Abstract E-112 Figure 1

mmHg) for 2 minutes (CLEAR™ Aspiration System, Inera Therapeutics, LLC, Sacramento, CA). All the clot samples were fixed, dehydrated and frozen fractured. Surfaces of the fractured clots were imaged at 20 Kx at four different locations to obtain pore-size estimates of fibrin networks using ImageJ. Dynamic mechanical analysis (DMA) was conducted to understand the viscoelastic behavior of the clots obtained from patients with AIS under cyclic loading conditions.

Results The fibrin-rich clot was corked in the distal tip of the aspiration catheter during clot retrieval. The average clot diameter measured proximally was 3.5 mm, 2.3 mm and 1.8 mm for the control, static and cyclic groups, respectively. Mechanical loading-unloading-reloading on the clot resulted in clot deformations; however, the changes in the clot dimension were less pronounced as the mechanical stimulus continued during the DMA tests. Clot deformation during aspiration was accompanied by a reduction in the average pore size in the fibrin-rich clot. The figure 1 demonstrates that the fibrin pore size measured from the proximal end of the clot was significantly reduced after aspiration when compared to the control clot (control: $857\mu\text{m}^2$, cyclic: $434\mu\text{m}^2$, static: $420\mu\text{m}^2$). No significant differences in fibrin pore size were observed between the cyclic and static groups; however, it should be noted that the smallest pore size measurement was found in the cyclic group.

Conclusion Applying cyclic or static aspiration to the fibrin-rich clot forms a denser fibrin mesh and results in clot stiffening. A comprehensive study is ongoing to study the structural changes of different clot models under aspiration at various frequencies and amplitudes.

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E-113 OUTCOMES OF SMALL VESSEL THROMBECTOMY FOR EMERGENT ACA, MCA AND POSTERIOR STROKE SYNDROMES IN A COMMUNITY STROKE PRACTICE

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Endovascular mechanical thrombectomy is an effective, well tolerated treatment alternative for patients with emergent stroke syndromes after distal anterior and posterior intracranial thrombo-embolism.

Background Endovascular mechanical thrombectomy has been proven to be an effective and safe treatment strategy for emergent large vessel occlusion. However, the effectiveness and safety of this technique has not been well established for more distal, smaller vessels. In our series, we demonstrate technical success using various described revascularization techniques for ACA, PCA and distal MCA branches. Intervention results in significant clinical improvement with no significant increase in complications.

Methods Forty-one consecutive patients who presented with occlusions of either ACA, PCA or distal MCA branches were retrospectively reviewed. A comprehensive description of the

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 ≥ 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