

# GI Bleeding

*Summary from Rosen's By Meaghan Dehning*

## Epidemiology

- >1 million hospitalizations annually in the US
- Upper GI bleeds (proximal to ligament of Treitz) incidence is 165 per 100,000; 13-14%
- Lower GI bleeds (distal to the ligament of Treitz) incidence is 20.5 per 100,000; mortality 4%

## Pathophysiology

- Hematemesis – bloody or coffee-ground emesis. Occurs secondary to an upper GI bleed
- Melena – dark, tarry stools. Occurs secondary to upper GI bleed.
- Hematochezia – bright red or maroon blood per rectum. Most often occurs secondary to a lower GI bleed, but may be seen in rapid upper GI bleeds

## Differential Diagnosis\*\*\*

- Upper GI Bleed – Adult
  - Peptic ulcer disease (>50% of acute upper GI bleeds in ED)
  - Erosive gastritis (more common in inner city populations)
  - Esophageal varices (more common in inner city populations)
- Upper GI Bleed – Pediatric
  - Gastric/duodenal ulcers
  - Esophagitis
  - Gastritis
  - Esophageal varices\*
  - Mallory-Weiss tears
- Lower GI Bleed – Adult
  - Hemorrhoids
  - Colonic diverticula
  - Angiodysplasia
  - Colitis secondary to ischemia, infection, IBD
  - Aortoenteric fistula\*
- Lower GI Bleed – Pediatric
  - Anorectal fissures
  - Infectious colitis
  - Intussusception
  - Meckel's diverticulum
- Mimickers
  - Hematemesis – Epistaxis, dental bleeding, red food coloring
  - Melena - Bismuth and Fe containing medications
  - Hematochezia – vaginal bleeding, gross hematuria, partially digested foods (beets)

\*may rapidly lead to exsanguination and death.

## Signs and Symptoms

- Upper GI Bleed
  - Hematemesis
  - Melena
- Lower GI Bleed
  - Hematochezia (may be seen in rapid upper GI bleed)
- Physical Exam/Vitals
  - Hypotension and tachycardia suggest impending shock
  - Assess for pallor, cool/clammy extremities, ecchymoses/petechiae, jaundice, palmar erythema, spider angiomas

## Work-up

- Thorough History
  - Context i.e. recent history of severe retching
  - Quantity – passage of clots, streaks of blood on toilet paper (often better assessed via vitals)
  - Appearance – hematemesis, melena, hematochezia.
  - Past Medical History – assess for bleeding risk factors (NSAIDs, Coumadin), previous bleeding episodes, EtOH use\*\*
- Basic Laboratory Studies
  - Hemoglobin (<10 + correlate with increased rates of rebleeding and mortality), BUN (BUN:creatinine ratio >36 without renal failure is suggestive of upper GI bleed), coagulation studies, platelets
- Additional Studies
  - Occult blood/guaiaac testing (may have false positive with ingestion of red meat, turnips, horseradish, vitamin C)
  - EKG – especially in elderly or high risk for ischemic event
  - Abdominal CT – identify viscus perforations (no use for plain films)

## Empiric Management

- Type and screen or cross-match (If unstable O neg to women of childbearing age; O pos to others)
- Begin resuscitation
- Sengstaken-Blakemore Tube- bedside balloon tamponade if exsanguinating likely variceal bleed without immediate endoscopy available
- Medications
  - High dose PPI (80mg bolus omeprazole iv, 8 mg/hr x 3days)
  - Somatostatin and Octreotide – splanchnic vasoconstrictors that reduce portal hypertension. Begin empirically in GI bleeds with a history of EtOH or abnormal LFTs (50 microgram bolus, 50 micrograms/hour iv)

## Disposition

- Hemodynamically unstable with severe upper GI bleeding → urgent GI consult
- Lower GI bleed or exsanguinating → also consult surgery
- Ongoing bleeding, significant comorbidity → admit to ICU
- Identifying high risk patients – requiring a blood transfusion, endoscopy, or surgical intervention – using clinical and laboratory data to risk stratify
  - Blatchford score -99.6% sensitive
  - Rockall score – 90.2%

\*\*See table 30-2 in Rosen's for additional characteristics of high risk bleeders

\*\*\*See Figure 30-1 for helpful diagnostic algorithm