)</td>
<td>0.28</td>
<td>0.62 (0.24 - 1.57)</td>
<td>0.31</td>
</tr>
<tr>
<td>Age**</td>
<td>1.17 (1.10 - 1.25)</td>
<td>&lt;0.001</td>
<td>1.29 (1.14 - 1.47)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female</td>
<td>0.65 (0.48 - 0.88)</td>
<td>0.005</td>
<td>0.05 (0.24 - 0.78)</td>
<td>0.005</td>
</tr>
<tr>
<td>Aspirin Use</td>
<td>1.27 (0.95 - 1.71)</td>
<td>0.11</td>
<td>0.97 (0.56 - 1.67)</td>
<td>0.90</td>
</tr>
<tr>
<td>NSAID Use</td>
<td>0.80 (0.52 - 1.22)</td>
<td>0.30</td>
<td>1.34 (0.66 - 2.76)</td>
<td>0.42</td>
</tr>
<tr>
<td>Mesalamine Use</td>
<td>0.95 (0.64 - 1.46)</td>
<td>0.90</td>
<td>2.40 (0.57 - 10.1)</td>
<td>0.23</td>
</tr>
</tbody>
</table>

* Parameter estimate and odds ratio relative to control group.
** Parameter estimate and odds ratio relative to a 5 year difference.

P1117
POOR BOWEL PREPARATION IN COLONOSCOPY IS A COSTLY PROBLEM: PROSPECTIVE RANDOMIZED STUDY OF URBAN INPATIENT POPULATION
S. Daught, MD, S. Curtis, MD, J. K. Ho, MD, A. S. Ahmad, MD, J. C. Reynolds, MD.
1. Gastroenterology, Drexel University College of Medicine, Philadelphia, PA; 2. Gastroenterology, Crozer Chester Medical Center, Upland, PA.

Purpose: Poor colonic preparation (prep) is a major limitation on the quality of colonoscopy (colon). Inpatient (IP) status has previously been shown to be a significant predictor of prep poor. No prospective trials evaluated the effect of education (edu) on IP prep outcomes. The aims of the study are: 1. To prospectively identify predictors of poor prep in IP’s. 2. To determine if enhanced patient (pt) edu can significantly improve the quality of prep in IP’s undergoing colonoscopy.

Methods: The study was done as a single-blinded, prospective, randomized, concealed allocation, multicenter study. IP’s scheduled for colon in 2 urban hospitals were included. Factors previously shown to influence prep outcome in outpts and other potential risk factors (RF) were documented. Pt prep washing with prep ingestion was obtained from nursing staff blinded to the pt allocation. Endoscopists blinded to the randomization rated the prep using a visual analog scale ranging from 0-4 (0=poor, 4=excellent). Pts were randomized to one of two groups. The edu group received a 15 min verbal session by a health care worker and a pictorial brochure in addition to the standard instructions by the registered nurse (RN). Standard of care (SOC) group received instructions from the RN alone.

Results: Of the 73 pts enrolled, 68 were included in the study, 5 were excluded as the procedure was not done the next day as planned. Of the 68 included, 38 in the edu group and 30 in the SOC group. The mean age of all pt’s was 60.2 years, 45.6% were women, 54.4% were non-white and 22% had less than high school edu. Poor prep was seen in 23.5%. In 47.1% the prep was inadequate for screening purposes. Due to prep inadequacy 11.8% of the pt’s had repeat colonoscopy, extending hospital stay. Consuming >75% of the prep (p=0.009) and prep given before 3:00 pm (p=0.01) were the only significant predictors of adequate bowel prep. Other RF including demographics, edu level, current illness, ability to ambulate, presence/absence of colonic symptoms on admission, family history of colon cancer/polyps and prep type were similar in good and poor prep pts. Poor prep was seen in 25.7% of pts in the edu group (<2 score) compared to 23.3% in the SOC group (p=0.6).

Conclusion: 1. Poor bowel prep in IP’s remains a costly problem in US hospitals. 2. Inadequate prep resulted in a prolonged hospital stay in 11.8% of pts. 3. Pre-procedural edu alone does not appear to impact the quality of the bowel prep in IP’s. Newer strategies need to be developed that place emphasis on increasing compliance and early administration of the bowel prep in IP’s.

