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PROCEDURAL AND FUNCTIONAL OUTCOMES FOR ASPIRATION THROMBECTOMY IN ACUTE ISCHEMIC STROKE PATIENTS WITH DIFFERING CLOT DWELL TIMES: A SUBSET ANALYSIS FROM THE COMPLETE REGISTRY

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Introduction Longer clot dwell times following acute ischemic stroke (AIS) are potentially associated with poorer outcomes in patients treated with aspiration thrombectomy (AT).

Aim of the Study Evaluate the safety and efficacy of AT in AIS across differing clot dwell times.

Methods A subset analysis from a global prospective registry of adults with AIS (COMPLETE) was performed to evaluate impact of clot dwell time on functional outcomes following AT with the Penumbra System. Inclusion criteria were M1 occlusion, witnessed stroke, baseline mTICI 0–2a, and onset to puncture time of 0–24 hours. Patients with multiple emboli, proximal stenosis, or tandem lesions were excluded.

Results Among 148 patients included (mean age 67.4, 57% female), 67 had clots ≤3 hours and 81 had clots >3 hours. Older clots had lower ASPECTS (median 8.0 [IQR 6.0, 9.0] versus 9.0 [8.0, 10.0] $p=0.0003$) and higher NIHSS (13.0, [9.0, 18.0] versus 16.0 [11.0, 20.0] $p=0.0005$) at baseline. Older clots required more passes (2.0 [1.0, 3.0] versus 1.0 [1.0, 2.0], $p=0.0066$), and time to mTICI 2b-3 reperfusion (median 27.0 [17.0, 42.0] versus 17.0 [13.0, 29.0] minutes, $p=0.0094$). Each hour increase in dwell time reduced odds of functional recovery (90-day mRS 0–2) by 12% (OR 0.88; 95% CI 0.661, 0.989; $p=0.0388$) with no significant difference in mortality. Older clots were associated with more safety complications and longer hospital stays.

Conclusions Patients with longer clot dwell times were associated with more attempts and longer time to achieve reperfusion, more post-procedure complications, and lower likelihood of functional recovery.

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EP59

SUCCESSFUL MECHANICAL THROMBECTOMY AFTER MICROSURGICAL CLIPPING OF A RUPTURED MIDDLE CEREBRAL ARTERY ANEURYSM

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In case of acute thrombotic occlusion of the parent artery after microsurgical aneurysm clipping an endovascular

mechanical thrombectomy is an essential technique to achieve vascular recanalization. However a procedure-related rerupture risk should be considered, especially when using a stent retriever.

To demonstrate the feasibility and safety of mechanical thrombectomy for vessel occlusion after clipping of a ruptured aneurysm of the middle cerebral artery (MCA) trifurcation.

We report about a 62 year old woman who was brought to the emergency room after being found down at home. On admission she was somnolent but accessible with mild focal neurological deficits. A computed tomography of the brain revealed a right temporal hematoma with subarachnoid and intraventricular hemorrhage due to a ruptured saccular aneurysm of the MCA trifurcation. A surgical approach was considered best treatment option and microsurgical clipping was performed. Intraoperative microvascular Doppler depicted a spontaneous thrombus formation in M1-Segment and the patient was transferred to the angio-suite for a mechanical thrombectomy.

Cerebral angiography demonstrated occlusion of the M1-Segment on the right site. After two failed contact aspiration thrombectomy attempts, a combination of stent retriever and aspiration was performed. A microcatheter was advanced into the M2-Segment and a Solitaire device was deployed from the middle M2-Artery to M1-Segment. Postthrombectomy imaging demonstrated TICI 2b recanalization. There were no procedure related complications, no perforation and no vasospasm. The treated aneurysm was completely obliterated.

Stent-retriever revascularization is a safe, feasible and effective treatment option for acute thrombotic occlusion of the parent artery after microsurgical aneurysm clipping.

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EP60

ENDOVASCULAR THROMBECTOMY IN POSTERIOR CIRCULATION STROKE AT SAINT PETERSBURG VASCULAR CENTER

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We performed a retrospective study of 211 patients (128 male and 83 female, m.age 68 years) with acute LVO in posterior circulation. These patients with ischemic stroke underwent EVT in regional vascular centers.

Results In most cases (80.6%), the clots were removed by thromboaspiration as the first-line reperfusion method, and in 12.8% of cases – using stent retrievers. Although the need to change the reperfusion method was higher with stent