



Abstract E-140 Figure 1

angioplasty. 4 patients had carotid stenting. The decision on emergent stenting was based on the algorithm shown in Image attachment. Stenting is done following Bolus GP2B3A inhibitor followed by infusion for 6 hours and Aspirin and Plavix given through NG tube. Successful recanalization based on thrombolysis in cerebral infarction (TICI) score of 2b or 3 and neurological improvement is defined by ≥ 8 point reduction of National Institutes of Health Stroke Scale (NIHSS) score at 7 days and an improved modified Rankin Scale (mRS ≤ 2) score at 90 days.

Results Overall, 93% had TICI 2b/3 signifying successful recanalization. 46.6% had a reduction in the NIHSS score by ≥ 8 points at 1 week. 60% had a good outcome with a mRS ≤ 2 . Mortality was 12.5% (n = 2) with 1 death due to massive hemorrhage and 1 death due to cardiac cause.

Conclusions Major Strokes due to tandem occlusion of ICA and ICA/MCA can be treated successfully with lesser morbidity and mortality if strategized based on the understanding of collateral circulation based on pre-procedure CT angiogram. The number of stenting can be minimized and reserved for only those patients with a poor flow in the proximal ICA and poor collateral circulation and those with carotid dissection.

Disclosures S. Paramasivam: None. S. Kumar: None.

E-141 LARGE VESSEL OCCLUSION STROKE THROMBECTOMY IN THE ELDERLY: IS 90 THE NEW 80?

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Background Little is known on the outcomes of nonagenarians treated with endovascular therapy (ET) for acute large vessel occlusion stroke. It remains unclear whether they have worse clinical outcomes than octogenarians.

Methods We reviewed our prospectively collected endovascular database at a tertiary care academic institution between 09/2010–11/2018. All patients older than 80 years that underwent endovascular therapy for large vessel occlusion anterior circulation acute ischemic stroke were included and categorized into two groups: 80–89 years (octogenarians), and 90–99 years (nonagenarians). Baseline, procedural, and radiological characteristics, as well as outcome parameters were compared. Receiver operating characteristic curves were used to calculate the optimal final infarct volume (FIV) threshold to predict good outcomes in both age category.

Results Fifty nonagenarians and 248 octogenarians were treated over the 8-year study period. When compared with octogenarians, nonagenarians were less often males (18% vs

34.8%, $p=0.02$) had lower rates of DM (12% vs 24.9%, $p=0.047$) and pre-procedure glucose levels (114[104–143] mg/dl vs 126[109–152], $p=0.013$). Other baseline characteristics and procedural parameters were comparable between groups. In terms of outcomes, rates of successful reperfusion (mTICI 2b-3) (92.0% vs 91.9%, $p=1.0$) and any parenchymal hematomas (PH) (8.3% vs 13.3%, $p=0.34$) were comparable. There was a non-significant trend toward better 90-Day independent outcomes (mRS 0–2) and higher 90-day mortality favoring octogenarians (13.6% vs 25.3%, $p=0.094$ and 52.3% vs 38.7%, $p=0.095$ respectively) while ambulatory outcomes were more similar (mRS 0–3) (38.1% vs 41.9%, $p=0.212$). There was a non-significant shift in the overall distribution of 90-day mRS favoring octogenarians. In multivariate analysis, baseline NIHSS, ASPECTS, IV t-PA, Successful reperfusion (mTICI 2b-3) and any PH were independent predictors of a favorable shift in mRS while age category was not. A FIV ≤ 16.9 ml (sensitivity 67%, specificity 75%) in octogenarians and less than 12.8 mL (sensitivity 79%, specificity 80%) in nonagenarians demonstrated the greatest accuracy for identifying good outcomes.

Conclusions Our study shows that there were no differences in procedural and clinical outcomes between nonagenarians and octogenarians treated with ET with more than 1/3 of nonagenarians were ambulatory at 90 days. However, advanced age seems to be associated with reduced tolerance for infarct volume. Further research is needed to optimize selection modalities in this age cohort.

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EFFICACY AND SAFETY OF MECHANICAL THROMBECTOMY USING LARGER BORE JET 7 ASPIRATION CATHETERS FOR INTRACRANIAL LARGE VESSEL OCCLUSION

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Purpose To report initial experience of A Direct Aspiration first-Pass Thrombectomy (ADAPT) technique using larger bore JET 7 aspiration catheters in patients experiencing acute ischemic stroke secondary to intracranial large vessel occlusions (LVO).

Materials and methods COMPLETE is a prospective, single-arm, multi-center observational registry, including patients with intracranial LVO who are eligible for mechanical thrombectomy and have planned frontline treatment with Penumbra System. We performed an interim analysis in patients treated with new larger bore JET 7 aspiration catheters (inner

diameter of 0.072'). Primary outcomes included angiographic revascularization of the occluded target vessel at immediate post-procedure as defined by an mTICI 2b or higher, functional outcome at 90 days post-procedure as defined by a mRS 0–2, and all-cause mortality at 90 days. Secondary outcomes included incidence of device- and procedure-related serious adverse events (SAEs), occurrence of embolization in previously uninvolved (or new) territories (ENT), and occurrence of symptomatic intracranial hemorrhages (sICH) at 24 hours.

Results Fifty-five patients (mean age 66.5 ± 13.0 ; 50.9% female) treated at 12 sites in the US were included in this analysis. Baseline NIHSS (mean \pm SD) was 14.8 ± 7.3 . Median ASPECT Score was 9.0 (IQR, 8.0–10.0). Target vessel location was the internal carotid artery or terminus in 18.2% (10/55), M1 in 52.7% (29/55), M2 in 16.4% (9/55), and posterior circulation in 12.7% (7/55) of patients. Median procedure time was 28.0 minutes (IQR, 16.0–50.0).

Successful revascularization (mTICI 2b or higher) was achieved in 92.6% (50/54) of patients. Good functional outcome (mRS 0–2) at 90 days was observed in 42.9% (6/14) of patients; follow-up data collection is ongoing. Mortality occurred in 10.9% (6/55) of patients. Procedure- and device-related SAEs occurred in 5.6% (3/54) and 1.9% (1/54) of patients, respectively. Vessel dissection was reported in 1.9% (1/54) of patients. There were no occurrences of sICH, ENT, or vessel perforation.

Conclusion In this initial experience, the safety and efficacy of Penumbra System with larger bore JET 7 aspiration catheters for patients with LVO is acceptable and comparable to other aspiration catheters. Use of larger bore aspiration catheters resulted in fast overall procedural time.

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SHORT-TERM IN-HOSPITAL OUTCOMES OF THROMBOLYSIS FOR ACUTE ISCHEMIC STROKE PATIENTS WITH NON-PRIMARY BRAIN TUMORS AND PERIPHERAL VASCULAR DISEASE

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Background Intravenous thrombolysis remains an underutilized treatment for acute ischemic stroke (AIS) due to several relative and absolute contraindications. Previous studies have found similar outcomes after thrombolysis between AIS patients with benign brain tumors and AIS patients without. This study aims to investigate short-term outcomes of thrombolytic treatment for the greater majority of AIS patients who have no history of primary brain tumors, particularly those with peripheral vascular disease (PVD).

Methods This retrospective cohort study utilized data from the 2012–2015Q3 Nationwide Inpatient Sample (NIS). ICD-9 codes identified adult patients (ages 18+) who suffered acute ischemic stroke and received intravenous thrombolysis, and then further