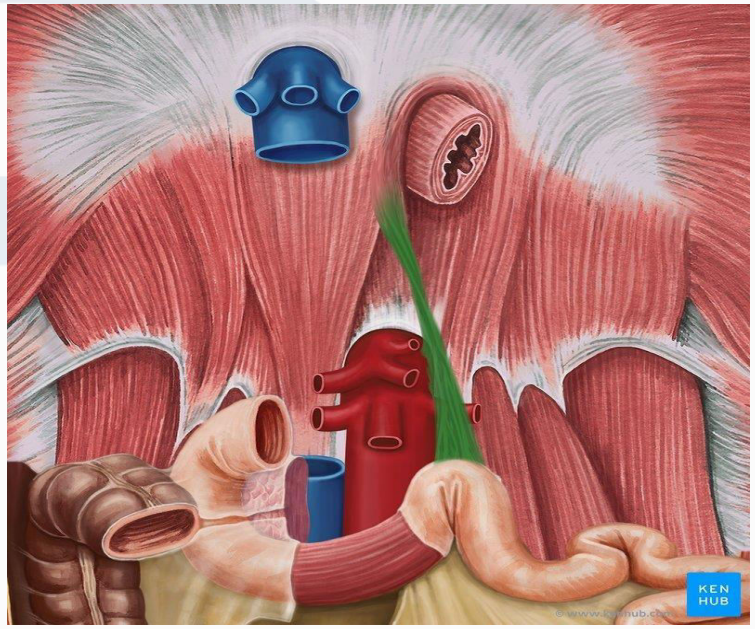
Clinical round in surgery

UGIB

Etiology

- **Definition**: Bleeding into the lumen of the proximal GI tract, proximal to the ligament of Treitz.



- **The common differential diagnosis of UGI bleeding?**
  1. PUD (Most common cause of significant UGI).
  2. Acute gastritis.
  3. Esophageal varices.
  4. Gastric ulcer.
  5. Mallory–Weiss tear.
  6. Tumor.

Presentation (History and physical)

- **What are the signs/symptoms?**
  Hematemesis, melena, syncope, shock, fatigue, **coffee-ground emesis**, hematochezia, epigastric discomfort, epigastric tenderness, signs of hypovolemia, guaiac-positive stools.

- **Why is it possible to have hematochezia?**
  Blood is a cathartic, and hematochezia usually **indicates a vigorous rate of bleeding from the UGI source**.

Presentation (History and physical)

- **History:**
- Use of: **NSAIDs, aspirin, anticoagulants, antiplatelet agents**.
- **Alcohol abuse**, previous GI bleed, **liver disease, coagulopathy**.

- **Physical:**
- **Tachycardia**; **orthostatic blood pressure changes suggest moderate to severe blood loss**; (hypotension may be late finding **hypotension suggests life-threatening blood loss** n healthy younger adult)
- **Rectal examination** is performed to assess stool color (melena versus hematochezia versus brown)
- Significant **abdominal tenderness** accompanied by signs of peritoneal irritation (eg, **involuntary guarding**) suggests perforation

Approach (Laboratory)

- **Which lab tests should be performed?**
  Chem-7, bilirubin, **LFTs, CBC, type and cross, PT/PTT**, amylase.
- **Why is BUN elevated?**
  Because of absorption of blood by the GI tract.

- **What about nasogastric lavage?**
- It may be helpful if the source of bleeding is unclear or to clean the stomach before endoscopy.

Approach

- **ABC:**

1. **Airway patency.**
2. **Breathing:** Provide a supplemental O2 if O2 sat< 94%.
3. **Circulation.**

What is the initial treatment?

1. **IVFs** (16 G or larger peripheral IVS × 2), **Foley** catheter (monitor fluid status).
2. **NGT** suction (determine rate and amount of blood).
3. **EGD:** endoscopy (determine etiology/location of bleeding and possible treatment—coagulate bleeders).