P1118
COMPLIANCE OF FOLLOW-UP COLONOSCOPY IN OLDER ADULTS
A. Stephenson-McIntur, DO, MIRA, J. Lin, DO, MS, A. Chopra, MD, S. Pomerantz, PhD.
Gastroenterology, University of Medicine and Dentistry of New Jersey - School of Osteopathic Medicine, Stratford, NJ.

Purpose: Much emphasis has been placed on initial screening colonoscopy at the age of 50. Since the risk of colon cancer continues to increase after the age of 50, it is important for people to return for follow-up colonoscopies, particularly those who have had a normal finding on an initial screening colonoscopy. The objective of this study is to identify whether individuals, aged 60 or older, who have had normal initial screening colonoscopies, are returning for follow-up colonoscopies, and if they are not returning, what barriers and concerns limit their return for a follow-up colonoscopy. Also, the relationship between compliance with other health-related behaviors such as mammograms and baseline PSA levels is explored.

Methods: Subjects were people 60 and older who attended community-based gatherings for seniors at churches, senior clubs/meetings and senior centers. A 25-item survey was constructed to focus on compliance and awareness of, and behavior related to colonoscopies for colon cancer screening and follow-up, as well as other health screening tests such as mammograms, PSA, dental, and eye exams.

Results: 174 people participated in the study. Their mean age was 74 (SD 7.5). 80% were female and 20% were male. Of the 174, 51% were White, 39% were Black, and 10% were “other” ethnicity. Out of the sample, 75.1% had an initial screening colonoscopy. Of those subjects that had an initial screening colonoscopy and answered the question (N=123), 63.4% reported having normal results. Due to poor prep, 11.8% of the pt’s had repeat colonoscopy, extending hospital stay. Consuming >75% of the prep (p=0.009) and prep given before 3:00 pm (p=0.01) were the only significant predictors of adequate bowel prep. Other RF including demographics, edu level, current illness, ability to ambulate, presence/absence of colonic symptoms on admission, family history of colon cancer/polyps and prep type were similar in good and poor prep pts. Poor prep was seen in 25.7% of pts in the edu group (<2 score) compared to 23.3% in the SOC group (p=0.6).

Conclusion: Many older adults are getting initial screening colonoscopies. Of those with normal findings on the initial screening colonoscopy, a significant minority are not going back for follow-up colonoscopies, which places them at a risk for developing colon cancer. For those who have not had an initial screening colonoscopy or are not returning for follow-up colonoscopy, further education and/or encouragement by physicians may have an important role. People who are getting colonoscopies appear to be compliant with other health screening tests.
RISK OF COLORECTAL CANCER (CRC) IN PERSONS WITH A FAMILY HISTORY (FHx) OF ADENOMATOUS POLYPS: A SYSTEMATIC REVIEW

T E Imperiale, MD, D F Ramondi, MD, J Medicine, Indiana University, Indianapolis, IN; 2 Medicine, University of North Carolina, Chapel Hill, NC.

Purpose: The risk of colorectal cancer (CRC) in first-degree relatives (FDRs) of persons with adenomatous polyps (APs) is not clearly defined.

Methods: We performed a systematic review of the published literature by identifying all studies that purported to examine the risk of CRC in persons with a FHx of APs. We searched MEDLINE and EMBASE for studies on this topic, and cross-referenced retrieved reports. We abstracted descriptive and quantitative information from each study and compared each with the ideal study on this topic.

Results: From among 13 relevant studies, we identified two types of case-control studies. Ten studies identified cases with APs, controls without APs and compared the frequency of CRC in FDRs between the two groups; one study used spouses of the cases as a control group. We excluded these 11 studies because they addressed a different study question: “Does having a FDR with CRC increase the risk for APs?” The remaining 2 studies (Table) defined cases as persons having a FDR with APs, controls as persons either having no FDR with APs or with minor symptoms, and compared the subsequent presence of CRC in cases and controls themselves, a study design more consistent with the ideal study. These two studies suggest that the risk of persons having a FDR with any AP is greater than in persons having no FDR with APs (2.31% vs 0.53%; RR=4.36; CI, 1.60-10.2), and that persons who have a FDR with a large (≥1 cm) AP are at greater risk for the combined outcome of CRC and APs ≥ 1 cm than persons with minor symptoms (8.4% vs 4.2%; OR=2.77; CI, 1.01-5.09). However, both studies have limitations that affect validity and/or generalizability of the result.

