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New Joint ACG-CAG Guidelines on the Management of Anticoagulants and Antiplatelets during Acute Gastrointestinal Bleeding and the Periendoscopic Period

(Bethesda, MD, March 21, 2022) – In the first update since 2016 to clinical guidelines on the management of patients on common anticoagulant and antiplatelet therapies during gastrointestinal (GI) bleeding or undergoing elective endoscopy, authors from the American College of Gastroenterology (ACG) and the Canadian Association of Gastroenterology (CAG) implemented rigorous systematic reviews of predefined clinical questions and used the GRADE approach to develop recommendations for challenging clinical scenarios faced by endoscopists.

The joint ACG-CAG guidelines propose evidence-based recommendations for the periendoscopic management of anticoagulant and antiplatelet drugs during acute GI bleeding and the elective endoscopic period. An international, multi-society, and multidisciplinary working group addressed clinical questions related to 1) temporary interruption of anticoagulant and antiplatelet drugs; 2) reversal of anticoagulant and antiplatelet drugs; 3) periprocedural heparin bridging; and, 4) postprocedural resumption of anticoagulant and antiplatelet drugs.

Antithrombotic drugs commonly used in the management of patients with atrial fibrillation, ischemic heart disease, venous thromboembolism and valvular heart disease also increase the risk of GI bleeding from sources in the gut including ulcers or diverticula and following endoscopic procedures.

“Our aim was to create a focused, pragmatic guideline distilling the published literature to inform clinical practice for the care of patients whose antithrombotic medications put them at risk for acute bleeding and life-threatening hemorrhage or who require routine endoscopic procedures,” commented first author Neena S. Abraham, MD, MSc (Epi), FACG. “This guideline is unique in the unprecedented level of rigor used to evaluate the evidence, and the inclusion of experts in gastroenterology, hematology, and cardiology to ensure a multidisciplinary perspective when formulating recommendations.”

According to Alan Barkun, MD, MSc (Epi), FAG, CAGF, “We recognized the difficulties in translating evidence-based guideline recommendations into clinical practice and so we created a dissemination tool as a companion publication that provides algorithmic guidance for common scenarios encountered during endoscopy with contextual information in interpreting the guideline panel’s recommendations.”

Recommendations for Patients with Acute GI Bleeding

The first ten guideline statements address the management of patients in the setting of acute GI bleeding, those patients hospitalized or under observation with overt GI bleeding manifesting as melena (passage of black, tarry stools), hematochezia (fresh blood from the rectum) or hematemesis (vomiting of blood, which may be obviously red or have an appearance similar to coffee grounds.)

The authors summarized their recommendations for patients presenting with acute GI bleeding: “For patients on warfarin, we suggest against giving fresh frozen plasma or vitamin K; if needed, we suggest prothrombin complex concentrate (PCC) compared with fresh frozen plasma administration; for patients on direct oral anticoagulants (DOACs), we suggest against PCC administration; if on dabigatran, we suggest against the administration of idarucizumab, and if on rivaroxaban or apixaban, we suggest against andexanet alfa administration; for patients on antiplatelet agents, we suggest against platelet transfusions; and for patients

on cardiac acetylsalicylic acid (ASA) for secondary prevention, we suggest against holding it, but if the ASA has been interrupted, we suggest resumption on the day hemostasis is endoscopically confirmed."

Recommendations for Patients Undergoing Elective Endoscopy
An additional nine guideline recommendations target patients in the elective (planned) endoscopy setting. These recommendations exclude patients at high risk of thromboembolic events in whom elective procedures should be deferred.

The authors summarize these recommendations: "For patients on warfarin, we suggest continuation as opposed to temporary interruption (1 to 7 days), but if it is held for procedures with high risk of GI bleeding, we suggest against bridging anticoagulation unless the patient has a mechanical heart valve; for patients on DOACs, we suggest temporarily interrupting rather than continuing these; for patients on dual antiplatelet therapy for secondary prevention, we suggest temporary interruption of the P2Y12 receptor inhibitor while continuing ASA; and if on cardiac ASA monotherapy for secondary prevention, we suggest against its interruption."

