AGA INSTITUTE

American Gastroenterological Association (AGA) Institute Medical Position Statement on Obscure Gastrointestinal Bleeding

This document presents the official recommendations of the American Gastroenterological Association (AGA) Institute on “Evaluation and Management of Occult and Obscure Gastrointestinal Bleeding.” It was approved by the Clinical Practice and Economics Committee on March 12, 2007, and by the AGA Institute Governing Board on May 19, 2007.

This medical position statement is based upon the interpretation and assimilation of scientifically valid research, derived from a comprehensive review of published literature.

Since the publication of the last technical review on obscure gastrointestinal (GI) bleeding in 2000, technical advances in endoscopy have revolutionized the evaluation and management of patients with obscure GI bleeding.

Etiology and Definitions

Obscure GI bleeding, defined as bleeding from the GI tract that persists or recurs without an obvious etiology after esophagogastroduodenoscopy (EGD), colonoscopy, and radiologic evaluation of the small bowel such as small bowel follow-through or enteroclysis, could be categorized into obscure overt and obscure occult bleeding based on the presence or absence of clinically evident bleeding.

Bleeding lesions that are overlooked in the esophagus, stomach, and colon during initial workup or lesions in the small intestine that are difficult to visualize with conventional endoscopy and radiologic imaging are responsible for the obscurity of the etiology of GI bleeding. Commonly overlooked lesions in the upper GI tract include Cameron’s erosions in large hiatal hernias, fundic varices, peptic ulcer disease, angioectasias, Dieulafoy’s lesion, and gastric antral vascular ectasia. Lesions missed during colonoscopy include angioectasias and neoplasms.

The etiology of small intestinal bleeding is dependent on the age of the patient. Younger patients are likely to have small intestinal tumors, Meckel’s diverticulum, Dieulafoy’s lesion, and Crohn’s disease, while older patients (older than 40 years) are prone to bleeding from vascular lesions, which comprise up to 40% of all causes, and nonsteroidal anti-inflammatory drug-induced small bowel disease. Less common etiologies of bleeding that originate in the C-loop of duodenum include hemobilia, hemosuccus pancreaticus, and aortoenteric fistula. Because of the inability to localize a bleeding site in the small bowel with small bowel radiologic imaging, an early diagnosis of the bleeding site has been the exception rather than the norm.

Development of wireless (cableless) video capsule endoscopy and double-balloon enteroscopy has enabled us to overcome the delays in the diagnosis of the past and also provides an opportunity to revisit the traditional definitions of the source of GI bleeding into upper or lower GI bleeding based on the location of the bleeding either proximal or distal to the ligament of Treitz. Reclassifying GI bleeding (and obscure GI bleeding) into 3 categories (upper, mid, lower GI bleeding) instead of adhering to the traditional classification of upper GI and lower GI bleeding may be useful to improve our understanding of the problem.

Bleeding above the ampulla of Vater, within the reach of an EGD, is defined as upper GI bleeding; small intestinal bleeding from the ampulla of Vater to the terminal ileum, best investigated by capsule endoscopy and double-balloon enteroscopy, is defined as mid GI bleeding; and colonic bleeding is defined as lower GI bleeding, which can be evaluated by colonoscopy.

Evaluation and Management

The 2000 position statement of the American Gastroenterological Association proposed progressive testing with bleeding scans and angiography for those patients with active bleeding and repeat endoscopy, enteroscopy, enteroclysis, or small bowel series for those not actively bleeding. With continued blood loss, intraoperative enteroscopy was suggested. Due to lack of definitive diagnostic modalities before 2000, the management costs included at least $33,630 per patient without a diagnosis made. Evaluation and management have taken a paradigm shift with the introduction of capsule endoscopy and double-balloon endoscopy during the past 5 years.
Evaluation of the patient with obscure bleeding is dependent on the extent of the bleeding and the age of the patient. Patients with occult GI blood loss and no anemia most likely do not require evaluation beyond colonoscopy unless upper tract symptoms are present. Certainly advanced testing beyond colonoscopy and upper endoscopy is not warranted in this group.

Patients with occult GI blood loss and iron deficiency anemia and negative workup on EGD and colonoscopy need comprehensive evaluation, including capsule endoscopy to identify an intestinal bleeding lesion. One should review the capsule endoscopy examination in its entirety because capsule endoscopy may provide clues to bleeding from stomach and colon overlooked by EGD and colonoscopy. The most common cause of obscure bleeding in this group is angiectasia, accounting for up to 80% of cases. One should be aggressive in the investigation of the etiology of bleeding in younger patients because small bowel tumors are the most common cause of obscure bleeding in patients younger than 50 years. Early diagnosis of tumors of the small bowel can be obtained by capsule endoscopy, and those with negative findings on examination can be reassured. Because small bowel lesions could be overlooked on capsule endoscopy, it is critical to follow up these patients closely and the study should be repeated if necessary.

