

Hypotension

Hippo-BP

Massive venous bleeding from esophageal varices often leads to hypotension, which can cause hypoperfusion of vital organs (e.g., brain, kidneys) and eventually death.

Acute Management

IV Fluids

IV Fluid Acute-angle

The acute management of esophageal varices starts with IV fluids, typically isotonic solutions, to raise/stabilize blood pressure and prevent end-organ hypoperfusion.

Antibiotics

ABX-guy

Patients with variceal bleeding should be given prophylactic antibiotics, preferably before endoscopy. IV broad-spectrum antibiotics such as ceftriaxone are typically used for this purpose. The goal is to complete a total of seven days of antibiotic therapy. Patients who are discharged before seven days are transitioned to oral ciprofloxacin to complete the seven-day course.

Octreotide

Octo-tree-ride

IV octreotide is often given for the management of acute variceal hemorrhage on the basis that it reduces portal venous pressure via splanchnic vasoconstriction and thus decreases shunting of the blood into the submucosal veins.

Endoscopic Band Ligation or Sclerotherapy

Line-gate and Skull-arrow-laser

Endoscopic band ligation or sclerotherapy may be used to reduce bleeding of varices in patients with cirrhosis. Ligation is done by placing an O-ring around the base of the enlarged vein, and sclerotherapy involves injecting a sclerosing agent into the base of the enlarged vein.

Balloon Tamponade

Balloon Tampon

Balloon tamponade mechanically compresses the varices, controlling hemorrhage. This procedure involves two balloons with three lumens, one for the gastric balloon, one for the esophageal and one for gastric aspiration (Sengstaken-Blakemore tube).

Prophylaxis

Nonselective Beta Blockers

Nonselective Beta-fish with LOL Blocks and Purple-axes

Nonselective beta-blockers (e.g., nadolol, propranolol) block the adrenergic dilatory tone in mesenteric arterioles, resulting in the unopposed alpha-adrenergic activity, which leads to vasoconstriction. This decreases blood flow from the systemic circulation into the portal circulation and thus reduces pressure in the portal system. Beta-blockers are used for prophylaxis of esophageal variceal bleeding.

Transjugular Intrahepatic Portosystemic Shunt (TIPS)

Q-TIPS with Shunt

TIPS, or transjugular intrahepatic portosystemic shunt, is a nonsurgical procedure that creates a shunt. This shunt connects systemic and portal venous systems, which redirects portal blood flow to reduce venous pressure and decrease portosystemic shunting. This is done by puncturing the wall of the hepatic vein and using a catheter to connect it to the portal vein. This procedure is contraindicated in those with severe hepatic encephalopathy since it may shunt excessive ammonia toxins to cerebral circulation.