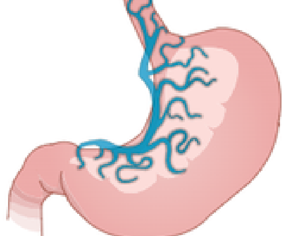


Acute Variceal Hemorrhage

Consider acute variceal hemorrhage in the differential diagnosis of any patient with cirrhosis and upper GI bleeding

#1) ABCs
- Transfusion threshold 70g/L*

*does not apply if massive bleed, history of ischemic heart disease

See more info in the 2013 NEJM Restrictive Transfusion paper

#2) Dosing of Pharmacological therapy
- **Antibiotic Therapy**

Ceftriaxone 1 gram IV daily until stable to be discharged from hospital or for a total of 7 days (whichever is shorter)
- **Pre-Endoscopy pre-motility agent**

In the absence of contraindications such as prolonged QT, Erythromycin 250 mg IV given 30-120 minutes pre-endo to facilitate gastric emptying
- **Vasoconstrictor Therapy**

Octreotide 50mcg IV bolus followed by a 50mcg/hour IV for 3-5 days OR Terlipressin if it is available

#3) Details of Endoscopic therapy - scope within 12 hours

Varices	Therapy
Esophageal varices OR GOV1 gastric varices	→ Endoscopic band ligation
GOV2 or IGV1 gastric varices	→ Endoscopic gluing

#4) This patient has decompensated cirrhosis
- Once the patient stabilizes, consider discussion with a liver specialist for management advice and potential transplant consideration

See Assess disease severity page

Successful control of bleeding?

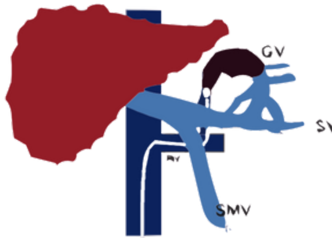
NO

Temporize with balloon tamponade
- Urgent assessment for Transjugular portosystemic shunt (TIPS) or retrograde transvenous obliteration (RTO)

Considerations for TIPS

Contact a hepatologist at a specialized tertiary care center with expertise in the procedure to determine if a TIPS is indicated

Consider BRTO in the following cases:
- Patients with bleeding from gastrofundal varices (GOV2 or IGV2)
- Presence of gastrorenal shunt on imaging (i.e. CT scan)
- Poor candidates for TIPS treatment
  - History of recurrent hepatic encephalopathy
  - Poor liver function
  - Poor heart function



YES

Considerations for a pre-emptive TIPS

For bleeding from esophageal varices:

If the Child-Pugh score is 10-13 (or 8-9 with active bleeding), seek Hepatology consultation as to whether a pre-emptive TIPS within 24-72 hours would be indicated (PMID 20573925, PMID 32980344)

*TIPS should only be carried out at a specialized tertiary care center with experience in the procedure

Initiate Secondary Prophylaxis

Secondary prophylaxis of Esophageal varices or GOV1 gastric varices

Use Endoscopic band ligation in combination with NSBBs

Endoscopic band ligation:
- every 4-8 weeks until variceal obliteration
- then in 3-6 months post-obliteration
- then 6-12 months indefinitely

Start one of the following Nonselective beta-blockers (NSBBs):
- Nadolol starting dose 20-40 mg PO QHS, maximum dose 80mg PO QHS if ascites and 160 mg PO QHS without ascites (dose to tolerance or heart rate 55-60, SBP>90)
- Propanolol starting dose 20-40mg PO BID, maximum dose 80mg PO BID if ascites and 160mg PO BID without ascites (dose to tolerance or heart rate 55-60, SBP>90)
- Carvedilol starting dose 3.125mg PO BID, target dose 6.25mg PO BID. Carvedilol has a more pronounced impact on the blood pressure than the NSBB, but can still be used in decompensated cirrhosis if it is tolerated.

See practical tips for NSBB use

What if your patient re-bleeds on secondary prophylaxis?

Consider RTO in the following cases:
- Patients with bleeding from gastrofundal varices (GOV2 or IGV2)
- Presence of gastrorenal shunt on imaging (i.e. CT scan)
- Poor candidates for TIPS treatment
  - History of recurrent hepatic encephalopathy
  - Poor liver function
  - Poor heart function

Considerations for TIPS

Contact a hepatologist at a specialized tertiary care center with expertise in the procedure to determine if a TIPS is indicated