Complete Summary

GUIDELINE TITLE

ASGE guideline: the role of endoscopy in the patient with lower-GI bleeding.

BIBLIOGRAPHIC SOURCE(S)

Davila RE, Rajan E, Adler DG, Egan J, Hirota WK, Leighton JA, Qureshi W, Zuckerman MJ, Fanelli R, Wheeler-Harbaugh J, Baron TH, Faigel DO. ASGE Guideline: the role of endoscopy in the patient with lower-GI bleeding. Gastrointest Endosc 2005 Nov;62(5):656-60. [58 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

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SCOPE

DISEASE/CONDITION(S)

Lower gastrointestinal (GI) bleeding caused by:

- Diverticular disease
- Ischemic colitis
- Vascular ectasia
- Hemorrhoids
- Neoplasia
- Postpolypectomy
- Nonsteroidal anti-inflammatory drug (NSAID)-induced colopathy
- Other miscellaneous etiologies

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Gastroenterology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To describe the role of gastrointestinal (GI) endoscopy in patients with lower GI bleeding

TARGET POPULATION

Patients with suspected lower gastrointestinal bleeding

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation

1. Colonoscopy (and preparation of the colon using polyethylene glycol-based solutions)
2. Air-contrast barium enema
3. Virtual colonoscopy
4. Computed tomographic (CT) colonography
5. Upper endoscopy
6. Digital rectal examination
7. Sigmoidoscopy
8. Anoscopy
9. Nasogastric (NG) tube placement
10. Gastric lavage
11. Radiologic evaluation
    - Radioactive-labeled red-blood-cell scanning
    - Angiography

Management

1. Thermal contact modalities, including heat probe and bipolar/multipolar coagulation
2. Epinephrine injection
3. Endoscopic metallic-clip placement
4. Superselective arterial embolization with various agents (gelatin sponge, microcoils, polyvinyl alcohol particles, and balloons)
5. Surgery

6. Cessation and avoidance of aspirin and non-steroidal anti-inflammatory drugs (NSAIDs)

MAJOR OUTCOMES CONSIDERED

- Specificity and sensitivity of diagnostic tests
- Mortality rate
- Hospitalization rate and length of stay
- Control of hemorrhage
- Bleeding recurrence rate
- Complications associate with interventions

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A MEDLINE literature search was performed, and additional references were obtained from the bibliographies of the identified articles and from the recommendations of expert consultants. When little or no data existed from well-designed prospective trials, emphasis was given to results from large series and reports from recognized experts.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Guidelines for appropriate utilization of endoscopy are based on a critical review of the available data and expert consensus.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendations are followed by evidence grades **(A-C)** identifying the type of supporting evidence. Definitions of the evidence grades are presented at the end of the "Major Recommendations" field.

Evaluation and Management

Occult Fecal Blood

Patients with chronic lower gastrointestinal bleeding (LGIB) that presents with occult fecal blood should undergo colonoscopy. If colonoscopy cannot be completed to the cecum, air-contrast barium enema should be obtained to evaluate the portions of the colon not visualized endoscopically. Virtual colonoscopy or computed tomographic (CT) colonography also can be used to rule out a proximal colonic lesion in patients who have had an incomplete colonoscopy.

Upper endoscopy should be considered if a source is not identified on colonoscopy, particularly if there are upper-gastrointestinal (GI) symptoms or anemia.

Melena

The diagnostic evaluation of a patient with melena should begin with upper endoscopy, because an upper-tract source is most likely in this setting. If an upper-GI source is not identified, then colonoscopy should be pursued. Obscure GI bleeding is defined as bleeding of unknown origin that persists or recurs after an initial negative endoscopic evaluation, including upper endoscopy and colonoscopy. The evaluation and the management of obscure GI bleeding are discussed in another guideline.

Intermittent Scant Hematochezia

Chronic intermittent passage of small amounts of visible red blood is the most common pattern of LGIB. Because most patients with scant hematochezia have an anorectal or a distal colonic source of bleeding, the initial evaluation in young, healthy patients ($\leq$40 years of age) should be a digital rectal examination and sigmoidoscopy, with or without anoscopy. Young, otherwise healthy patients with a convincing, benign source of bleeding on sigmoidoscopy, such as hemorrhoids or anal fissures, generally do not need to undergo colonoscopy for further evaluation. Patients over 50 years of age; those with anemia; those with significant risk factors for colorectal neoplasia; and/or those with worrisome symptoms, such as weight loss or change in bowel habits, should undergo colonoscopy. Please see the American Society for Gastrointestinal Endoscopy practice guidelines on the endoscopic therapy of anorectal disorders for the management of anorectal sources of hematochezia, including radiation proctopathy, internal hemorrhoids, and anal fissures.

Severe Acute Bleeding

Patients with severe LGIB should undergo clinical evaluation and stabilization as is done with upper-GI bleeding.

Nasogastric (NG)-tube placement should be strongly considered, especially in the setting of hemodynamic compromise. A clear NG-tube aspirate does not rule out an upper-GI source, whereas the presence of bile makes an upper source unlikely. A positive aspirate should prompt emergent upper endoscopy. In patients with a previous history of peptic ulcer disease, a recent history of nonsteroidal anti-inflammatory drug (NSAID) use, significant upper-GI symptoms, or a nondiagnostic NG lavage, upper endoscopy should be performed either before or after colonoscopy. Upper endoscopy also should be performed after colonoscopy in cases where a colonic source is not identified.

