

affected stroke territories, post revascularization mTICI outcomes as well as the pertinent devices are presented and discussed.

Results In our series of 41 patients with emergent small vessel occlusions of the anterior and posterior circulation, 6 ACA and 3 PCA branches occlusions are described. Age on admission was distributed as 68 ± 16 years (mean \pm SD), and approximately 51% were male. mTICI revascularization was possible in 41% with at least 50% recanalization in 93%.

Conclusions Mechanical revascularization for emergent small vessel occlusions is a viable intervention alternative with minimal post procedural risk profiles in patients.

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E-114 PREDICTORS OF POOR OUTCOME AFTER SUCCESSFUL MECHANICAL THROMBECTOMY OF ANTERIOR CIRCULATION LARGE VESSEL OCCLUSIONS WITHIN 6 HOURS OF SYMPTOM ONSET

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Introduction Successful recanalization is a significant predictor of a good clinical outcome after mechanical thrombectomy (MT). However, some patients have a poor clinical outcome even with complete revascularization.

Objective We aimed to study the clinical, imaging, and procedural factors that predict a poor clinical outcome (90-day modified Rankin Scale \geq 3) in patients with anterior circulation large vessel occlusion (LVO) who undergo successful MT within 6 hours of symptom onset.

Patients and methods We performed a retrospective review of all patients who underwent MT within 6 hours of symptom onset for an anterior circulation LVO at our institution between May 2016 to June 2018. Poor outcome was defined as a modified Rankin Scale equal or more to three at 90 days.

Results A total of 56 patients met criteria for inclusion in this study. A poor outcome occurred in 31 (55.4%) patients. On univariate analysis, compared to patients with good clinical outcomes, patients with poor outcomes had higher mean NIHSS scores on presentation (23.3 vs. 13.8, $P < 0.001$), were more likely to have internal carotid artery (ICA) occlusions (38.7% vs. 8%, $P = 0.008$), and had a higher incidence of distal clot migration (DCM) after MT (48.4% vs. 8%, $P = 0.028$). Age, gender, other baseline clinical characteristics, the method of revascularization, and incidence of hemorrhagic transformation did not differ between the two cohorts. Using multivariate regression analyses, baseline NIHSS score, site of occlusion, and the presence of DCM remained significant predictors of a poor clinical outcome at 90 days ($P = 0.001$, $P = 0.026$, and $P = 0.04$, respectively).

Conclusion Baseline NIHSS score, ICA occlusion, and DCM are independent predictors of a poor outcome after MT for anterior circulation LVO performed within 6 hours of symptoms onset.

All values are presented as the number of patients (n) and percentage (%) unless indicated otherwise. Boldface type indicates statistical significance.

Abstract E-114 Table 1 Baseline characteristics, angiographic findings and clinical outcome

	Good Outcome N=25	Poor Outcome N= 31	P value
Age (years)	65.2 \pm 15.1	68.4 \pm 14	0.40
Mean \pm SD			
Gender	10 (40%)	17 (54.8%)	0.27
Atrial fibrillation (AF)	12 (48%)	12 (38.7%)	0.49
Arterial hypertension	20 (78.8%)	23 (80%)	0.61
Diabetes mellitus	4 (16%)	7 (22.6%)	0.54
Time LKW (min)	215.8 \pm 75	228.2 \pm 77.9	0.55
Mean \pm SD			
ASPECT score (Mean \pm SD)	9.4 \pm 0.7	9 \pm 1.1	0.14
Prior rTPA administration	17 (68%)	23 (74.2%)	0.61
Baseline NIHSS score	13.8 \pm 5.7	21.3 \pm 5.3	<0.001
Mean \pm SD			
Site of occlusion:			0.008
ICA	23 (92%)	19 (61.3%)	
MCA			
Tandem lesion	1 (4%)	6 (19.4%)	0.09
Technique	17 (68%)	25 (80.6%)	0.28
Stentriever	8 (32%)	6 (19.4%)	
Aspiration			
Number of passes	1.9 \pm 1.4	2.3 \pm 1.8	0.61
Mean \pm SD			
Puncture to recanalization (min) Mean \pm SD	37.1 \pm 23.3	51.1 \pm 36.7	0.16
TICI score \geq 2b	24 (96%)	26 (83.9%)	0.15
Hemorrhagic transformation	7 (28%)	14 (45.2%)	0.19
Symptomatic hemorrhagic transformation	2 (8%)	6 (19.4%)	0.23
Distal clot migration	5 (20%)	15 (48.4%)	0.028
NIHSS score after procedure	3.2 \pm 3.7	17.7 \pm 5.5	<0.001
Mean \pm SD			

Abstract E-114 Table 2 multivariate analysis for predictors of poor outcome

	Odds ratio	95% Confidence interval	P value
Baseline NIHSS score	1.3	1.11–1.52	0.001
Site of occlusion (ICA)	8.9	1.3–60.9	0.026
Distal clot migration (DCM)	5.77	1.09–30.69	0.04

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E-115 INTRACRANIAL SALVAGE TECHNIQUES IN REFRACTORY THROMBECTOMY: WHO, WHEN AND HOW?