Conclusion: Most of the studies on FHx of AP and risk of CRC use a case study design that does not directly address the risk of CRC in persons who have a FDR with APs. The current, relevant literature is sparse but suggests an increased risk, though the studies have methodological limitations. Subsequent research is required that is both properly designed and considers subgroups of APs as well as factors that may modify risk, such as age, sex, and polyp location.

1st Author, yr  Design Cases Controls Exposure Results Limitations
Nakamura, 2000 61.39 subjects completed a questionnaire about FHx before having sigmoidoscopy (CY) 641 subjects with a FDR and no APs 5491 subjects with no FHx with APs CRC present in 15 (2.3%) cases, 29 (0.5%) controls -self-completed, non-verified responses -Japanese subjects
Cottel, 2007 CY findings in FDRs of patients with a large AP and controls with minor symptoms 168 FDRs 307 subjects with minor symptoms CRC and APs CRC and large APs present in 14 (8.0%) cases, 13 (4.2%) controls -no FDRs had a FHx of CRC -neither CRC nor APs alone was greater among cases

COLORECTAL CANCER SCREENING PROGRAM IN AN URBAN UNIVERSITY HOSPITAL

H M Licha, MD, R Fisher, MD, J Richter, MD, M Medicine, Temple University Hospital, Philadelphia, PA.

Purpose: Colorectal cancer is a leading cause of cancer. Yet, screening colonoscopy is underutilized, especially in minority and lower socio-economic populations. This report describes the experience of an open access screening colonoscopy program in an urban university hospital serving primarily an African American and Hispanic population.

Methods: Data were collected for the first 15 months of the program beginning December 2006. Patients were referred from the family medicine and internal medicine practices at the university hospital, the residents’ medical clinic and from outside medical practices affiliated with the medical center. Referrals were sent to the GI section. A bilingual nurse facilitator initiated contact with the patient by phone. If necessary, three attempts were made to contact the patient and messages were left. A screening questionnaire was administered by phone and the purpose and benefits of colonoscopy and the prep were discussed with the patient. A reminder phone call two days prior to the procedure was made. Results: 450 patients were referred for screening colonoscopy. 176 patients (39%) came for the colonoscopy 77 patients (16%) undergoing colonoscopy had polyphs and 56 patients (32%) had advanced polyphs, ie. adenomatous polyphs greater than 1 cm, tubular adenomas with high grade dysplasia or villous adenomas. Of the 274 patients who did not have colonoscopy, 262 could not be contacted, 10 were contacted but refused the procedure and 2 were scheduled but did not come. There was a statistically significant difference between the universe based internal medicine practice and all other referral sources 56% of patients referred from this practice had the exam compared to 42% referred from practices outside the institution (p=0.04), 29% from the university family medicine practice (p=0.009) and 21% from the residents’ medical clinic (p=0.001). There was no statistical difference in age or gender in those who came for the exam. Data regarding patient satisfaction are limited and were positive in a small sample of the screened patients.

Conclusion: A high prevalence of significant lesions was detected by screening colonoscopy in our lower socio-economic population. The large number of referred patients not undergoing colonoscopy is indicative of the many barriers to colorectal cancer screening in an inner city population. It is notable that patients from different referral sources accepted screening colonoscopy when offered to them compared to those who rejected colonoscopy as physicians related or patient-related. Future studies should identify these barriers and develop methods to improve use of open access screening programs.

PERCEPTION AND PREFERENCE OF COLONOSCOPY FOR COLORECTAL CANCER SCREENING IN MEDICALLY UNDERSERVED WEST TEXAS AREA

R Yen, MD, A Mrevoud, MD, A Rangi, MD, Internal Medicine/Gastroenterology, Texas Tech University Health Science Center, Lubbock, TX; 2 Internal Medicine, Texas Tech University Health Science Center, Lubbock, TX; 3 School of Nursing, Texas Tech University Health Science Center, Lubbock, TX.

Purpose: To determine factors that possibly prevent patients from undergoing screening colonoscopy in medically underserved area of West Texas.