Colonoscopy is recommended in the early evaluation of LGIB. The procedure should be performed after preparation of the colon by using polyethylene glycol-based solutions. The preparation can be administered per NG tube or orally at a rate of approximately 1 L every 30 to 45 minutes. The colonic preparation facilitates endoscopic visualization, improves diagnostic yield, and may improve the safety of the procedure by decreasing the risk of perforation.

Several endoscopic treatment modalities can be used to achieve hemostasis when a source of LGIB is identified at the time of colonoscopy. The identification of a visible vessel or a pigmented protuberance within a diverticular segment is rare and may denote those patients at high risk for persistent or recurrent diverticular bleeding. Thermal contact modalities, including heat probe and bipolar/multipolar

coagulation, and epinephrine injection can be used independently or together in the treatment of bleeding colonic diverticula.

Endoscopic metallic-clip placement also serves as an alternative treatment for diverticular hemorrhage. Angiographic or surgical therapy may be necessary in cases of massive bleeding from a diverticulum that may not be amenable to endoscopic therapy.

Endoscopic therapy for vascular ectasia is widely accepted and is highly successful. Both thermal and injection methods can be used effectively. Successful cauterization rates of 87% have been described when using thermal therapy. Lower power settings than those used for bleeding gastroduodenal ulcers are recommended because of the increased risk of perforation in the right colon. Radiologic evaluation of patients with acute LGIB includes radioactive-labeled red-blood-cell scanning and angiography. Tagged-red-blood-cell scanning is positive in 45% of patients and has an overall accuracy of 78% for localizing the site of bleeding. Intestinal bleeding rates as low as 0.1 mL/min can be detected with this technique. Because angiography requires faster rates of bleeding for the identification of a bleeding source (rate of 1 mL/min), tagged-red-blood-cell scanning may be used by angiographers as a screening study to identify those patients with active ongoing bleeding who may benefit from angiotherapy.

Superselective arterial embolization with various agents (gelatin sponge, microcoils, polyvinyl alcohol particles, and balloons) has now replaced intra-arterial vasopressin for the treatment of LGIB. Control of bleeding can be achieved in 44% to 91% of cases and is associated with fewer major complications compared with vasopressin infusion. Potential complications of this technique include abdominal pain, fever, intestinal ischemia, and intestinal strictures. The rate of recurrent bleeding with superselective embolization ranges from 7% to 33%. Patients who fail angiographic therapy with ongoing or recurrent LGIB usually require surgery.

Surgery should be considered in patients with significant, ongoing hematochezia that requires the transfusion of more than 6 units of packed red blood cells in a 24-hour period or if bleeding recurs. Preoperative localization of lower-GI bleeding is crucial to avoiding extensive surgical intervention ("blind colectomy") and in ensuring that the bleeding is truly arising from the lower GI tract. Directed segmental resection is possible when the bleeding site is identified before surgery, as with an adenocarcinoma of the colon, or in a patient with diverticular disease limited to the left colon.

Summary

- LGIB is defined as bleeding emanating from a source distal to the ligament of Treitz and may present in multiple ways, including occult fecal blood, iron deficiency anemia, melena, intermittent scant hematochezia, or acute bleeding. **(C)**
- Colonoscopy is effective in the diagnosis and the treatment of LGIB. **(A)**
- NG-tube placement and/or upper endoscopy to look for an upper-GI source of bleeding should be considered if a source is not identified on colonoscopy, particularly if there is a history of upper-GI symptoms or anemia. **(A)**

- Colonoscopy is recommended in the early evaluation of severe acute LGIB. **(A)**
- Thermal contact modalities, including heat probe and bipolar/multipolar coagulation, and/or epinephrine injection can be used in the treatment of bleeding diverticula, vascular ectasia, or postpolypectomy bleeding sites. **(A)**
- Angiography and/or tagged-red-blood-cell scanning can be used in the setting of active, persistent bleeding or in cases of nondiagnostic endoscopic evaluation. **(A)**
- Preoperative localization of bleeding should be attempted in all patients before surgical intervention. **(C)**
- Aspirin and NSAIDs can be associated with lower-GI bleeding. If possible, these agents should be stopped and/or avoided in patients with a history of lower-GI bleeding. **(C)**

Definitions:

A. Prospective controlled trials
B. Observational studies
C. Expert opinion

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and classified for the recommendations using the following scheme:

A. Prospective controlled trials
B. Observational studies
C. Expert opinion

When little or no data exist from well-designed prospective trials, emphasis is given to results from large series and reports from recognized experts. Guidelines for appropriate utilization of endoscopy are based on a critical review of the available data and expert consensus.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate use of endoscopy in the diagnosis and management of patients with lower gastrointestinal (GI) bleeding, providing bleeding control, avoidance of complications, and prevention of recurrence

POTENTIAL HARMS

Superselective arterial embolization with various agents (gelatin sponge, microcoils, polyvinyl alcohol particles, and balloons) may be associated with potential complications including abdominal pain, fever, intestinal ischemia, and intestinal strictures.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Further controlled clinical studies are needed to clarify aspects of this statement, and revision may be necessary as new data appear. Clinical consideration may justify a course of action at variance to these recommendations.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Nov

GUIDELINE DEVELOPER(S)

American Society for Gastrointestinal Endoscopy - Medical Specialty Society

SOURCE(S) OF FUNDING

American Society for Gastrointestinal Endoscopy

GUIDELINE COMMITTEE

Standards of Practice Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the American Society for Gastrointestinal Endoscopy (ASGE) Web site.

Print copies: Available from the American Society for Gastrointestinal Endoscopy, 1520 Kensington Road, Suite 202, Oak Brook, IL 60523

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on December 7, 2005. The information was verified by the guideline developer on December 14, 2005.

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