Patient Presentation, Risk Stratification, and Initial Management in Acute Lower Gastrointestinal Bleeding



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KEYWORDS

- Gastrointestinal bleeding Lower gastrointestinal bleeding Diverticulosis
- Endoscopy
 Colonoscopy

KEY POINTS

- The incidence of hospitalization for lower gastrointestinal bleeding has decreased marginally in the United States but remains a significant cause of morbidity and mortality.
- Causes of lower gastrointestinal bleeding vary depending on the age of patients as well as coexisting comorbid conditions.
- Risk stratification facilitates appropriate patient disposition as well as initiation of involvement of supportive teams and resource mobilization to, it is hoped, reduce morbidity and mortality.
- Initial resuscitation, including hemodynamic stabilization, is critical; laboratory investigations should also be undertaken during the initial patient assessment and patients' condition optimized before endoscopic intervention.
- The management of comorbid conditions, including the appropriate use of antiplatelet agents and anticoagulants, requires a multidisciplinary approach with individualized tailoring.

INTRODUCTION

About 30% to 40% of all cases of gastrointestinal bleeding originate from a lower gastrointestinal source¹; although lower gastrointestinal bleeding (LGIB) used to be less common compared with upper gastrointestinal bleeding, this ratio has changed

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over time. Indeed, emergency department visits between 2007 and 2012 for upper gastrointestinal bleeding decreased by 5%, whereas those for LGIB increased by 17%, with about 900,000 ambulatory care visits in the United States in 2010.¹

LGIB historically referred to any bleeding distal to the ligament of Treitz, but since 2006 this definition has been modified to bleeding from a source distal to the ileocecal valve.^{2–4} The reader must, however, keep in mind that this change in nomenclature is recent and is not reflected in older literature.^{5,6}

The management of LGIB has evolved over the last few years to incorporate a multidisciplinary management strategy in which diagnostic tools like computed tomographic angiography as well as transarterial embolization play a larger role in caring for patients with LGIB.

This article provides a synopsis on the presentation of overt LGIB and the risk stratification of affected patients as well as reviews acute management issues based on the best evidence available to date.

EPIDEMIOLOGY

The age- and sex-adjusted incidence of hospitalization for LGIB has decreased marginally in the United States from 2001 to 2009 (41.8–35.7 per 100,000)⁷ but remains a significant source of morbidity and mortality (case fatality rate of 1.47%). When compared with upper gastrointestinal bleeding, LGIB is associated with a higher mortality (8.8% vs 5.5%), longer hospital stay (11.6 \pm 13.9 vs 7.9 \pm 8.8 days), and greater resource utilization. In England, 2.7% of all red blood cell transfusions countrywide are used for cases of LGIB. 9

A national audit in the United Kingdom that incorporated 143 hospitals with a total of 2528 patients with LGIB who presented within 2 months in 2015 reported a median age presentation of 74 years, whereas most patients (79.1%) had coexisting comorbidities; a significant proportion of patients were receiving either oral anticoagulant (15.9%) or antiplatelet therapy (29.4%). ¹⁰

In a recent systematic review and meta-analysis, 11 the overall mortality associated with LGIB was 0.4%, whereas the bleeding-related mortality was 1.1%. Furthermore, LGIB was associated with a recurrent bleeding rate of 13.5% (95% confidence interval [CI]; 11.8% to 15.5%); length of hospital and intensive care unit (ICU) stays were 5.7 \pm 5.2 and 1.9 \pm 0.4 days, respectively. Overall, 13.6% patients experienced further bleeding during their hospitalization, whereas 4.4% were readmitted with recurrent bleeding within 28 days. 10 The average total number of blood transfusions received by patients was 3.4 \pm 2.2 units, whereas about 6.8% (95% CI; 5.2% to 8.8%) required surgery. 11

CAUSES OF LOWER GASTROINTESTINAL BLEEDING

The causes of LGIB vary significantly based on the age at presentation; for example, among those less than 60 years of age, the leading causes of LGIB include colitis (infective, ischemic, inflammatory bowel disease, or an undetermined cause) as well as benign anorectal disorders (hemorrhoids, anal fissures, solitary rectal ulcer syndrome). In contrast, among patients more than 60 years of age, the leading cause is diverticular disease. Some of the most common causes of LGIB include diverticulosis, ischemic colitis, hemorrhoids, colorectal polyps or neoplasms, angioectasias, postpolypectomy bleeding, and inflammatory bowel disease. An ore complete list of causes of LGIB is shown in Table 1. Interestingly, it has been reported that in up to 25% of cases of LGIB, no cause can be documented.

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