Methods: A written questionnaire concerning colon cancer and screening colonoscopy was distributed to adult patients at Larry Combs Wellness Center, an outpatient clinic located in a medically underserved area of Lubbock, Texas.

Results: A total of 432 subjects completed the questionnaire from April to May 2008. Patient characteristics included age ≥ 50 in 45%, female gender 67%, Hispanic 47%, Caucasian 38%, African-American 10%, household income < $10,000/year in 52%, unemployed 59%, lack of medical insurance in 44%, and level of education high school or equivalent in 50%. Of the 192 patients ≥ 50 years old, 38% had undergone screening colonoscopy. Of the unscreened subjects a 50 years old, 23% had never heard of colonoscopy as a screening test. Of the 118 patients age ≥ 50 without previous screening, 25% did not plan to undergo screening for colon cancer and 46% were uncertain about having screening colonoscopy. The main factors cited as preventing subjects from undergoing screening colonoscopy were financial issues in 33%, lack of information about colonoscopy in 20%, concern about possible discomfort during colonoscopy in 17%, and lack of knowledge about colon cancer risk in 13%. The majority of patients, 58%, listed no gender preference for the endoscopist. Only 29% of the female subjects preferred to have a female perform their colonoscopy. Using score range of 0 to 10, patients rated the importance of colon cancer screening for their overall health as 8.3 (mean, SD 2.9), their knowledge about colonoscopy as 3.5 (mean, SD 3.7), and their satisfaction with previous colonoscopy as 8.7 (mean, SD 2.6).

Conclusion: In this population of patients in an underserved urban area of West Texas, 38% of patients over age fifty had undergone colonoscopy screening. Over two-thirds of respondents were not certain or do not plan to undergo screening colonoscopy. The main factors preventing decision-making under screening colonoscopy were financial issues, concerns about possible discomfort during colonoscopy, and lack of understanding about colon cancer risk. Knowledge about colon cancer risk and colonoscopy in this population appears low, indicating the need for better education in this area.
Late Breaking Abstract
Oral Paper 29

SONIC: A RANDOMIZED, DOUBLE-BLIND, CONTROLLED TRIAL COMPARING INFliximAB AND INFliximAB PLUS AZATHIOPRINE TO AZATHIOPRINE IN PATIENTS WITH CROHN’S DISEASE NAIVE TO IMMUNOMODULATORS AND BIOLOGIC THERAPY

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Purpose: To assess the induction of steroid-free remission and the safety of infliximab (IFX) monotherapy and IFX+azathioprine (AZA) combination therapy, with AZA monotherapy in moderate-to-severe CD pts.

Methods: 508 pts who were naïve to immunomodulators were randomized to: 1) AZA 2.5mg/kg capsules + placebo (PBO) infusions, 2) IFX 5mg/kg infusions + PBO capsules, or 3) IFX 5mg/kg infusions + AZA 2.5mg/kg capsules through wk30. The infusions were administered at wks 0, 2, and 6 followed by q8wk infusions. Final efficacy assessments were collected at wk42, including endoscopy for pts with mucosal ulcerations at baseline. RESULTS: 52% of pts were male and 93% were Caucasian. The median age was 34yrs (range, 18-80yrs). The median CD duration was 2.3yrs (range, 0 to 43yrs). The median CDAI score was 275 (25th-75th percentile, 244-323) and the median baseline CRP was 1.1mg/dl (range, 0.3-19.0). 41% of pts were on steroids at baseline. The proportion of pts in steroid-free remission (CDAI=150) at wk26 (primary endpoint) was 56.8% with IFX+AZA, 44.4% with IFX, 30.6% with AZA (p<0.001 IFX+AZA vs. AZA; p=0.009 IFX monotherapy vs AZA monotherapy; p=0.022 IFX+AZA vs. IFX monotherapy). The proportion of pts with mucosal healing at wk26 was 43.9% with IFX+AZA, 30.1% with IFX, and 16.5% with AZA (p<0.001 IFX+AZA vs. AZA; p=0.023 IFX vs AZA; p=0.055 IFX+AZA vs. IFX). The proportion of pts with serious infections was similar in all treatment groups. One pt, treated with IFX+AZA, developed tuberculosis. Colon cancer developed in 2 pts, both treated with AZA monotherapy. One death occurred following colectomy in a pt treated with AZA alone.

