Abstracts

EMBOTRAP II device, 35% of the patients that did not achieve the FPE required both the EMBOTRAP II device and an additional device to achieve complete revascularization. Patients that achieved the FPE had a significantly shorter LOS (6.1 vs. 9.5 days, $p=0.004$) and fewer days spent in a standard bed (3.1 vs. 6.1, $p=0.004$) vs. those that did not achieve the FPE. Overall, the reduction in healthcare resource use associated with achieving the FPE led to estimated per-patient cost-savings of \$6,355 (table 1). In the absence of cost data reported in ARISE-II, costs for healthcare resource use were obtained from the literature, which may not be generalizable across settings and is a limitation of this analysis. Additionally, this analysis did not include all components of health resource use that may impact costs (e.g., procedure time, surgical evacuation for symptomatic intracranial hemorrhage [sICH]).

Abstract E-101 Table 1 Per-patient procedural healthcare resource use costs

Procedural and in-patient healthcare resource	Cost/patient		
	FPE (n=91)	Not Achieving FPE (n=81)	Difference
LOS*			
Days in ICU	\$6,467.74	\$7,040.14	-\$572.40
Standard bed days	\$2,791.39	\$5,782.63	-\$2,991.25
Devices/methods used	\$7,886.35	\$10,677.66	-\$2,791.31
Total	\$17,145.48	\$23,500.43	-\$6,354.95

*Based on total LOS and proportion of standard bed vs. ICU days

Conclusion Among patients with final complete reperfusion ($mTICI \geq 2c$), achieving the FPE may lead to per-patient cost-savings of \$6,355 due to reductions in procedural and in-patient healthcare resource use.

Disclosure O. Zaidat: 1; C; Cerenovus, Stryker, Medtronic, Penumbra, Genentech. 2; C; Stryker, Cerenovus, Penumbra, Medtronic. J. Saver: 2; C; Cerenovus, Stryker, Medtronic, Rapid Medical. 4; C; Rapid Medical. 5; C; University of California. H. Mattle: 1; C; Neuravi/Cerenovus. 2; C; Neuravi/Cerenovus. 3; C; Neuravi/Cerenovus. H. Bozorgchami: 2; C; Cerenovus, Stryker, CohereX. A. Narata: None. A. Yoo: 1; C; Cerenovus, Stryker, Medtronic, Penumbra, Genentech. 2; C; Cerenovus, Genentech, Zoll Circulation. 4; C; Inera Therapeutics. M. Ribo: 1; C; Stryker, Medtronic. 2; C; Cerenovus, Stryker, Medtronic, Anaconda Biomed. 4; C; Anaconda Biomed. C. Crivera: 4; C; Johnson & Johnson. 5; C; Johnson & Johnson. H. Cameron: 5; C; Cornerstone Research Group, contracted by Cerenovus. T. Andersson: 2; C; Cerenovus, Anaconda, Medtronic, Rapid Medical, Ablynx, Amnis Therapeutics.

E-102

BASILAR ARTERY OCCLUSION WITH INVOLVEMENT OF POSTERIOR CIRCULATION BRANCHES AND ASSOCIATED FUNCTIONAL OUTCOME: A PRELIMINARY ANALYSIS OF SINGLE CENTER REGISTRY

¹A Zafar, ¹S Suriya, ¹M Farooqui, ¹A Ikram, ²S Ortega-Gutierrez, ¹M Torbey. ¹Neurology, University of New Mexico Health Sciences Center, Albuquerque, NM; ²Neurology, University of Iowa Hospital, Iowa City, IA

10.1136/neurintsurg-2019-SNIS.177

Introduction Acute basilar artery occlusion (BAO) accounts for 1% of all ischemic strokes and is associated with high mortality and morbidity. The purpose of study was to analyze functional outcome of patients with BAO in relation to the location of occlusion, posterior circulation branches and time interval from last known well (LKW) to groin puncture.

Methods This is a descriptive, retrospective study from a single center database. We reviewed patients presenting with BAO or with symptomatic high grade stenosis in basilar artery at UNMH between 2007 and 2017. Data was collected on secured Redcap™ database. The imaging data was reviewed by two independent physicians separately. Patients with no available imaging or follow up data, and no identifiable BAO or high grade stenosis on vascular imaging, were excluded. The

Abstract E-102 Table 1 Functional Outcome, Baseline and Imaging Descriptive Analysis of Patients Presenting with Acute Basilar Artery Occlusion.

