Gastrointestinal Bleeding

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KEYWORDS

• Gastrointestinal bleeding • Hemorrhage • Upper gastrointestinal bleeding
• Lower gastrointestinal bleeding • Transfusion

KEY POINTS

- The emergency physician should have a structured approach to managing patients who present with acute gastrointestinal bleeding, directed toward preventing end-organ injury, limiting transfusion complications, averting rebleeding and managing comorbidities.
- Risk stratification is important to the management and disposition of patients with gastrointestinal bleeding, anticipating those who will need aggressive resuscitation and those who can be safely discharged home with outpatient management.
- Acute emergency department management may include localization of the bleed, appropriate volume and blood product resuscitation, vasoactive agents, antibiotics, reversal of anticoagulation, and specialty consultations.

INTRODUCTION

Gastrointestinal bleeding (GIB) is a serious, potentially life-threatening disease that leads to almost 1 million hospitalizations annually in the United States.[1,2] Because this is a commonly encountered chief complaint with high morbidity and mortality, the emergency physician is challenged to promptly diagnose, accurately risk assess, and aggressively resuscitate patients with gastrointestinal bleeding. Emergency medicine physicians are also tasked with identifying the subset of patients with GIB who can be safely discharged home with outpatient management. This article reviews risk stratification, diagnostic modalities, localization of bleeding, and management, including transfusion strategies and reversal of anticoagulation.

EPIDEMIOLOGY

GIB encompasses bleeding originating anywhere in the gastrointestinal tract, extending from the mouth to the anus. Most clinicians further delineate GIB by the location of

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bleeding. Upper gastrointestinal bleeding (UGIB), or bleeding from above the ligament of Treitz, and lower gastrointestinal bleeding (LGIB) each have unique etiologies (refer to **Box 1**), disease progression, and treatment.

The annual incidence of acute UGIB in the United States is estimated to be between 48 and 160 cases per 100,000.[3] The rates of UGIB are higher in men and the elderly.[3] The most common cause of UGIB remains peptic ulcer disease and accounts for up to 67% of UGIB fcases.[3,6] However, there has been a 23% decrease in admissions for UGIB from 2001 to 2009 and a corresponding 34% decrease in peptic ulcer disease admissions during that same time period.[7] Rebleeding rates with UGIB range from 25% to 30% in variceal bleeding and approximately 20% in peptic ulcer bleeding,[8] correlating with higher mortality rates ranging from 30% to 37%.[9] Risk factors for UGIB include *Helicobacter pylori* infection, nonsteroidal anti-inflammatory drugs (NSAIDs), antiplatelet medications, and anticoagulation. There is also a likely

Box 1
Etiologies of gastrointestinal bleeding

Upper Gastrointestinal Bleeding

- Peptic ulcer disease
- Gastritis
- Esophageal varices
- Gastric varices
- Vascular lesions
- Esophageal ulcer
- Malignancy
- Mallory-Weis tear
- Portal hypertensive gastropathy
- Aortoenteric fistula
- Crohn disease
- Pancreatic disease

Lower Gastrointestinal Bleeding

- Diverticular disease
- Gastrointestinal cancers
- Inflammatory bowel disease
- Colitis: ischemic, radiation, infectious
- Angiodysplasia
- Polyps
- Hemorrhoids
- Anal fissure
- Colonic ulcerations
- Rectal varices
- Upper gastrointestinal source

Data from Refs.[3–5]