LARGE NECK ANTERIOR COMMUNICATING ARTERY ANEURYSM TREATED WITH WEB: AN UNUSUAL APPROACH

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The Woven EndoBridge Device (WEB) is efficient and safe in the treatment of wide-neck bifurcation intracranial aneurysms. An important step in operative planning is establishing the appropriate dimension of the device, and achieve a good aneurysm catheterization. We describe a case of an anterior communicating artery wide-neck aneurysm treated with WEB with a challenge catheterization.

The treatment was planned with a WEB SL 10x8. For this device deployment was necessary a 0.033" inner diameter microcatheter. This microcatheter has a specifically engineered reinforced distal portion that allows device’s recapture and redeployment, but can make catheterization harder. The aneurysm catheterization was only possible after two 0.014” guidewires were advanced beyond anterior communicating artery. After this maneuver, the WEB was then deployed. Control cerebral angiogram at 3 months post-operatively revealed complete aneurysm occlusion. This experience showed that WEB can achieve good results for aneurysm greater than 10,0mm and sometimes and navigation could be the most complex step of the procedure. Two 0.014” guidewires can be an alternative when using 0.033” inner diameter.

EVALUATION OF EFFECTIVENESS AND SAFETY OF THE CORPATH® GRX SYSTEM IN ENDOVASCULAR EMBOLIZATION PROCEDURES OF CEREBRAL ANEURYSMS

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Introduction Robotic assisted endovascular intervention for percutaneous coronary and peripheral interventions has been available for several years. Robotic assisted neurointervention is a recently available technology with exciting future applications in the treatment of neurovascular diseases.

Aim of the Study The objective of this study was to evaluate the effectiveness and safety of robotic-assisted platform Corpath GRX (Corindus Vascular Robotics of Siemens Healthineers, Newton, Massachusetts) for treating cerebral aneurysms.

Methods This prospective, international, multi-center study included 113 patients (88% males) with ruptured wide-necked aneurysms, account for 0.5–2% of ruptured intracranial aneurysms. Treatment options are complex and controversial, particularly regarding the timing of endovascular therapy. We prefer to treat these aneurysms at least a week after ictus, after balancing the risks of bleeding, vasospasm, and anticoagulation.

Aim of study A tertiary neuroscience centre’s experience treating ruptured BBAs with an emphasis on endovascular treatment.

Methods Clinical records of all patients with subarachnoid haemorrhage secondary to ruptured BBAs presented to our institution between September 2014 and December 2021 were retrospectively reviewed. Data collected included details of aneurysms and treatment, clinical outcomes and follow-up imaging.

Results We included 19 patients. 14 patients (74%) were treated with endovascular flow diversion, 3 patients (16%) had endovascular coiling and 2 patients (10%) underwent surgical clipping. The median (IQR) time from admission to flow diversion treatment was 8 (4.5 to 12.5) days, during which no patient rebled. No haemorrhagic or thromboembolic complications occurred intraoperatively. All patients had clinical and MRI follow-up over an average of 18 months (range 6–60 months), with complete aneurysm obliteration noted in 17 patients (88%), and residual but stable aneurysm neck in 2 patients (12%). In clinical follow-up, 94% of patients (N=18) had a modified Rankin score of 2 or less after 180 days. No deaths were associated with the subarachnoid haemorrhage or treatment.

Conclusions Our endovascular treatment approach for ruptured aneurysms is safe and effective, with a low risk of procedural complications and favourable clinical outcomes.