

Bailout Stenting Technique Application in Treatment of Ruptured Cerebral Aneurysms

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Introduction. Endovascular treatment of ruptured aneurysms is recommended by simple technique using coil embolization or balloon assisted coiling. Use of stents in acute patients may be complicated due to necessity of antiaggregation during procedure and after with enlarged bleeding risk.

Aim, Materials and Methods. The aim of the study is to determine patients who underwent endovascular treatment using stents as a bailout technique and verify complication rate and clinical outcome during and after endovascular operation. Patients were selected from the database of endovascular aneurysm treatment at Riga Eastern Clinical University Hospital from January 2015 to December 2016.

Results. Retrospective analysis was applied. 8 patients (6.45 %) of 124 aneurysms were treated using bailout stenting technique, including 7 females and one male in age group from 35 to 78 years. From 8 cases 6 (75 %) patients were treated in acute rupture stage with Glasgow coma scale on admission 6 to 14. All patients had wide neck aneurysms with dome-to-neck ratio < 1.2 and complex anatomy. In 5 cases aneurysm was localized on internal carotid artery and 3 cases in middle cerebral artery. All embolization were completed with complete occlusion of the sac. Patients received the same antiaggregation regime including bolus and perfusion of eptifibatide according to patient's weight without any local cerebral or distal hemorrhagic event. No neurologic deficit with complete patient recovery and mRS 0 on discharge was achieved in 5 cases (62.5 %) from all patients.

Conclusions. Bailout stenting is a saving technique in acute and nonruptured aneurysm treatment without increase of haemorrhagic complications. It helps to avoid coil protrusion in the lumen of the parent artery avoiding thromboembolic events.