For patients with obscure GI bleeding and associated anemia or overt bleeding with melena or maroon blood per rectum, repeat endoscopic examinations can be worthwhile. Use of a cap-fitted endoscopy to examine blind areas to forward a viewing endoscope, such as high lesser curve, under the incisura angularis, and the posterior wall of the duodenal bulb; random biopsies of the duodenum for celiac disease; injection of naloxone to detect obscure angiectasia; use of a side-viewing endoscope to examine the ampulla in patients with suspected pancreaticobiliary pathology; and a push enteroscope to carefully examine the C-loop of duodenum after injection of glucagons, if necessary, in patients with prior abdominal aortic aneurysm repair should be considered.

Once all the findings on standard examinations (EGD and colonoscopy) are negative, the small bowel may be assumed to be the source of blood loss and capsule endoscopy should be the third test in the evaluation of patients with GI bleeding. In the patient with active bleeding, capsule endoscopy can confirm the small bowel as the site of bleeding, providing a location. Even if the study findings are negative for the small bowel in the actively bleeding patient, the study may indicate that the bleeding is actually colonic or even gastric in origin. In the patient with active bleeding within the small intestine, the capsule will guide further evaluation and therapy. A patient with a small bowel tumor detected by capsule endoscopy will proceed directly to laparoscopic surgery. If the site of bleeding is identified in the proximal small bowel and there is no mass, push enteroscopy will be used to reidentify the site and cauterize the lesion. In cases where a distal small bowel site is identified, double-balloon enteroscopy or surgical intervention coupled with intraoperative enteroscopy will be necessary.

The role of small bowel series, enteroclysis, cross-sectional imaging, and nuclear scans in the evaluation of obscure GI bleeding has declined substantially with the advent of capsule endoscopy because of its extremely low diagnostic yield.

The natural history of vascular lesions in the small bowel has not been well characterized. It is estimated that less than 10% of all patients with angiectasia will eventually bleed. Once lesions have bled, their tendency to rebleed is also not known. Although physicians are anxious to treat these lesions, it may be that as many as 50% will not rebleed. Frequent previous bleeding episodes and transfusion requirements are predictive of recurrent bleeding. Capsule endoscopy findings may assist in the follow-up evaluation of patients with obscure GI bleeding. About half of the patients with positive findings on capsule endoscopy experienced rebleeding on long-term follow-up, compared with 5% of patients with negative findings on capsule endoscopy. Further invasive investigations can be deferred in patients with obscure GI bleeding and negative findings on capsule endoscopy.

Endoscopic or surgical therapy should be considered due to its ease, relatively good long-term results, and the lack of a clearly effective, well-tolerated medical therapy unless the risks of the procedures outweigh the benefits.

Angiographic therapy is usually reserved for acutely bleeding lesions (equivalent to 3 units of blood loss per day) detected during diagnostic angiography.

Although outcomes studies are needed, it would appear that the early use of capsule endoscopy would not only allow more rapid diagnosis and thus improved patient care but could also lessen the costs associated with obscure bleeding. Repeated colonoscopy and upper endoscopy would be avoided, and, with a diagnosis, repeat hospitalizations and transfusions could be averted. Early experience with double-balloon enteroscopy in the management of patients with obscure GI bleeding is encouraging as well. Further studies on the cost-effectiveness of these novel modalities will help us define the choice of investigation and management of these patients.

GOTTUMUKKALA S. RAJU
Department of Medicine
University of Texas Medical Branch, Galveston
Galveston, Texas
Address requests for reprints to: Chair, Clinical Practice and Economics Committee, AGA National Office, c/o Membership Department, 4930 Del Ray Avenue, Bethesda, Maryland 20814. Fax: (301) 654-5920.

The Medical Position Statements (MPS) developed under the aegis of the AGA Institute and its Clinical Practice and Economics Committee (CPEC) were approved by the AGA Institute Governing Board. The data used to formulate these recommendations are derived from the data available at the time of their creation and may be supplemented and updated as new information is assimilated. These recommendations are intended for adult patients, with the intent of suggesting preferred approaches to specific medical issues or problems. They are based upon the interpretation and assimilation of scientifically valid research, derived from a comprehensive review of published literature. Ideally, the intent is to provide evidence based upon prospective, randomized placebo-controlled trials; however, when this is not possible the use of experts’ consensus may occur. The recommendations are intended to apply to healthcare providers of all specialties. It is important to stress that these recommendations should not be construed as a standard of care. The AGA Institute stresses that the final decision regarding the care of the patient should be made by the physician with a focus on all aspects of the patient’s current medical situation.

Reference