

INTRAVENTRICULAR THROMBOLYSIS IN PATIENTS WITH ANEURYSMAL SUBARACHNOIDAL HAEMORRHAGE – SINGLE CENTRE EXPERIENCE

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Aim: Intraventricular haemorrhage (IVH) is one of the possible complications of aneurysmal subarachnoidal haemorrhage, contributing in worse outcome of affected patients. Usual treatment of IVH is external ventricular drainage (EVD), which allows drainage of haemorrhagic cerebrospinal fluid, prevents the development of hydrocephalus, and at the same time allows intracranial pressure monitoring. However, it can not help in clot resolution and even often becomes obstructed by blood clots. Intraventricular fibrinolysis, namely using of low-dose tissue plasminogen activator (rtPA) delivered through the drainage-catheter into the ventricles, showed clear association with mortality reduction as well as better clinical outcome in certain subgroups of patients with IVH. Aim of this presentation is to show the results of our prospective clinical observational study of intraventricular thrombolysis, performed according to our protocol on patients with aneurysmal subarachnoidal haemorrhage. Protocol was approved by Hospital Ethical Committee in November 2011., and in this work we present the results on 21 patients.

Methods: Patients with aneurysmal subarachnoidal haemorrhage were treated according to our diagnostic and therapeutic algorithm. After the initial CT scan and CTangiography, they were selected either to endovascular or neurosurgical treatment of aneurysm. Endovascularly treated patient were followed up in our (neurological) intensive care unit. According to protocol, a control CT scan was performed immediately after the procedure, and indication for EVD considered. In patients with IVH and hydrocephalus, EVD has been put by neurosurgeon. After catheter placement control, intraventricular thrombolysis has been performed according to protocol (up to three doses, each 12 hours, CT scan control at least after second dosage).

Results: We present clinical and radiological results of our selected patients, and discuss the rate of catheter obstruction, good outcome (mRS up to 2) and mortality, as well as possible complications of this treatment.

Conclusion: Intraventricular thrombolysis is safe and effective method for preventing EVD obstruction and clearing intraventricular haemorrhage in patients with aneurysmal subarachnoidal haemorrhage after endovascular procedure.