Approach

- Treat hypotension initially with rapid bolus isotonic crystalloid (e.g. 500-1000 NS) use smaller bolus if patient has compromise cardiac function.
- Transfusion:
- For severe, ongoing bleeding, immediately transfuse blood products in 1:1:1 ration of RBCs, plasma, and platelets, as for trauma patients.
- For hemodynamic instability despite crystalloid resuscitation, transfuse 1 to 2 units RBCs.
- For hemoglobin <8 g/dL (80 g/L) in high-risk patients (eg, older adult, coronary artery disease), transfuse 1 unit RBCs and reassess the patient's clinical condition
- For hemoglobin <7 g/dL (70 g/L) in low-risk patients, transfuse 1 units RBCs and reassess the patient's clinical condition
- Avoid over-transfusion with possible variceal bleeding
- Give plasma for coagulopathy or after transfusing four units of RBCs; give platelets for thrombocytopenia (platelets <50,000) or platelet dysfunction (eg, chronic aspirin therapy) or after transfusing four units of RBCs.
- Obtain immediate consultation with gastroenterologist; obtain surgical and interventional radiology consultation for any large-scale bleeding.

Approach

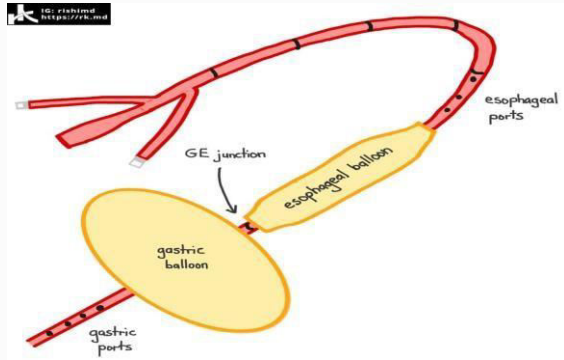
- **What is the diagnostic test of choice with UGI bleeding?**
  EGD (>95% diagnosis rate).
- **What are the treatment options with the endoscope during an EGD?**
  Coagulation, injection of epinephrine (for vasoconstriction), injection of sclerosing agents (varices), variceal ligation (banding).

Approach (Drugs)

- **Pharmacotherapy for all patients with suspected or known severe bleeding:**
- **Give a proton pump inhibitor:**
- **1. Evidence of active bleeding (eg, hematemesis, hemodynamic instability), give esomeprazole or pantoprazole, 80 mg IV**
- **2. No evidence of active bleeding, give esomeprazole or pantoprazole, 40 mg IV**

- **Endoscopy delayed beyond 12 hours, give second dose of esomeprazole or pantoprazole, 40 mg IV.**

Approach (Drugs)



- **Pharmacotherapy for known or suspected esophagogastric variceal bleeding and/or cirrhosis:**
- **Give somatostatin or an analogue (eg, octreotide 50 mcg IV bolus followed by 50 mcg/hour continuous IV infusion).**
- **Give an IV antibiotic (eg, ceftriaxone or fluoroquinolone.)**
- **Balloon tamponade may be performed as a temporizing measure for patients with uncontrollable hemorrhage likely due to varices using any of several devices (eg, Sengstaken-Blakemore tube, Minnesota tube); tracheal intubation is necessary if such a device is to be placed; ensure proper device placement prior to inflation to avoid esophageal rupture**

Treatment

- **What are the indications for surgical intervention in UGI bleeding?**
  Refractory or recurrent bleeding and site known, >3 unit PRBCs to stabilize or >6 unit PRBCs overall.
- **What percentage of patients require surgery?**
  ≈10%.
- **What percentage of patients spontaneously stop bleeding?**
  ≈80% to 85%.

Prognosis

- **What is the mortality of acute UGI bleeding?**
  Overall 10%, age 60 to 80 years 15%, age >80 years 25%.

- **What are the risk factors for death following UGI bleed?**

1. Age >60 years.
2. Shock.
3. >5 units of PRBC transfusion.
4. Concomitant health problems.

Case scenario

- A **68-year old male** presents to the ED with **complaints of fatigue, stomach pain, and vomiting for 3 days**. The patient reports that his **emesis appears brown and granular, similar to coffee grounds, and his stool is black and tarry**. He has a past medical history of **arthritis**, **GERD**, and hypertension.

Thank you