Guidelines on the diagnosis and treatment of bleeding into the digestive tract caused by portal hypertension

Doporučený postup pro diagnostiku a léčbu krvácení do zažívacího traktu při portální hypertenzi

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In the event of suspected bleeding into the digestive tract caused by portal hypertension, the Czech Society of Hepatology's working group for portal hypertension recommends the following set of diagnostic measures and treatments:

On first contact with the patient:
Assess the essential anamnestic data:
- Determine when bleeding started
- Estimate the extent of blood-loss
- Find out whether this is the first instance of bleeding, or a repeat occurrence
- Has there been any known occurrence of liver disease, alcohol abuse or use of medication?

Carry out a physical examination with emphasis on
- State of consciousness
- Blood pressure, pulse frequency, breathing frequency
- Symptoms of anaemia
- Physical examination of the abdomen

Implement
- Intravenous link
- Infusion of crystalloids or plasma expanders
- Intravenous administration of 1 mg terlipressin (Remestyp) while respecting contraindications
- Monitor basic vital functions during transport

On admission of patient to healthcare facility

Continue further treatment at an intensive care unit (ICU), preferably an internal one, with the option of urgent therapeutic endoscopy
- Apart from standard ICU examinations, assess rating according to Child-Pugh classification.
- Continue replacing intravasal volume/hemosubstitution with the aim of stabilising the patient's circulation. Haemoglobin levels should be maintained at 70–80 g/l with regard to ancillary illnesses and the patient's condition. There is insufficient data to make any unequivocal recommendations as regards treatment of coagulopathy.
- Standard administration of broad-spectrum antibiotics / chemotherapy according to the principles of antimicrobial prophylaxis. While most have experience with quinolones or cephalosporins (Ceftriaxone), a specific ATB should be selected based on the epidemiological situation in the

given region and healthcare facility and following consultation with the relevant ATB centre.

- Continue pharmacological treatment intravenously with 1–2 mg terlipressin every four hours; in the event of contraindications or adverse effects, administer 250 µg i.v. of somatostatin bolus and further 250 µg/hour on a continual basis or 25 µg/hour of octreotide (while respecting contraindications).
- Carry out endoscopic examination as early as possible, ideally immediately after the stabilisation of circulation.
- The aim of endoscopic examination is to: determine the source and level of bleeding and to carry out an endoscopic examination. Endoscopic band ligation of the varices is preferred for this treatment or, alternatively, endoscopic sclerotisation in situations where ligature is not technically possible or unavailable.
- Continue the administration of equal doses of vasoactive substances (terlipressin, somatostatin, analogue of somatostatin) for a period of 5 days.

In the event that bleeding from the oesophageal varices cannot be stopped during the initial endoscopy, then the temporary blockage of the varices using an inflated tamponade should be considered; the maximum blockage period is 24 hours. A possible alternative in this situation is the use of a self-expanding, coated oesophageal stent.

The failure of treatment (continued bleeding, haemodynamic instability, and recurrence of bleeding) is an indication for control endoscopy.

In the event of failure of the second therapeutic endoscopy and concurrent pharmacotherapy, carry out a portosystemic shunt, preferably a transjugular intraheptal portosystemic shunt (TIPS). In the event that TIPS is not feasible, then a surgical solution, preferably devascularisation, can be considered.

Continue to administer antimicrobial prophylactics and haemosubstitutes if necessary. An adequate energy supply must be provided. Treatment with diuretics is suitable for patients with tension ascites. Encephalopathy may be prevented through the use of lactulose.

Once acute bleeding has been stemmed

Following bleeding caused by portal hypertension

Every patient must be treated with the aim of preventing the recurrence of bleeding (secondary prevention). The cause of portal hypertension and hepatopathy must be subjected to close examination and the basic disease treated, including consideration of a liver transplant.

Secondary prevention

- Endoscopic treatment of the varices until varices have been eliminated (preferably using ligations).
- Constant administration of adequate doses of non-selective* beta blockers to achieve a heart rate reduction by 20% or to 55 beats/minute, while respecting contraindications. In the event that the hepatic venous pressure gradient (HVPG) can be measured, it is appropriate to verify the effects of the beta blockers with this examination.
- The combination of the endoscopic approach and the concurrent administration of beta blockers is likely the most suitable method of preventing repeat bleeding.
- Once eradication has been achieved, carry out endoscopic checks once every 6 months.
- In the event of a recurrence of bleeding during full secondary prevention, it is necessary to consider TIPS. In the event that TIPS is not feasible, an alternative for patients with Child-Pugh scores A and B is a surgical shunt; the type of procedure should be selected with regard to the possibility of a liver transplant.

Primary prevention (for patients who do not yet show bleeding from oesophageal varices)

- Patients with medium to large varices, patients with small varices with 'red marks' and patients with small, Child-Pugh C varices should be given preventative treatment with the aim of preventing initial bleeding.
- The sustained administration of non-selective* beta blockers under the same conditions as for secondary prevention is standard procedure.
- A suitable primary preventative procedure to use in the event of contraindications or intolerance towards beta blockers is endoscopic ligation of varices.

**In view of the fact that no beta blockers proved by long-term studies (i.e. propranolol and nadolol) are currently available in the Czech Republic, the use can be permitted, with certain reservations, of metipralol (Trimepranol; the disadvantage of this is its short half-life), atenolol (whose disadvantage is its selectivity) or carvedilol (of the available substances, this one seems the most suitable, even there is insufficient data available from long-term treatment).*

Literature

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