Conclusions: Moderate-severe CD pts treated with IFX monotherapy or IFX+AZA (when initiated together) are more likely to achieve steroid-free clinical remission and complete mucosal healing than those receiving AZA alone. IFX+AZA was more effective than IFX monotherapy for steroid-free remission. Safety among the treatment groups was similar.

Late Breaking Abstract
Oral Paper 56

A RANDOMIZED CONTROLLED COMPARISON OF WARM WATER INFUSION IN LIEU OF AIR INSUFFLATION VS. AIR INSUFFLATION FOR AIDING COLONOSCOPY INSERTION IN SEDATED PATIENTS UNDERGOING COLORECTAL CANCER (CRC) SCREENING AND SURVEILLANCE

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Background: 52% of patients for CRC screening and surveillance completed colonoscopy without sedation when water infusion in lieu of air insufflation was used to aid insertion.

Purpose: To perform a randomized controlled trial comparing air insufflation (conventional method) vs. water infusion in lieu of air (study method) in sedated colonoscopy.

Hypothesis: Compared with conventional method, study method achieves lower requirement for medications, but similar cecal intubation rate, assessment of current experience and willingness to repeat future colonoscopy.

Method: Patients were informed during open access colonoscopy class. The usual bowel prep was done. Screenning or surveillance patients who signed informed consent were randomized. Pre-medications were administered as 0.5 increment of Fentanyl (25 μg) and 0.5 increment of Versed (1 mg) plus 50 mg Diphenydramine. Colonoscopy was performed by two experienced endoscopists who are skilled with both methods based on the randomization code. With the conventional method, air was used during scope insertion and water was used for irrigation if poor prep was encountered. With the study method, the water pump was turned off on scope insertion. Water (at 37°C) was infused using a peristaltic pump to distend and cleanse the colon; and facilitate scope insertion until the cecum was reached (observing the appendix opening under water or touching cecal floor). If the patients reported a pain score >2 (0=none, 10=most severe), while maneuvers to minimize pain were implemented by the colonoskopist, patients were asked by the nurse if they wanted additional medications. The answer was affirmative, 0.5 increments (Fentanyl 25 μg or Versed 1 mg) would be administered. During withdrawal, air was insufflated to facilitate inspection, biopsy and polypectomy. Primary outcome: medications measured as increments. Sample size calculation based on retrospective data indicated a total of 56 patients were required to show a difference. Data analysis was performed using t or χ2 test; p<0.05 is significant.

Results: (Table): Medications used before reaching the cecum and total medications used were significantly lower with the water method. Cecal intubation rate (100%) and willingness to repeat (96%) were similar for both methods. Pain scores at the ascending colon and cecum were significantly lower and less abdominal compression/position change was required for the study method. There were no differences in the immediate and 24 hour satisfaction scores (0=dissatisfied, 10=satisfied).

Conclusion: In a prospective randomized controlled trial, water infusion in lieu of air insufflation is superior to air insufflation for CRC screening and surveillance in the sedated patients.

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<td>Meds during withdrawal (increments)</td>
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<td>Total meds (increments)</td>
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<td>No 17, yes 11</td>
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<td>Satisfaction 1 day later</td>
<td>9.1±0.3</td>
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Open to all ACG 2008 attendees, industry-sponsored satellite symposia provide additional educational opportunities for attendees. These programs are independent of the ACG Annual Scientific Meeting and Postgraduate Course programs. ACG is not the continuing medical education provider of these programs. For more information, see the company sponsor.

Saturday, October 4th

Severe *Clostridium difficile* Infection: Clinical Clues and Therapeutic Strategies
6:30 am-7:45 am • Sun D Ballroom
Provided by Robert Michael Education Institute, LLC through a grant from ViroPharma.

Clinical Case Conversations: Current Issues in the Management of Inflammatory Bowel Disease for the Community Gastroenterologist
5:30 pm-8:00 pm • Sun D Ballroom
Provided by Executive Meeting Management through a grant from Centocor.

Optimizing the Use of Biologics in the Treatment of Crohn’s Disease
8:30 pm-10:00 pm • Sun A Ballroom
Provided by MedLogix Communications through a grant from Elan Pharmaceuticals.

