Variceal Bleeding: Diagnosis and Management

- Gastroesophageal varices are present in 50% of patients with cirrhosis, and the presence of varices correlates with severity of liver disease:
  - 40% in Child Class A
  - 85% in Child Class C
- Varices develop and worsen in cirrhotic patients at a rate of 8% per year
- The risk of first variceal hemorrhage is about 15% per year with the greatest risk factor being the size of the varices
- If left untreated, late rebleeding occurs in 60% of patients in 1-2 years
- Variceal hemorrhages are associated with a mortality rate of 20% at 6 weeks

### Diagnosis

- **Gold Standard:** Esophagogastroduodenoscopy (EGD)
- Screening EGD at time of diagnosis of cirrhosis:
  - Repeat every 2-3 years for compensated cirrhosis without varices or
  - Every year for patients with varices or decompensated cirrhosis

### Acute Management

*(See Upper GI Bleed guideline for initial general management)*

- Management must be in ICU setting
- Initial stabilization:
  - Secure airway
  - Peripheral venous access
  - Volume resuscitation
- Transfuse blood products (goal hemoglobin of 8 g/dL)
  - FFP and platelets as needed
- Initiate prophylactic antibiotics to decrease rate of SBP and reduce rebleeding rate
  - Ciprofloxacin PO 400 mg BID x 7 days or
  - If unable to safely take oral, then IV ceftriaxone 1 g/day x 7 days
- Administer vasoconstrictor octreotide (50 mcg bolus followed by 50 mcg/hr continuous infusion):
  - Start as soon as variceal bleed is suspected (do not wait for EGD confirmation)
  - Continue for 3-5 days after hemorrhage
- Emergent endoscopy (within 12 hours) to identify source of hemorrhage, and intervention with band ligation (or equivalent therapies) of bleeding varices
- If unable to control bleeding with endoscopic banding:
  - Proceed to transjugular intrahepatic portosystemic shunt (TIPS) (IR procedure) or
  - Consider endoscopic gluing of gastric varices (N-2-butyl cyanoacrylate) or Interventional radiology consult for post-balloon-occluded retrograde transvenous obliteration (BRTO)
  - Balloon tamponade (if planning for more definitive therapy within 24 hours)
  - Obtain/consider Surgery consult

**Note:** The greatest risk for rebleeding is within 5 days of initial hemorrhage.

### Primary Prophylaxis

- **No varices:**
  - No need for prophylaxis
- **Small varices (low-high risk):**
  - Repeat EGD every 1-2 years
- **Medium or large varices:**
  - Nonselective beta-blockers or EGD for endoscopic variceal ligation (banding)

### Secondary Prophylaxis

*(Management after Variceal Bleeding)*

- Nonselective beta-blockers (titrate to maximal tolerated dose) AND repeat EGD for endoscopic variceal ligation (banding)
  - Repeated every 2-4 weeks until obliteration
- Consider TIPS for recurrent variceal bleeds despite pharmacologic and endoscopic variceal ligation prophylaxis
- Consider endoscopic glueing of gastric varices (N-2-butyl cyanoacrylate) or Interventional Radiology consult for post-balloon-occluded retrograde transvenous obliteration (BRTO)
- Refer for liver transplant evaluation
References


Quality Measures

- Percent of patients receiving prophylactic antibiotics (ciprofloxacin or ceftriaxone)
- Percent of patients receiving octreotide (started on presentation and continued 3-5 days)
- Percent of patients with endoscopy within 12 hours of admission
- Percent of patients discharged on beta blocker
- 30-day readmission rate
- Mortality rate (risk adjusted)
- Length of stay (risk adjusted)

Guideline Authors

- James Hanje, MD

Guideline Approved


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