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Purpose Emergent large vessel occlusion due to underlying vessel wall pathology may be refractory to the endovascular

stroke thrombectomy requiring further intracranial interventions to achieve successful recanalization. The aim of our study was to determine the prevalence of refractory thrombectomy requiring further intervention, compare their baseline characteristics, adjunctive intracranial interventions, and outcomes.

Methods We retrospectively reviewed 253 patients treated with mechanical thrombectomy for ELVO from Jan 2015 to December 2019. Refractory thrombectomy was defined as patients requiring emergent intracranial angioplasty/stenting, intraprocedural antiplatelet therapy, or patients suffering reocclusion in the same artery within one day of the procedure. Baseline characteristics and outcomes were compared between the refractory and the standard treatment groups using Mann-Whitney and Fisher Exact and Chi square tests. Outcomes were also compared within the refractory group undergoing different treatment modalities. Favorable outcome was defined as mRS ≤ 2 after 3 months.

Results Refractory thrombectomy was identified in 22 cases (8.7%) with no statistically significant differences in baseline characteristics, median NIHSS score (15 vs. 17, $P=0.14$), and percentage of favorable outcomes (42.1% vs 51.9%, $P=0.48$) versus the standard thrombectomy group, respectively. Patients in the refractory cohort had a significantly higher prevalence of diabetes (45.5% vs. 19.9%, $P=0.013$), while the standard group patients presented with significantly higher rates of atrial fibrillation (47.8% vs. 18.2%, $P=0.007$). Diabetes was the sole independent predictor of refractory thrombectomy with OR 3.436 (95% CI: 1.190–9.524, $p=0.017$). Within the refractory group, 9 patients were treated with intracranial stenting (40.9%), 7 received intra-arterial/intravenous eptifibatide infusion (31.8%), 2 patients were treated by angioplasty (9%), and 4 developed silent re-occlusions (18%). There were no significant differences in favorable outcomes between the standard versus refractory thrombectomy groups, whether treated with intracranial stenting or eptifibatide antiplatelet therapy (51.9% Vs. 62.5% Vs. 14.3%, $P=0.12$).

Conclusion Refractory thrombectomy is more common in diabetics. Emergent intracranial stenting and eptifibatide antiplatelet are equally safe and effective adjuvant treatments after stroke thrombectomy in the setting of underlying vessel wall pathology.

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E-116

CLINICAL CHARACTERISTICS, STROKE MECHANISM AND OUTCOME OF ISOLATED SYMPTOMATIC BASILAR ARTERY STENOSIS

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Background While diffuse atherosclerotic disease affecting the posterior circulation has been described extensively, the prevalence, natural history and angiographic characteristics of

isolated symptomatic basilar artery stenosis (ISBAS) remains unknown.

Methods We reviewed our prospectively acquired institutional database to identify patients with $\geq 50\%$ symptomatic basilar artery (BA) stenosis without significant atherosclerotic burden in the vertebral or posterior cerebral arteries. Stroke mechanism, collateral circulation through the posterior communicating arteries, degree and length of the stenosis were analyzed. The primary outcome was time from index event to new transient ischemic attack (TIA), acute ischemic stroke (AIS) or death. Other outcome variables included modified Rankin scale (mRS) score on discharge and last follow-up.

Results Of 6369 patients with AIS/TIA, only 91 (1.43%) had ISBAS. Seventy-three (80.2%) patients presented with AIS and 18 (19.8%) with TIA. Twenty-nine (31.9%) were women and the median age was 66.8 ± 13.6 years. The mean follow-up time was 2.7 years. The most common stroke mechanism was artery-to-artery thromboembolism (50.8%), followed by perforator occlusion (32.3%) and flow-dependent/hypoperfusion (16.9%). The percentage of stenosis was lower in patients who had favorable outcome compared to those with mRS 3–6 on discharge (78.3 ± 14.3 vs 86.9 ± 14.5 , $p=0.007$). Kaplan-Meier curves showed higher recurrence/death rates in patients with $\geq 80\%$ stenosis, mid-basilar location and poor collateral circulation. Approximately 13% of ISBAS patients presented with complete BA occlusion.

Conclusion ISBAS is an uncommon (1.5%) cause of TIAs and AIS. Males in their sixties are mostly affected and artery-to-artery embolism is the most common stroke mechanism. Mid-basilar location, $\geq 80\%$ stenosis and poor collateral circulation are important factors associated with worse prognosis. **Key-words:** basilar artery stenosis, ischemic stroke, transient ischemic attack, intracranial atherosclerotic disease, stroke mechanism, collateral circulation, posterior circulation.

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OUTCOMES OF ENDOVASCULAR TREATMENT IN DIRECT VERSUS TRANSFER PATIENTS; TRANSFER STUDY: A PRELIMINARY ANALYSIS

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Objectives The primary objective is to evaluate difference in outcomes after endovascular treatment (EVT) between patients directly admitted through Emergency Department (ED) and patients transferred from outside institutions.

Background Over last few years, EVT has been established as the most-effective treatment for acute ischemic stroke (AIS) patients with large vessel occlusion (LVO). In New Mexico state, University of New Mexico Hospital (UNMH) serves as the only institution providing 24/7 services for EVT. In addition to transfers, patients are also admitted directly to UNMH through ED to undergo EVT. Considering the dynamics of New Mexico state, representing various other similar states, we are conducting this study to evaluate any significant difference in the outcome of transferred patients in comparison to directly admitted patients.