Sunday, October 5th

Pulling the Trigger on Biologic Therapy in Crohn’s Disease: A Case-based Discussion
5:30 pm-7:00 pm • Sun D Ballroom
Provided by Westway House through a grant from Abbott.

Collective Clinical Forum: Educational Initiative on Constipation
7:00 pm-8:30 pm • Orange Blossom Ballroom
Provided by Gullapalli & Associates through a grant from Takeda Pharmaceuticals North America, Inc.

Managing Crohn’s Disease in the Long-Term: Ask the Expert!
8:30 pm-12:00 midnight • Osceola C Ballroom
Provided by Strategic Consultants International through a grant from UCB, Inc.

Monday, October 6

Exploring Controversial Themes in IBD
5:30 pm-7:00 pm • Osceola B Ballroom
Jointly provided by Curatio CME Institute and the University of Chicago Pritzker School of Medicine through a grant from Procter & Gamble.

Emerging Concerns of Kidney Damage Following Bowel Preparations
9:00 pm-11:00 pm • Orange Blossom Ballroom
Provided by Advanced Medical Resources through a grant from Braintree Laboratories.

Tuesday, October 7

Improving Management in Challenging GERD: Setting Expectations for the Future
6:30 pm-8:00 pm • Osceola D Ballroom
Provided by Strategic Consultants International through a grant from Takeda Pharmaceuticals North America, Inc.

PPIs – Should We Be Concerned About Their Use?
8:00 pm-12:00 midnight • Orange Blossom Ballroom
Provided by Meeting Management Associates through a grant from GlaxoSmithKline.
Abbott Laboratories • Booth #1130
Abbott Laboratories • Booth #1123
Abbott Vascular • Booth #1136
Acupath Laboratories, Inc. • Booth #416
Alaven Pharmaceutical • Booth #323
Alpha-1 Foundation • Booth #308
Alpine Biomed • Booth #419
Alveulox, Inc. • Booth #1924
American Association of Nurse Anesthetists • Booth #414
American College of Gastroenterology • Booth #611
American Express • Booth #1723
American Gastroenterological Association • Booth #628
American Neurogastroenterology & Motility Society • Booth #312
AmeriPath, Inc. • Booth #501
AmSurg Corp • Booth #1401
AstraZeneca, LP • Booth #1709
Avantis Medical Systems, Inc. • Booth #1135
Axcan Pharma US, Inc. • Booth #1115
Banner Health • Booth #1824
Bard Access Systems • Booth #406
BARRx, Inc. • Booth #1822
Biocodex Pharmaceuticals • Booth #623
BioK+ International, Inc. • Booth #1037
Boston Scientific • Booth #1523
Bovie Medical • Booth #432
Braacco Diagnostics, Inc. (formerly E-Z-EM) • Booth #1712
Braintree Laboratories, Inc. • Booth #716
Breathe E-Z Systems, Inc. • Booth #333
Bristol-Myers Squibb • Booth #2307
C Thomas • Booth #2404
Calmsense, Inc. • Booth #607
Capellon Pharmaceuticals, Ltd. • Booth #1138
Caris Diagnostics • Booth #401
Celiac Disease Foundation • Booth #304
Centocor • Booth #1001
ChirrRhoClin, Inc. • Booth #528
Chronic Liver Disease Foundation • Booth #428
Colon Health Centers of America • Booth #322
Comed Endoscopic Technologies • Booth #723
Cook Medical • Booth #1623
Crohn’s & Colitis Foundation of America, Inc. • Booth #300
CSA Medical • Booth #410
Dannon Company • Booth #704
Dionysus Systems, Inc. • Booth #1904
Digestive Care, Inc. • Booth #619
Diplomat Specialty Pharmacy • Booth #1140
Elan Pharmaceuticals • Booth #2105
Elan Pharmaceuticals • Booth #1901
Elsevier • Booth #1500

EXHIBIT HOURS
Sunday • 3:30 pm – 7:00 pm
Monday • 9:30 am – 4:00 pm
Tuesday • 9:30 am – 4:00 pm
Wednesday • 9:30 am – 12:00 noon

