Quick Pimp: Acute Gastrointestinal Bleed

Brandon Masi Parker OMS IV POPPF @DidacticsOnline
• Where is all this blood coming from?
• Should we place an NG tube?
  – What will increase sensitivity of gastric lavage?
• Is this GI bleeder sick?
• What will the vitals look like?
• What labs should be sent?
• What medications should we give?
• Who to consult?
• Patient is dying and consultants are having an ice cream party...what can we do?
• How would you like to disposition this patient?
Where is blood coming from?

- Most likely upper GI.
  - Acute, massive upper GI: 40-150/100,000 persons
    - mortality rate: 6-10%
  - Acute, massive lower GI: 20-27/100,000 persons
    - mortality rate: 4-10%

- Assume upper
  - More likely, more dangerous, more we can do

- Assume varices
  - More deadly, more we can do
Should we place an NG tube?

NOOO!...it will break away a clot...
...and if you give ketamine their head will EXPLODE!

See next page for evidence based medicine
Should we place an NG tube?

• Firstly...NG tubes are SAFE. (even with suspected varices)

• Diagnostic Lavage with return of blood is fairly specific for upper GI bleed but NOT sensitive.

• In severe cases, an NG tube can remove large quantities of blood prior to intubation.
  – Not great literature to support this practice but anecdotally used and logically makes sense.

• Real-time information on re-bleed
With a negative diagnostic lavage, what finding will increase our sensitivity?

- **BILE.**
- Bile in lavage is a sign that the pylorus is open and we are returning fluids beyond gastric contents.
Is this GI bleeder sick?

• Glasgow-Blatchford Score
  – Score is equal to "0" if the following are all present: (>5 predicts 50% chance will need an intervention)
    • Hemoglobin level >12.9 g/dL (men) or >11.9 g/dL (women)
    • Systolic blood pressure >109 mm Hg
    • Pulse <100/minute
    • Blood urea nitrogen level <18.2 mg/dL
    • No melena or syncope
    • No past or present liver disease or heart failure
What will vitals look like?

• Hemorrhagic shock
  – Tachycardia
  – Narrow Pulse Pressure
  – Hypotension

• Pearl:
  – Pt’s with chronic liver dx and history of varices may be on Beta Blockers which can blunt their tachycardic response.
What labs should we get?

- CBC
  - Monitor H/H
  - Check for thrombocytopenia (<50)
- Type and cross blood for transfusion
- Coags
  - Indicator of liver disease
  - Risk of DIC
  - You want coagulation information on a bleeding patient. If the pt. is on anticoagulants or is essentially anticoagulated due to liver disease you will need to reverse this.
- LFTs
- Renal function (BUN/Cr)
- Fibrinogen
- Calcium
  - Monitor during massive transfusion because of citrated blood transfusions
- Gastrin?
  - Zebra type answer to check for gastrinomas that may cause UGIB
IS BUN/Cr helpful in GI bleeder?

• BUN/ Cr ratio >36
  – sensitivity of 90%
  – specificity of 27%
What medications should we give?

• Oxygen
• Octreotide- Variceal bleeding
  – Replaced vasopressin as it is more efficacious and less vasoconstriction related side effects
• Proton-pump inhibitors- PUD
• Antibiotics
• Oxygen
  – PREOXYGENATE in case they end up needing intubation
  – Also in pt’s with significantly decreased oxygen carrying capacity it is best to keep the hemoglobin that is still around well saturated with O2 to decrease the risk of ischemic injury.
• Octreotide
  – 50 mcg bolus then 50 mcg/hr
  – Effective in up to 80% of bleeds
  – Somatostatin analogue that induces strong, rapid and prolonged vaso-constriction.
  – Reduces portal and variceal pressures as well as splanchnic blood flow
  – Inhibits both acid and pepsin secretion thus theoretically preventing the dissolution of freshly formed clots at the site of bleeding.
• Proton-pump inhibitors
  – 80 mg over 10 minutes then 8 mg/hr x 72 hrs
  – PPIs help platelets stick, they can not do that in an acidic environment
  – Omeprazole before Endoscopy in Patients with Gastrointestinal Bleeding—Conclusions Infusion of high-dose omeprazole before endoscopy accelerated the resolution of signs of bleeding in ulcers and reduced the need for endoscopic therapy (Nejm 2007;356(16):1631-1640)
    • But patient-centered end points such as mortality, hospital length of stay, and required blood transfusions were not statistically different.
    • There was also an increase rate of rebleeding w/ use of PPIs

• Listen to SMART EM podcast...PPIs may cause more harm than good?
• Antibiotics
  – Prophylactically given, ideally prior to endoscopy, to prevent infections AND decrease risk of rebleeding.
  – Up to 20% of cirrhotic pt’s presenting with GI bleeding have a bacterial infection and up to 50% will develop an infection while hospitalized.
Who should we consult?

• GI
  – Endoscopy

• IR
  – If endoscopy fails
  – TIPS procedure
    • Has largely replaced selective arterial embolization and arterial vasopressin.
    • TIPS much better than endoscopy for variceal bleeding.

• Surgery
  – As last resort or if lower gastric varices are involved
Consultants are unavailable...what are we doing?

• Actively resuscitate **without** over resuscitation
  – Do not want to fluid over load these patients. In patients with variceal bleed a decreased BP can cause a decrease in blood loss.
  – pRBCs if Hg <7 or as part of massive transfussion
  – FFP when fibrinogen is <1g/dl or INR >1.5
    • 15 ml/kg
  – Platelets if <50 AND bleeding

• Balloon tamponade
How would you like to disposition this patient?

- Rockall score: < 3 = low risk of rebleeding or death and can be considered for early discharge.
  - Age
  - Signs of shock
  - Co-morbidity
  - Endoscopic diagnosis
  - Endoscopic stigmata of recent hemorrhage
Resources

- Sharara AI, et.al. Gastroesophageal Variceal Hemorrhage *NEJM* 2001; 345: 669-81