

## Summary:

**Aim:** Purpose of this study was to evaluate and to compare the treatment of patients with acute portal vein thrombosis (PVT) in a group with liver cirrhosis and in group without cirrhosis. Patients were treated with TIPS. The data in this study were collected retrospectively and prospectively.

**Methods:** Patients with PVT were selected from the group of patients treated with TIPS procedure between years 2000 and 2019. Patients with chronic PVT and portal cavernoma and patients with tumorous thrombosis were excluded. Patients with acute PVT were divided into two groups – group with liver cirrhosis (LC) and group without cirrhosis. We evaluated size and localization of thrombus. In a group of patients who underwent thrombolysis (TL) for the portal vein (PV) recanalisation we evaluated amount and severity of hemorrhagic complications. We also evaluated primary patency, primary assisted patency and secondary patency of shunt. Thirty-day and 1-year mortality was observed in the group with the LC and without LC and survival was assessed in the whole group and separately in both subgroups. We used the same technique to gain access to PV in all patients. Shunt in the liver parenchyma was created using bare metal stent or stentgraft.

**Results:** The whole group with acute PVT treated with TIPS consisted of 74 patients. In the group A were 60 patients and in this group was more men. In this group 64 % of patients had partial thrombosis of the PV trunk (type 1.) and 28 % of patients had type 3 thrombosis of the PV. The indications for TIPS were complications of PH (variceal bleeding in 60% and refractory ascites or fluidothorax in 35%). Thrombus was in 32% covered with the stent and in 38% dissolved after treatment with low molecular weight heparin (LMWH). Recanalisation of PV was done in 1 patient by TL in the group with LC. In the group B was 14 patients without LC. They suffered from procoagulation disease such as hepatic veins thrombosis associated with PVT (22 %) and polycythaemia vera (22%). In this group were more women and the mean age in this group was lower than in the group with LC. These patients had complete thrombosis type 3 in 86%. In 10 patients from the whole group we had to use the local TL with mechanical thrombectomy to restore the flow in the PV. In this group we observed higher hemorrhagic complication rate comparing to group without TL. All these complications were treated conservatively or endovascularly. Patients in the group with TL had similar rate of 30-day mortality.

**Conclusion:** Patients with portal vein thrombosis without liver cirrhosis in our group were more frequently women. Mean age in this group was lower than in the group with LC. Patients in this group had large PV thrombosis presenting with abdominal pain as a main symptom. In these patients using local thrombolysis for recanalisation of PV was more successful. On contrary the patients with PVT and liver cirrhosis were more frequently men. Mean age in the group was higher than in the group without LC. Patients had thrombus localised on the wall of PV trunk (type 1). Indication for TIPS was gastrointestinal bleeding and the thrombus was dissolved after TIPS procedure.

**Key words:** transjugular intrahepatic portosystemic shunt, portal hypertension, portal vein thrombosis, thrombolysis