Endo Choice • Booth #530
EndoSoft • Booth #717
ERBE USA, Inc. • Booth #1513
Ethicon Endo-Surgery • Booth #901
Eurand • Booth #324
Fleet Laboratories • Booth #701
Focus Medical Communications • Booth #1828
Fujinon, Inc. • Booth #1323
Geneden Biotech, Inc. • Booth #531
Gastrocor • Booth #301
Gastroenterology & Endoscopy News • Booth #1419
Gastroenterology & Hepatology • Booth #1031
Geisinger Health System • Booth #307
GI Pathology Partners, P.C. • Booth #2206
Given Imaging, Inc. • Booth #1235
GlaxoSmithKline Consumer Healthcare • Booth #807
gMed • Booth #507
Gundersen Lutheran Health System • Booth #1141
Hemosure, Inc. • Booth #430
HRA Research • Booth #1727
IFFGD • Booth #302
Immersion Medical • Booth #1132
INOWA Diagnostics • Booth #1502
Jol Diagnostics, Inc. • Booth #1826
L3 Healthcare Design, Inc. • Booth #605
Louisiana State University Agricultural Center - Extension Service • Booth #306
Market Access Partners • Booth #801
Max Endoscopy • Booth #1516
MD-Reports/Infinite Software Solutions, Inc. • Booth #631
Mednet • Booth #329
Medical Futures, Inc. • Booth #311
Medtronic • Booth #702
Mercedes Medical • Booth #309
Merelet Diagnostics Group of Otsuka America Pharmaceutical, Inc. • Booth #601
National Digestive Diseases Information Clearinghouse • Booth #2403
Natren, Inc. • Booth #2204
Nature Publishing Group • Booth #1922
Neuysis • Booth #728
Nuetteara Healthcare • Booth #317
Olympus America Inc. • Booth #1501
Omega Medical Imaging, Inc. • Booth #423
Optimer Pharmaceuticals • Booth #2101
Organization of Teratology Information Specialists • Booth #331
Osiris Therapeutics, Inc. • Booth #1033
Pathology Solutions, LLC. • Booth #213
Pentax • Booth #1517
Physician Capital Group • Booth #1134
Physicians Endoscopy • Booth #1716
PLUS Diagnostics • Booth #902
Practical Gastroenterology • Booth #1801
PracticeLink • Booth #529
PracticeOne • Booth #1729
Pri-Cara, Division of Ortho-McNeil-Janssen Pharmaceuticals, Inc. • Booth #1201
Prime Clinical Systems, Inc. • Booth #732
Procter & Gamble Pharmaceuticals • Booth #1211
Prometheus • Booth #823
ProVation Medical, Inc. • Booth #904
QDX Pathology Services • Booth #431
QOL Medical, LLC • Booth #2400
Quintron Instrument Company • Booth #1823
RLD Reference Laboratory, Inc. • Booth #2309
Redfield Corporation • Booth #1613
RedPath Integrated Pathology • Booth #2201
Reliance Pathology Partners • Booth #1928
Roche Laboratories, Inc. • Booth #1407
RocheExchange.com • Booth #900
Romark Pharmaceutical • Booth #1109
Safe Sedation • Booth #630
Salix Pharmaceuticals, Inc. • Booth #1431
Sandhill Scientific • Booth #1619
Sanatarus, Inc. • Booth #513
Schering-Plough • Booth #2107
Shire U.S., Inc. • Booth #811
Sierra Scientific Instruments • Booth #500
SLACK, Inc. • Booth #502
SmartPill Corporation • Booth #523
Solavay Pharmaceuticals, Inc. • Booth #1701
Spirus Medical, Inc. • Booth #1329
Stanly Regional Medical Center • Booth #326
Styker-GI • Booth #516
Takeda Pharmaceuticals North America • Booth #1733
Takeda Pharmaceuticals North America (formerly TAP) • Booth #1023
TeleVox • Booth #1035
The Delta Companies • Booth #315
The Oley Foundation • Booth #310
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University of Pittsburgh • Booth #514
US Endoscopy Group • Booth #1900
Vertex Pharmaceuticals Incorporated • Booth #803
ViroPharma • Booth #319
Vision-Sciences, Inc. • Booth #407
Vista Staffing Solutions • Booth #633
VueSpan • Booth #1240
Wako Diagnostics • Booth #632
Wiley - Blackwell • Booth #700