

P-030 MECHANICAL THROMBECTOMY IN MEDIUM VESSEL OCCLUSIONS USING THE NOVEL ASPIRATION MIVI Q CATHETERS: AN INTERNATIONAL MULTICENTER EXPERIENCE

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Introduction Medium vessel occlusions (MeVO) comprise a large proportion of all acute ischemic stroke (AIS). Approximately half of these patients do not achieve recanalization with intravenous alteplase alone. New endovascular technologies to provide recanalization in these patients represent an important frontier for the future of stroke care. The MIVI Q catheters have a novel design that optimizes the suction forces without an increase in lumen diameter, making it a promising tool for the treatment of MeVOs. We performed a multicenter study of Q catheters for the treatment of MeVOs, aiming to evaluate its efficacy and safety.

Methods Databases of 3 United States and 2 United Kingdom centers were retrospectively reviewed. Patients with MeVO treated with Q catheters were included. MeVO was defined as occlusion of M2-M3, anterior cerebral artery, or posterior cerebral artery, and classified as primary (without proximal large vessel occlusion [LVO]) or secondary (with proximal LVO). Patients characteristics, procedural information, angiographic and clinical outcomes were extracted. Angiographic outcomes were based on modified Thrombolysis in Cerebral Infarction (mTICI), with successful recanalization defined as mTICI ≥ 2 b. Clinical outcomes at 90-days were based on modified Rankin Scale (mRS). First pass effect (FPE) and modified FPE (mFPE) were defined as single-pass with Q catheter in the distal occlusion achieving mTICI ≥ 2 c and mTICI ≥ 2 b, respectively.

Results

Sixty-nine patients were included Median age was 71 years (IQR 56–82.5) and 52.2% were males. Most frequent comorbidities were hypertension (59.4%) and atrial fibrillation (39.1%). Sixty-five (94.2%) patients had pre-stroke mRS ≤ 2 . Median NIHSS at admission was 14 (IQR 8.5–23). Median ASPECTS was 9 (IQR 8–9). Primary and secondary MeVOs represented 47.8% and 52.2%, respectively. Femoral approach was used in 92.8% of patients, with remaining being treated via radial access. A different device was used in attempt to recanalize the distal occlusion in 8.7% of occlusions. Q catheters used were Q3 (47.8%), Q4 (33.3%), Q5 (10.1%) and Q6 (8.7%). Successful recanalization (mTICI ≥ 2 b) was achieved in 92.8%. The rate of FPE was 47.8% and mFPE was 68.1%. Balloon-guide catheters were used in only 7.2% of cases. Only 2 (2.9%) intraprocedural complications occurred, being one severe vasospasm and one ICA dissection caused by an exchange wire. The rate of any post-procedure intracranial hemorrhage was 13%, and PH2 rate was 2.9%. Follow-up at 90-days is currently available for 54 patients, of which 50% achieved mRS ≤ 2 . Primary and secondary MeVOs were not significantly different regarding age, comorbidities, pre-stroke mRS ≤ 2 , median ASPECTS, approach used, median number of passes, use of BGC, mTICI ≥ 2 b, FPE, mFPE, any intracranial hemorrhage and PH2 rates. The median NIHSS at admission

was significantly higher in secondary than in primary MeVOs (19.5 vs 12, $P=0.009$). The rate of mRS ≤ 2 at 90-days was significantly higher in primary than in secondary MeVOs (77.3% vs 31.3%, $P=0.002$).

Conclusions Treatment of MeVO patients with Q catheters resulted in optimal angiographic and clinical outcomes. Though angiographic results were similar between primary and secondary MeVOs, the first had less severe presentation and better outcomes at 90-days than the latter.

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P-031 END ARTERY LOCATION OF THROMBUS PREDICTS POOR NEUROLOGICAL OUTCOME DESPITE SUCCESSFUL THROMBECTOMY FOR ANTERIOR CIRCULATION STROKE

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Background Despite successful endovascular thrombectomy for acute ischemic stroke, a significant proportion of patients still fail to demonstrate functional independence at 90 days and show fast and early progression of infarct volume after thrombectomy. Several factors have been proposed to influence the fast progression of infarct volume after successful recanalization including collateral score and post-procedural hemorrhage. In this work, we compare clinical and technical outcomes in