

35. GI Bleeding

Etiology & Pathophysiology

- Ranges from occult, microscopic bleeding to profuse hemorrhage
- May originate from anywhere in the upper (from the esophagus to the ligament of Treitz) or lower GI tract (distal to the ligament of Treitz)
- Sources of life-threatening upper GI bleeding
 - Peptic ulcer disease (most common cause of upper GI bleeding)
 - Esophageal varices, secondary to portal hypertension and cirrhosis
 - Mallory-Weiss tears, due to forceful vomiting
- Sources of life-threatening lower GI bleeding
 - Diverticular bleeding, due to erosion of a diverticula into a vessel
 - Angiodysplasia (arteriovenous malformation) is common in elderly
 - Aortoenteric fistula (GI bleeding in a patient with past aortic surgery should be assumed to be an aortoenteric fistula secondary to an infected aortic stent until proven otherwise—they often have a small herald bleed that precedes massive hemorrhaging)

Differential Dx

- Upper GI bleed
 - Peptic ulcer
 - Esophageal varices
 - Gastric erosions/gastritis
 - Mallory-Weiss tear
 - Esophagitis
- Lower GI bleed
 - Diverticulosis
 - Angiodysplasia (AVM)
 - Cancer/polyps
 - Anorectal disorders
 - Inflammatory bowel disease
 - Aortoenteric fistula
 - Infectious diarrhea

Presentation

- Symptoms may range from occult, microscopic bleeding or minor blood on toilet paper to frank bloody vomitus or bloody stools
- Signs of upper GI bleeding include hematemesis and melena (dark, tarry stools)
- Hematochezia (bright red blood per rectum) indicates a lower GI bleed or brisk upper GI bleeding
- Hypovolemia due to hemorrhage (e.g., pallor, dizziness, weakness, syncope) and signs of shock (e.g., hypotension) may be present
- Nonspecific complaints may include dyspnea, abdominal pain, chest pain, and fatigue

Diagnosis

- Tachycardia or orthostasis may occur with >15% blood loss; hypotension occurs with >40% blood loss
- History may reveal causative factors, such as medications (e.g., aspirin, NSAIDs, steroids, anticoagulants), alcohol use, liver disease, or bleeding diathesis
- Blood type and cross/screen should be immediately ordered
- PT/PTT may be prolonged due to a coagulation disorder
- BUN may be elevated in upper GI bleed
- ECG should be evaluated in the elderly, patients with a history of cardiac disease, and those who present with chest pain or shortness of breath
- NG tube may be inserted to aspirate and test gastric contents in order to identify if upper GI bleeding has occurred
- Endoscopy (done by gastroenterology) is the diagnostic and often therapeutic procedure of choice for upper GI bleeding
- Colonoscopy, angiography, and red cell bleeding scans are used to identify sources of lower GI bleeding

Treatment

- Establish 2 large bore IVs and bolus with normal saline
- Blood transfusion may be added if hypotension persists despite IV fluid administration (replenish platelets and fresh frozen plasma for every 6 units of blood given)
- NG tube placement is controversial; often used in cases of severe active bleeding or severe nausea/vomiting
- Medication is often used but lacks evidence for efficacy in most settings
 - Anti-acid therapy (proton pump inhibitors or H2 blockers)
 - Octreotide infusion (causes splanchnic vasoconstriction) may be of benefit for bleeding varices and ulcers
 - Vasopressin (causes splanchnic and systemic vasoconstriction) (may result in myocardial ischemia)
- Emergent endoscopy (i.e., with ligation or sclerotherapy) is the preferred treatment for severe upper GI bleeds
- Balloon tamponade with Sengstaken-Blakemore tube may also be used for uncontrolled variceal bleeding
- Severe lower GI bleeding may be controlled by arteriographic embolization
- Surgery may be required for any persistent uncontrolled bleeding

Disposition

- Gastroenterology and surgery consult in patients with moderate to severe bleeding
- Most patients with GI bleeding should be admitted
- Very low risk patients may be discharged (e.g., patients with hemorrhoids, fissures, or proctitis)
- Patients with normal vital signs, no comorbid conditions, negative gastric aspirate and normal stool guaiac, good medical access, and understanding of their condition can be discharged
- All patients with systolic BP <100, tachycardia, >4 units transfused, or active bleeding should be admitted to an ICU