

Esophageal Varices

Esophageal varices are venous varices localized in the submucosal layer of the esophagus. They are a consequence of portal hypertension. All the patients with esophageal varices have a risk of acute bleeding, which can be fatal. The most common cause of portal hypertension and esophageal varices is liver cirrhosis. 30–60% of patients with liver cirrhosis have a risk of esophageal varices bleeding^[1]. Rebleeding is very often (60–100% patients with a history of previous variceal bleeding will rebleed in 2 years)^[1].

Pathogenesis

Higher blood pressure in portal vein expands in all the veins that carry blood to the portal vein. There are anatomical junctions between gastric vein (→ portal vein) and esophageal vein (→ superior vena cava). These junctions are called portocaval anastomoses. Because of the higher venous pressure, these junctions become dilated, and this pressure can be transferred to esophageal veins as well. Esophageal veins are localized in submucosa, over the muscular layer of esophagus. There is scope for the development of varices, which can expand into lumen of esophagus. Their perforation and bleeding is just a question of time.

The esophageal varices bleeding is common in portal pressure higher than 12 mmHg^[2]. Normal venous pressure in portal vein is 5–10 mm Hg^[1].

Localization

These varices are usually localized in distal part of esophagus, at the esophago-gastric junction. They can rarely be found higher in the esophagus or lower in the stomach.

Clinical Features

Patients without acute bleeding

- liver cirrhosis symptoms;
- dysphagia;
- anaemia (microcytes) – sign of previous bleeding;
- previous hematemesis and/or melena.

Patients with acute bleeding

- hematemesis (then melena);
- hypotension;
- other signs of hemorrhagic shock^[1].

Diagnosis

Gastroscopy is the only diagnostic method, which can prove existence of esophageal varices (visualization) and bring therapeutic solution in the same moment.^[1]

Therapy

Conservative therapy

All the patients with esophageal varices which are not in direct danger of bleeding or patients with portal hypertension without significant varices should be treated for portal hypertension. All the patients with portal hypertension will develop varices (sooner or later...). The therapy of portal hypertension includes:

- **nonselective β -blockers** (propranolol, nadolol);
- **TIPS** – transjugular intrahepatic portosystemic shunt (which is not conservative therapy of course).

Acute bleeding therapy

Every patient suspected of esophageal varices bleeding should be hospitalized in ICU and treated like every patient with massive blood loss:

- central and peripheral intravenous catheter;
- blood loss replacement (but carefully – it can increase portal blood pressure);



Esophageal varices in gastroscopy.



Esophageal varices – ligation.

- vasopressin – for vasoconstriction in splanchnical circulation;
- antibiotic prophylaxis – these patients are at risk of infection.^{[2][1]}

Acute gastroscopy is necessary! It can be the only solution how to stop bleeding.

The endoscopic treatment methods are:

- **endoscopic variceal ligation (EVL)**, almost replaced other endoscopic methodes;
- balloon tamponade (Sengstaken-Blakemore or Minnesota);
- endoscopic sclerosis of varices.^[2]

Another treatment method is **acute TIPS or surgical shunt** (decompression of portal system).^[2]

Links

Related articles

- Portal Hypertension
- Gastroscopy

External links

- Esophageal varices ligation - images (<http://www.kolonoskopie.cz/odborne/ligace-jicnovych-varixu.aspx>)

References

1. ČEŠKA, Richard, et al. *Interna*. 1. edition. Prague : Triton, 2010. 855 pp. pp. 433-434. ISBN 978-80-7387-423-0.
2. KASPER, Dennis L – FAUCI, Anthony S – LONGO, Dan L, et al. *Harrison's principles of Internal Medicine*. 16th edition. New York : McGraw-Hill Companies, Inc, 2005. 2607 pp. pp. 1892-1896. ISBN 0-07-139140-1.



Esophageal varices – after ligation.