

conducted to determine the association between baseline subject comorbidities, clot characteristics and reperfusion, with a focus on imaging findings. The plan for per pass analysis both by an independent core imaging laboratory and by an independent clot analysis laboratory sets apart this registry from other similar studies. In addition, the reperfusion assessment by the independent core lab will be using innovative eTICI.

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**P-010 SELECTIVE POSTERIOR CEREBRAL ARTERY AMO BARBITAL TEST: A PREDICTOR OF MEMORY FOLLOWING SUBTEMPORAL SELECTIVE AMYGDALOHIPPOCAMPECTOMY**

J Catapano\*, A Whiting, D Wang, M Labib, V Fredrickson, K Smith, A Ducruet, F Albuquerque. *Neurosurgery, Barrow Neurological Institute, Phoenix, AZ*

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**Introduction** Selective Posterior Cerebral Artery Amobarbital Test (PCA WADA) has been used to predict post-operative memory impairment following temporal epilepsy surgery in patients that have previously failed a traditional intracarotid artery amobarbital test (ICA WADA).

**Methods** We retrospectively reviewed medical records from 2012 to 2018 for all patients with seizures who underwent selective PCA WADA at our institution, following either failed or inconclusive ICA WADA. Standardized neuropsychological testing was performed prior and during the WADA procedure, as well as post-surgery in patients who underwent resection.

**Results** A total of 33 patients underwent a selective PCA WADA, with no complications recorded. 26 patients with medically-refractory epilepsy were determined to have a seizure focus amenable to selective amygdalohippocampectomy following extensive EEG monitoring. Of these 26 patients, 6 (23%) patients had a failed PCA WADA and did not undergo selective amygdalohippocampectomy. Another 7 patients (27%) declined surgical resection, leaving 13 patients who underwent

subtemporal selective amygdalohippocampectomy. Hippocampal sclerosis was found in all 13 patients (100%) upon pathological examinations. 12 patients (92%) subsequently had formal neuropsychological testing and all were found to have stable memory relative to preoperative examination. 10 patients (77%) were seizure free and had an Engle Grade of I with average follow up of 13 months.

**Conclusion** Selective PCA WADA is predictive of memory outcomes following a subtemporal selective amygdalohippocampectomy in patients with either a failed or inconclusive ICA WADA. Furthermore, given the low risk of complication and great potential benefit of seizure freedom, A selective PCA Wada may be warranted in medically intractable epilepsy patients that are candidates for a selective amygdalohippocampectomy with a prior failed or inconclusive ICA WADA.

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**P-011 INCREASED RATES OF SUCCESSFUL FIRST PASS RECANALIZATION DURING MECHANICAL THROMBECTOMY FOR M2 OCCLUSIONS: A SINGLE INSTITUTION STUDY**

<sup>1</sup>H Baharvahdat, <sup>2</sup>A Mowla, <sup>2</sup>J Jones, <sup>2</sup>Y Ooi, <sup>2</sup>N Kaneko, <sup>2</sup>R Jahan, <sup>2</sup>S Tateshima, <sup>2</sup>V Szeder, <sup>2</sup>M Nour, <sup>2</sup>F Vinuela, <sup>2</sup>G Duckwiler, <sup>1</sup>G Colby\*. <sup>1</sup>Neurosurgery, UCLA, Los Angeles, CA; <sup>2</sup>Radiology, UCLA, Los Angeles, CA

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**Background** Mechanical thrombectomy (MT) is standard of care for treatment of acute ischemic stroke due to proximal anterior circulation large vessel occlusion, such as the M1 segment of the middle cerebral artery (MCA). The effectiveness and complication profile in more distal vessels such as the M2 segment, however, remains to be completely defined.

**Methods** All MT treatments for acute M1 or M2 occlusion between 2011 and 2018 were retrospectively reviewed. Patients with thrombectomy using Merci device, intra-arterial pharmacological thrombolysis, mechanical wire maceration, or only using a balloon were excluded. Patient characteristics (age, NIHSS), number of passages, first passage recanalization success (TICI 2b or higher), total recanalization success, and hemorrhagic complications (ICH and SAH) were compared between M1 and M2 groups.

**Results** Two hundred sixty cases, including 171 M1 and 89 M2 occlusions, were analyzed. The mean age of patients and median of NIHSS were 70.7 ± 15.0 (SD) years and 15 (1–33), respectively. There was no significant difference between M1 and M2 groups for age and NIHSS (p=0.727 and p = 0.065, respectively). The total number of passages in M2 group was significantly less than M1 group (Median of 1 and range of 1 to 5 versus median of 2 and range of 1 to 7, p=0.023). First passage recanalization success rate was significantly higher in the M2 group than the M1 group (55.1% versus 39.2%, p=0.015). The total recanalization success rate also trended higher in the M2 group, but it did not reach statistical significance (83% versus 74.7%, p=0.132). Subarachnoid hemorrhage rate was significantly higher in the M2 group than the M1 group (24.7% versus 12.3%, p=0.010), but there was no difference for ICH between the two groups (p=0.862).

**Conclusion** Mechanical thrombectomy for M2 occlusions is effective, has a higher rate of first pass recanalization, and has

lower total pass number than M1 thrombectomy. However, mechanical thrombectomy in the M2 using recent generations of stent retriever technology is associated with higher rates of SAH, likely related to tension on the vessels when pulling through a more tortuous MCA segment.