Areas of Insufficient Evidence
The authors recognize that evidence was insufficient in the following settings to permit recommendations: "With acute GI bleeding in patients on warfarin, we could not recommend for or against PCC administration when compared with placebo. In the elective periprocedural endoscopy setting, we could not recommend for or against temporary interruption of the P2Y12 receptor inhibitor for patients on a single P2Y12 inhibiting agent. We were also unable to make a recommendation regarding same-day resumption of the drug vs. 1 to 7 days after the procedure among patients prescribed anticoagulants (warfarin or DOACs) or P2Y12 receptor inhibitor drugs because of insufficient evidence."

Clinical Practice Guideline Dissemination Tool Aids Patient Management
As a reference and companion to the guidelines, the authors developed a separate publication for clinicians to operationalize their recommendations including practical algorithms and contextual guidance, including where evidence is sparse, weighing the patients' risk of thromboembolic event versus the procedural risk of GI bleeding. Tables stratify patients receiving anticoagulant therapy according to thromboembolic risk, and several figures review the clinical flow of assessment and management of patients on anticoagulants and antiplatelets in the setting of acute GI bleeding. Underlying cardiac or hematologic conditions, recent cardiac events, or thrombotic events inform risk stratification for patients with cardiac disease. The authors define levels of risk for patients on anticoagulants for indications including mechanical heart valve, atrial fibrillation, and venous thromboembolism. Separate flow diagrams review the management of patients in the elective periprocedural setting of digestive endoscopy. This dissemination tool is embargoed until March 31, 2022 but available by emailing mediaonly@gi.org.

Read the Guidelines, Abraham, *et al.*
American College of Gastroenterology-Canadian Association of Gastroenterology Clinical Practice Guideline: Management of Anticoagulants and Antiplatelets During Acute Gastrointestinal Bleeding and the Periendoscopic Period. Neena S. Abraham, MD, MSc (Epi), FACG, Alan N. Barkun, MD, MSc (Epi), FACG, CAGF, Bryan G. Sauer, MD, MSc (Clin Res), FACG, James Douketis, MD, Loren Laine, MD, FACG, Peter A. Noseworthy, MD, Jennifer J. Telford, MD, MPH, FACG, CAGF and Grigorios I. Leontiadis, MD, PhD, CAGF. *Am J Gastroenterol* 2022;00:1–17.

Supplemental Materials: Clinical Practice Guideline Dissemination Tool (Barkun, *et al*.) will publish in April 2022 issue of *The American Journal of Gastroenterology*. Embargoed copies available by emailing mediaonly@gi.org. Embargo lifts March 31, 2022 on this companion publication.

Management of Patients on Anticoagulants and Antiplatelets During Acute Gastrointestinal Bleeding and the Periendoscopic Period: A Clinical Practice Guideline Dissemination Tool. Alan N. Barkun, MD, MSc (Epi), FACG, CAGF, James Douketis, MD, Peter A. Noseworthy, MD, Loren Laine, MD, FACG, Jennifer J. Telford, MD, MPH, FACG, CAGF and Neena S. Abraham, MD, MSc (Epi), FACG *Am J Gastroenterol* 2022;00:1–7.

About American College of Gastroenterology

Founded in 1932, the American College of Gastroenterology (ACG) is an organization with an international membership of over 17,000 individuals from 86 countries. The College's vision is to be the preeminent professional organization that champions the prevention, diagnosis, and treatment of digestive disorders, serving as a beacon to guide the delivery of the highest quality, compassionate, and evidence-based patient care. The mission of the College is to enhance the ability of our members to provide world class care to patients with digestive disorders and advance the profession through excellence and innovation based upon the pillars of Patient Care, Education, Scientific Investigation, Advocacy and Practice Management. Follow ACG on Twitter @AmCollegeGastro.

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The Canadian Association of Gastroenterology (CAG) was founded in 1962 with an aim to support and engage in the study of the organs of the digestive tract. The society has grown to include more than 1,000 members. The society actively promotes the advancement of the science and art of gastroenterology by providing leadership in patient care, research, teaching and continuing professional development (CPD); and to promote the highest ethical standards. The Canadian Association of Gastroenterology (CAG) is the only national professional association for Canada's gastroenterology community – physicians, basic scientists, and affiliated health care providers who work in the field of gastroenterology. The CAG provides professional gastroenterology education and funding opportunities for gastrointestinal health and disease research. Follow CAG on Twitter @CanGastroAssn.

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