

Management of GI Bleeding

1. Upper GI bleed- bleeding above the Ligament of Treitz (junction btwn duodenum & Jejunum)

- Ulcers (peptic ulcers)- 35-62%
- Varices- 4-31% (these bleeds have a high mortality rate)
- Mallory Weiss Tear- 4-13%- bleed from retching & vomiting

PRESENTATION:

- 1- Hematemesis- bloody vomitus (bright red - coffee brown color)
 - 2- Melena- black, tarry, foul-smelling stool; normally indicative of upper GI bleed → blood turns black & tarry as it moves thru the GI tract (blood is a cathartic)
 - 3- Hematochezia- bright red or maroon blood from rectum; normally indicative of lower GI source
- 4- Laboratory Data-
- | | |
|--------------------------------------|---|
| -Low Hgb & Hct | Chronic- months of oozing; BP stable, low Hct, Hgb |
| -INR (↑'d if bleed is from warfarin) | Acute- ↓ blood flow to organs, low Hct, Hgb (aggressive tx) |
| -Prothrombin time | |
- 5- Vital Signs- tachycardia & Hypotension
- 6- Decreased blood flow:
- | | | |
|-------------|-------------|-------------------------------|
| -↑ BUN/ Scr | -↑ AST, ALT | -alt'd mental status |
| -angina s/s | -↓ CO | -* renal, liver, heart, brain |

2. List risk factors for GI bleeds

Risk factors for Bleeding

- Chronic NSAIDs, Warfarin, Plavix, etc
- steroids
- elderly
- H.pylori
- gastritis
- critical illness

Indicators for complication/Death

- More comorbid disease states (liver, renal, CA, CV)
- hemodynamically unstable- significant bleeding
- elderly
- shock (CV unstable)
- initial low Hgb/Hct or coagulopathy (hard to stop bleed)
- presentation of bleed (stools- less worry; vomiting- more concern)
- endoscopic finding
- continued or re-bleeding

3. Explain the treatment choices for peptic ulcer bleed vs. esophageal & gastric variceal bleeds.

I) Peptic Ulcer Bleed-

a) Acute goals of Therapy:

- 1- Resuscitate/ Stabilize patient: ABC
- 2- Diagnose problem- clinical presentation, endoscopy
- 3- Forrest Classification (for PUD)- pts at higher risk; determine endoscopic therapy
 - Forrest I: active bleeding (pts definitely get endoscopy)
 - Forrest II: bleeding stigmata
 - Forrest III: no bleeding sign; <5% risk of re-bleeding (no endoscopy)

c) Treatment:

- 1- Treat source of bleed: use endoscopy to treat active bleeding or visible vessel
 - thermal, injection therapy- like Epi, mechanical- clips, combo of 2 methods
- 2- 10-20% of pts will re-bleed; a second attempt at endoscopic therapy then surgery
- 3- Pharmacological:
 - a) Acid suppressive therapy: goal to maintain pH of 6 (pH > 6 necessary for platelet aggregation; clotlysis when pH <6)
 - PPI's are preferred ~ pantoprazole 80mg bolus followed by 8 mg/hr infusion for 72h after endoscopy
 - Use in combination w/ endoscopy (start PPI in pt awaiting endoscopy)

II) Varices

a) At risk: liver disease, Cirrhosis is most common cause of portal hypertension → causes development of esophageal & gastric varices. Portal HTN results from (1) ↑'d resistance to portal blood flow (2) ↑'d

-Variceal bleeds have a higher morbidity & mortality than other GI bleeds

-They occur in 25-35% of cirrhotic pts and of these, 30-50% are fatal; 70% will re-bleed w/in 1 yr

-Other risks:

- elevated portal pressures- >12mmHg; req's invasive monitoring (hard to measure)
- Variceal size- seen upon endoscopy
- Variceal wall & tension- particular finding seen upon endoscopy
- Severity of liver disease

b) Acute Goals of Therapy:

- 1- Resuscitate/ Stabilize pt: ABC
- 2- Diagnose problem: clinical presentation, endoscopy
- 3- Treat source of bleed: endoscopy → band ligation preferred over sclerotherapy
 - a) Band Ligation- banding device attached to tip of endoscopes
 - significantly lower complication rate than sclerotherapy & may further ↓ bleeding rate
 - b) Sclerotherapy- sclerosant solution is injected into bleeding varix or the overlying mucosa.
 - complications include fevers, chest pain, esophageal ulceration, stricture formation, recurrent bleeding, perforations
- 4- Control acute bleed: drug therapy w/ Octreotide (Sandostatin)
 - a) Octreotide- DoC
 - MOA: selective splanchnic vasoconstriction & reduces portal blood flow and pressure
 - 50 mcg bolus followed by 25-50 mcg/hr CI (continue for 1-2 days)
 - AE: GI disturbances (abdominal pain, N/V, diarrhea), hypo/hyperglycemia, hypothyroidism, altered absorption of dietary fats if used for long time
 - b) Vasopressin- used to be used to no longer suggested due to systemic side effects (peripheral vasoconstriction, myocardial, mesenteric, & limb ischemia, cerebrovascular accidents)
- 5- If pt fails endoscopy → interventional radiology or surgery
 - a) Transjugular Intrahepatic Portosystemic Shunt (TIPS)- emergent interventional radiology
 - nonsurgical method used to prevent rebleed in pts failing primary therapy
 - creates intrahepatic shunt which diverts portal blood into systemic circulation
 - 10-15% complication rate; 25% develop encephalopathy; 1/3 pts develop TIPS stenosis or occlusion by one year
 - b) Emergent surgery- transplantation; shunt operation (shunt portal blood to systemic circulation);
 - 10-40% develop encephalopathy w/ shunt; 50-80% mortality rate
- 6- **Balloon Tamponade → if pts is REALLY sick; not common**
 - applies direct pressure to bleeding varix w/ inflatable balloon fitted on specialized nasogastric tube.**
 - used as a rescue procedure or bridge to more definitive therapy (like TIPS or surgery)**
 - complications are gastric & esophageal ulcerations, aspiration pneumonia, and esophageal perforation**
 - 10-30% complication rate**
- d) Isolated Gastric Varices- higher risk of mortality than esophageal; early TIPS or shunt surgery is considered first line for isolated gastric varices (esophageal are most common, but can have these)

4. Develop a management strategy for acute GI bleeds, including stabilizing the pt, diagnosing, and treating the problem.

Goals of Therapy: Acute GI bleed

- stabilize/resuscitate pt if hemodynamically unstable
 - diagnose source of problem
 - treat source of bleed
- a) Stabilize/ Resuscitate:
 - Airway- intubation
 - Breathing- assess oxygen saturations
 - Circulation- assess vital signs, IV access, fluid resuscitation
 - Monitory Laboratory information (LFT, SCr)
 - b) Diagnose: Use Endoscopy:
 - early endoscopy preferred (w/in 24h)
 - used to define cause of bleeding, determine the prognosis, and administer endoscopic therapy