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**P-012** SHORTER DOOR-IN DOOR-OUT TIME IS ASSOCIATED WITH HIGHER LIKELIHOOD OF ENDOVASCULAR THERAPY AND GOOD OUTCOMES

<sup>1</sup>S Desai\*, <sup>1</sup>K Shah, <sup>2</sup>T Jovin, <sup>1</sup>A Jadhav. <sup>1</sup>University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>2</sup>Cooper University Hospital Neurological Institute, Camden, NJ

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**Background and purpose** Endovascular therapy is associated with improved clinical outcomes in patients presenting with large vessel occlusions (LVO) however outcomes are typically worse in patients presenting as inter-facility transfers. A further understanding of the sources and impact of transfer delays is essential to improving outcomes in this population.

**Methods** Data were analyzed from consecutive acute ischemic stroke patients with proximal large vessel occlusions (LVO) transferred to our comprehensive stroke center for consideration of endovascular therapy. The following variables were studied: door-in-door-out time (DIDO), baseline NIHSS/mRS, initial CT ASPECT, site of LVO, treatment and clinical outcome.

**Results** 309 patients transferred from 14 referral hospitals to our CSC during the study period (January-December 2016). 61 (20%) had a proximal anterior LVO (53) or basilar artery occlusion (8). 40 (66%) underwent endovascular thrombectomy. 21 (34%) did not undergo endovascular thrombectomy – due to clinical improvement (33%), large core or poor ASPECTS (48%), high baseline disability (5%) and hemorrhagic transformation (5%). Median DIDO time in the endovascular thrombectomy group (98.5 minutes) was significantly better (p value=0.001) than the Median DIDO time in patients who did not get endovascular thrombectomy (185 minutes). The likelihood decreased by 0.5% for receiving endovascular therapy and 0.25% for good outcomes for every minute of DIDO.

**Conclusions** Shorter DIDO time is associated with higher likelihood of receiving endovascular therapy and good outcomes. DIDO may be used as a clinical performance metric for stroke referring hospitals.

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**P-013** TECHNICAL ASPECTS AND CLINICAL OUTCOME OF ENDOVASCULAR THROMBECTOMY IN OCTOGENARIANS AND NONAGENARIANS: SINGLE CENTER EXPERIENCE

<sup>1</sup>S Majidi\*, <sup>1</sup>J Lee, <sup>2</sup>A Al Balushi, <sup>1</sup>J Fifi, <sup>1</sup>I Singh. <sup>1</sup>Neurosurgery, Mount Sinai Hospital, New York, NY; <sup>2</sup>Neurology, Mount Sinai Hospital, New York, NY

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**Introduction/Purpose** Safety and efficacy of thrombectomy in patients  $\geq 80$  years old is not fully understood as this age group is generally underrepresented in major clinical trials. We aimed to review the procedural aspects and clinical outcome of thrombectomy in these patients.

**Materials and methods** We retrospectively identified all patients  $\geq 80$  years old who underwent thrombectomy for acute ischemic stroke with emergent large vessel occlusion (ELVO) in the anterior circulation from January 2014 to December 2018. Demographics, comorbidities, procedural variables, and clinical outcome measures were extracted. Thrombolysis in Cerebral Infarction (TICI) 2B or higher was considered successful reperfusion. Favorable clinical outcome was defined as a 90-day modified Rankin Scale (mRS) score  $<3$ .

**Results** A total of 113 patients were identified. The median age for the cohort was 85 years (range: 80–103). Seventy-three percent of the patients were women. Forty percent of the patients were white and 59% had Hispanic ethnicity. A total of 87 patients (77%) had internal carotid artery terminus or proximal M1 segment occlusion. Median admission NIHSS score was 18 (IQR: 14–25). Only 27% of the patients had received intravenous rt-PA. Thirty-two percent of the patients were treated between 6 hours to 24 hours from their time of symptom onset. Successful recanalization was achieved in 101 patients (89%) with a mean ( $\pm$ SD) groin puncture to recanalization time of  $63 \pm 43$  minutes. Monitored anesthesia care (MAC) was used in 78% of the patients. Groin puncture to recanalization time was 30 minutes shorter in patients under MAC ( $54 \pm 36$  vs  $85 \pm 50$ ;  $p=0.0006$ ); however, no statistically significant difference in the rate of 90-day favorable outcome was observed between the two groups (23% vs 20%,  $p=0.77$ ). The rate of favorable 90-day outcome was 22% and 28 patients (39%) had 90-day mortality.

**Conclusions** Thrombectomy in octogenarians and nonagenarians is technically feasible and associated with high rate of recanalization. Although the 90-day mortality was elevated in our cohort, the natural history of completed stroke in this population without reperfusion is also high. Despite this finding, nearly one out of four patients in this study had a favorable clinical outcome.

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**P-014** APPLICATIONS OF A NOVEL MICROANGIOSCOPE FOR NEUROENDOVASCULAR INTERVENTION

<sup>1</sup>V Srinivasan\*, <sup>1</sup>T Lazaro, <sup>2</sup>P Cooper, <sup>2</sup>M Phillips, <sup>1</sup>R Garcia, <sup>3</sup>S Chen, <sup>1</sup>J Johnson, <sup>1</sup>J Burkhardt, <sup>1</sup>D Collins, <sup>1</sup>P Kan. <sup>1</sup>Neurosurgery, Baylor College of Medicine, Houston, TX; <sup>2</sup>Vena Medical, Baylor College of Medicine, Houston, TX; <sup>3</sup>Radiology, Baylor College of Medicine, Houston, TX

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Visualization in neuroendovascular interventions relies on biplanar fluoroscopy and digital subtraction. Radiation and contrast-related complications are the two major drawbacks. Angioscopy, direct endoluminal optical visualization, does not require radiation or contrast but has limited utility in neurointerventions due to limitations in size and stiffness. A recently developed microangioscope has the miniaturization and flexibility necessary to navigate small, tortuous intracranial vessels, allowing the practical use of neurovascular angioscopy for the first time. The prototype is a coherent fiber bundle