Management of Upper Gastrointestinal Bleeding

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KEYWORDS

• Hematemesis • Melena • Esophageal varices • Peptic ulcer • Small bowel

HOSPITAL MEDICINE CLINICS CHECKLIST

1. An upper gastrointestinal (UGI) bleed originates from any lesion occurring from the esophagus to the ligament of Treitz.
2. The initial management of UGI bleeding consists of assessing the severity of bleeding based on presence of hemodynamic compromise, history, and physical examination; resuscitating the patient as indicated, including administration of blood products; reversing any concurrent coagulopathy; and triaging the patient to the appropriate level of critical, inpatient, or outpatient care.
3. Esophageal varices are a major cause of UGI bleeding from the esophagus. These varices form as collateral circulation caused by portal hypertension that can be secondary to multiple causes, including cirrhosis, idiopathic portal hypertension, portal vein thrombosis, and schistosomiasis.
4. Mallory-Weiss syndrome is another form of UGI bleeding from the esophagus. The syndrome consists of longitudinal tears to the esophagus that typically occur from forceful retching. If concurrent with esophageal variceal bleeding, these lesions can add to the severity of UGI bleeding and the complexity of medical management.
5. Peptic ulcer disease (PUD) is the most common cause of UGI bleeding. This disease is most commonly associated with nonsteroidal antiinflammatory drug use and *Helicobacter pylori* infection; however, it can also arise from multiple causes, ranging from inflammatory and metabolic causes to physical stress and environmental factors.

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Disclosure: The authors have nothing to disclose.
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Hosp Med Clin 6 (2017) 261–282
http://dx.doi.org/10.1016/j.ehmc.2016.11.008

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6. In addition to PUD, gastric malignancies, Dieulafoy lesions, and Cameron lesions also represent causes of UGI bleeding from the stomach. Thorough history taking and physical examination can provide important information that can help predict among these different sources of gastric bleeding and guide appropriate management.
7. Sources of UGI bleeding from the small bowel include peptic ulcers of the duodenum, aortoenteric fistula, a rare but life-threatening late complication of abdominal aortic aneurysm surgical repair, and hemosuccus pancreaticus, which is a rare complication of pancreatitis.
8. Esophageal variceal hemorrhage is associated with high morbidity and mortality; thus, early endoscopy is recommended to achieve hemostasis via variceal ligation or sclerotherapy. Additional medical therapy for this variceal bleeding consists of octreotide infusion and, for patients with cirrhosis, antibiotics for prevention of spontaneous bacterial peritonitis even in the absence of ascites.
9. In contrast with esophageal variceal hemorrhage, UGI bleeding from Mallory-Weiss syndrome typically resolves spontaneously, hence the condition is managed conservatively with transfusion of blood products as needed.
10. Management of UGI bleeding caused by PUD largely consists of proton pump infusion followed by early endoscopy to achieve hemostasis as well as prevent risk of rebleeding. Hemostasis is typically achieved via coaptive thermal coagulation or clipping. Use of prokinetic agents, such as erythromycin, should be considered in patients with severe bleeding in order to optimize visualization of the gastrointestinal tract. Long-term prevention of rebleeding is best achieved with acid suppression therapy with proton pump inhibitors or H2-receptor antagonist.
11. Endoscopic ultrasonography is a useful tool in both diagnosis of UGI bleeding from gastric lesions. In cases of UGI bleeding caused by gastric malignancy, endoscopy is used as a diagnostic tool in the identification of suspicious masses, endoscopic ultrasonography to assess depth of lesion and invasion of adjacent structures for staging, as a means of obtaining tissue biopsy. Endoscopic ultrasonography can also be useful for other forms of gastric bleeding, such as Dieulafoy lesions, to detect lesions that are not initially visible.

DEFINITIONS

What is the definition of an upper gastrointestinal (UGI) bleed?

A UGI bleed is defined as a bleed originating from the esophagus to the ligament of Treitz. Clinicians must exclude alternative sources, such as bleeding from the oropharynx/nasopharynx in addition to hemoptysis, before moving down the management pathway for gastrointestinal (GI) bleeding.

EPIDEMIOLOGY

Patients with GI bleeding account for more than half a million hospitalizations annually.[1] Approximately 50% of hospitalizations for GI bleeding are caused by UGI lesions, 40% are caused by lower GI lesions, and 10% are caused by obscure