GHAPP
Gastroenterology & Hepatology Advanced Practice Providers

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Management of Esophageal Varices

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Disclosures

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Disclosures

Jordan Mayberry, PA-C
Consultant: Intercept, Clinical Area: PBC, NASH
Complications of Cirrhosis Result From Portal Hypertension or Liver Insufficiency

- Portal hypertension
  - Variceal hemorrhage
  - Ascites
    - Spontaneous bacterial peritonitis
    - Hepatorenal syndrome
  - Encephalopathy
  - Jaundice

- Liver insufficiency

Cirrhosis
An Increase in Portal Venous Inflow Sustains Portal Hypertension

- Mesenteric veins
- Distorted sinusoidal architecture
- Portal vein
- Splanchnic vasodilatation
- ↑ Flow
Prevalence and Size of Esophageal Varices in Patients With Newly-Diagnosed Cirrhosis

A Threshold Portal Pressure of ~12 mmHg Is Necessary for Varices to Form

Varices Present (n=72)  Varices Absent (n=15)

Hepatic Venous Pressure Gradient (mmHg)

P<0.01

Varices Increase in Diameter Progressively

No varices  Small varices  Large varices

7-8%/year  7-8%/year

Merli et al. *J Hepatol.* 2003;38:266
Predictors of hemorrhage:
- Variceal size
- Red signs
- Child B/C

Large Varices Are More Likely to Rupture

2-year probability of first bleed:
- Small varices: 7%
- Large varices: 30%

Pre-Primary Prophylaxis

- Multicenter, randomized, placebo-controlled trial of timolol (non-selective beta-blocker) vs. placebo in patients

- Beta-blockers did not prevent the development of varices and were associated with a higher rate of serious adverse events

- Hepatic venous pressure gradient (>10 mmHg) was the strongest predictor of the development

No varices

Varices
No hemorrhage

Variceal hemorrhage

Recurrent hemorrhage

No specific therapy
Repeat endoscopy in 2-3 yrs*

* Sooner with cirrhosis decompensation
Treatment of Varices / Variceal Hemorrhage

- **No varices**
- **Varices**
  - No hemorrhage
  - variceal hemorrhage
  - Recurrent hemorrhage

Management depends on the size of varices
• Prevention of First Variceal Hemorrhage in Patients with small varices
  – NSSB is the recommended therapy for patients with high risk small EV
MANAGEMENT OF PATIENTS WITH MEDIUM/LARGE VARICES WITHOUT PRIOR HEMORRHAGE

Treatment of Varices / Variceal Hemorrhage

- No varices
- Small varices
  - No hemorrhage
- Medium/large varices
  - No hemorrhage
  1. β-blockers (propranolol, nadolol) indefinitely
  2. Endoscopic variceal ligation in patients intolerant to β-blockers
- Variceal hemorrhage
- Recurrent hemorrhage
• Prevention of First Variceal Hemorrhage in Patients with Medium or Large Varices
  – Traditional NSBBs or EVL
  – Choice of treatment should be based on patient preference and characteristics
  – Patients on NSBBs or carvedilol do not require serial EGD
  – Combination therapy NSBB plus EVL is NOT recommended in this setting
  – TIPS is not recommend in this setting

Hepatology, January 2017
Control of hemorrhage

Recurrent hemorrhage

Variceal hemorrhage

Medium/ large varices
No hemorrhage

Small varices
No hemorrhage

No varices

Control of hemorrhage

Treatment of Varices / Variceal Hemorrhage
Treatment of Varices / Variceal Hemorrhage

• General Management:
  – IV access and fluid resuscitation
  – Do not overtransfuse (hemoglobin ~ 8 g/dL)
  – Antibiotic prophylaxis

• Specific therapy:
  – Pharmacological therapy: Octreotide
  – Endoscopic therapy: ligation,
  – Shunt therapy: TIPS, surgical shunt

Hepatology, January 2017
Endoscopic Variceal Band Ligation

- Bleeding controlled in 90%
- Rebleeding rate 30%
- Compared with sclerotherapy:
  - Less rebleeding
  - Lower mortality
  - Fewer complications
  - Fewer treatment sessions
TIPS in the Treatment of Variceal Hemorrhage

• TIPS is rescue therapy for recurrent variceal hemorrhage
  – (At second rebleed for esophageal varices, at first rebleed for gastric varices)

• TIPS is indicated in patients who rebleed on combination endoscopic plus pharmacologic therapy

• In patients with Child A/B cirrhosis, the distal spleno-renal shunt is as effective as TIPS
  – (Dependent on local expertise)
Transjugular Intrahepatic Portosystemic Shunt

- Hepatic vein
- Portal vein
- Splenic vein
- Superior mesenteric vein
- TIPS (Transjugular Intrahepatic Portosystemic Shunt)
Treatment of Varices / Variceal Hemorrhage

- No varices
- Small varices
  - No hemorrhage
  - Small varices
  - Medium/large varices
    - No hemorrhage
    - Variceal hemorrhage
      - Recurrent hemorrhage

1) β-blockers + EVL may be preferable
2) TIPS / shunt surgery
• Treatment for Prevention of Recurrent Esophageal Variceal Hemorrhage
  – Combination of NSBB + EVL is first line therapy
    • Goal HR 55- 60 bmp
  – TIPS is rescue therapy for these patients
<table>
<thead>
<tr>
<th>Evolution of Varices</th>
<th>Level of Intervention</th>
<th>Management Recommendations</th>
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</thead>
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<td>Cirrhosis with no varices</td>
<td></td>
<td>• Repeat endoscopy in 2-3 years</td>
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<tr>
<td></td>
<td></td>
<td>• No specific therapy</td>
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<tr>
<td>Small varices No hemorrhage</td>
<td>Pre-primary prophylaxis</td>
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<tr>
<td>Medium / large varices No hemorrhage</td>
<td>Primary prophylaxis</td>
<td>• Repeat endoscopy in 1-2 years</td>
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<td></td>
<td></td>
<td>• Non selective beta-blockers</td>
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<td>Variceal hemorrhage</td>
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<td>• EVL in those intolerant to drugs</td>
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<td>Recurrent variceal hemorrhage</td>
<td>Secondary prophylaxis</td>
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<td></td>
<td>• Antibiotics in all patients</td>
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Case AO

Case Presentation

• A 64 year-old male executive was brought to the emergency room after a pre-syncopal episode in the bathroom. He had been a heavy drinker for over 30 years.

• Physical examination was significant for orthostatic hypotension, asterixis, icteric sclerae and black, tarry stool on rectal examination.
Case AO

Case Presentation

- Hgb 9 g/dL, albumin 3.2 g/dL, bilirubin 3.7 mg/dL, INR 1.2.
- Patient was resuscitated and started on prophylactic antibiotics.
- On endoscopy, three columns of large esophageal varices with red wale signs and gastric varices were seen. No active bleeding.
Case AO

Therapy?

What is the appropriate management of his varices?

- Pharmacological therapy alone?
- Endoscopic treatment alone?
- Endoscopic + pharmacological therapy?
- TIPS?
- Surgery?
Acute Therapy

- The source of bleeding is likely variceal given the absence of other lesions that could explain upper GI hemorrhage
- Octreotide infusion was initiated after an initial bolus
- Variceal band ligation of esophageal varices was performed
Case AO

Long-Term Therapy

- After 5 days without recurrent hemorrhage, patient was started on propranolol 40 mg p.o. BID

- Once HR indicated appropriate beta-blockade (55-60 bpm) patient maintained on this dose indefinitely

- Outpatient endoscopy with possible banding was scheduled