Total Number of Patients N=32		1–3 months		
		mRS (0–2) N=10	mRS (3–5) N=6	mRS (6) N=16
Baseline	Mean Age (years)	64.7	51.6	69.2
Characteristics	Gender Male	8 (80%)	1 (16.7%)	4 (25.0%)
	Female	2 (20%)	5 (83.3%)	12 (75.0%)
Baseline	Hypertension	5 (50%)	3 (50.0%)	11 (68.7%)
Medical History	Hyperlipidemia	3 (30%)	3 (50.0%)	5 (31.2%)
	Congestive Heart Failure	1 (10%)	1 (16.7%)	2 (12.5%)
	Coronary Heart Disease	1 (10%)	0 (0%)	0 (0%)
	Diabetes Mellitus	1 (10%)	1 (16.7%)	3 (18.7%)
	Atrial Fibrillation	0 (0%)	1 (16.7%)	0 (0%)
	Previous Ischemic Stroke	1 (10%)	1 (16.7%)	5 (31.2%)
	Smoking	1 (10%)	0 (0%)	1 (6.2%)
Occlusion Level	Vertebrobasilar Junction	2 (20%)	0 (0%)	6 (37.5%)
	Proximal Basilar	2 (20%)	0 (0%)	2 (12.5%)
	Mid Basilar	4 (40%)	2 (33.3%)	4 (25.0%)
Occlusion of Major Branches	Distal Basilar	2 (20%)	4 (66.7%)	4 (25.0%)
	Ipsilateral PICA	7 (70%)	6 (100%)	13 (81.2%)
	Contralateral PICA	2 (20%)	0 (0%)	0 (0%)
	Ipsilateral AICA	8 (80%)	5 (83.3%)	12 (75.0%)
	Contralateral AICA	1 (10%)	1 (16.7%)	0 (0%)
	Ipsilateral SCA	6 (60%)	4 (66.7%)	8 (50.0%)
	Contralateral SCA	0 (0%)	1 (16.7%)	0 (0%)
	Ipsilateral PCA	8 (80%)	4 (66.7%)	12 (75.0%)
Posterior Communicating Artery Status	Contralateral PCA	0 (0%)	0 (0%)	0 (0%)
	Unilateral patent	3 (30%)	2 (33.3%)	6 (37.6%)
	Bilateral patent	6 (60%)	4 (66.7%)	7 (43.7%)
	Both Absent	1 (10%)	0 (0%)	3 (18.7%)
Intervention	t-PA	2 (20%)	0 (0%)	4 (25.0%)
	Thrombectomy	4 (40%)	2 (33.3%)	6 (37.6%)
	Median LKW – groin puncture time (min)	602.5	642.5	768

outcome was defined as 1–3 months modified Rankin Scale (mRS). All patients were divided into three groups based on their follow-up mRS. Patients with mRS 0–2, patients with mRS 3–5 and patients with mRS 6.

Results A total of 66 patients with stenosis or occlusion of posterior circulation presenting with acute ischemic stroke were identified. Out of 66, complete imaging review of 52 patients was completed. Out of 52, no BAO occlusion or high grade stenosis was identified in 11 patients on vascular imaging. In 8 patients, there was no follow-up mRS score or baseline vascular imaging available. Thirty-two patients were included in the final analysis, out of which, 10 patients were mRS 0–2 group, 6 patients were in mRS 3–5 group and 16 patients were in mRS 6 group (see Table 1). Mean age in both groups was 64.7, 51.6 and 69.2 years respectively with male predominance. Hypertension was the most common baseline comorbidity in all groups. In mRS 6 group, 37.5% had occlusion in vertebrobasilar junction. Thrombectomy was performed in 40%, 33.3% and 37.6% patients respectively. The last known well (LKW) to groin puncture time was increased in patients with mRS 6.

Conclusion This retrospective analysis of BAO database depicts that older age, presence of HTN, history of prior stroke, location of clot at vertebrobasilar junction, and absence of bilateral posterior communicating arteries is associated with higher mortality. Moreover, delayed time to groin puncture was also observed in patients with higher mortality. Large scale studies are needed to validate these findings.

Disclosures A. Zafar: None. S. Suriya: None. M. Farooqui: None. A. Ikram: None. S. Ortega-Gutierrez: None. M. Torbey: None.

E-103 SHORT-TERM IN-HOSPITAL OUTCOMES OF THROMBOLYSIS FOR ACUTE ISCHEMIC STROKE PATIENTS WITH NON-PRIMARY BRAIN TUMORS AND CONGESTIVE HEART FAILURE

K Tong*, T Colburn, P Brauer. *Anatomy, Kansas City University of Medicine and Biosciences, Kansas City, MO*

10.1136/neurintsurg-2019-SNIS.178

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 congestive heart failure (CHF).

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 isolated patients diagnosed with CHF. Data for patients who were missing important clinical identifiers (age, gender, race, mortality), did not receive IV thrombolysis, and had primary brain tumors (benign or malignant) were excluded. Data analyses assessed hospital mortality rate, length of stay (LOS), inpatient charges, and average age at admission.

Results Of the 24,692 encounters with AIS patients treated with thrombolysis and had no history of primary brain tumors, 4130 were diagnosed with CHF.

- Mean mortality rate was significantly increased (11.3% CHF vs. 11.8% no CHF, $p < 0.0001$).
- Mean LOS was significantly longer (7.63 days CHF vs. 6.08 days no CHF, $p < 0.0001$).
- Average total charges were significantly increased (\$96,978.03 CHF vs. \$83,905.14 no CHF, $p < 0.0001$).
- Average age at admission was significantly older (70.68 years CHF vs. 66.32 years no CHF, $p < 0.0001$).

Conclusion This study aims to inform physicians to better manage AIS patients receiving IV thrombolysis with CHF and no history of primary brain tumors. These patients experience higher mortality rate, longer LOS, increased total hospital charges, and older age at admission than those without CHF. These findings suggest that placing clinical focus on the coexisting condition of CHF before administering IV thrombolysis for AIS may be critical for improving short-term in-hospital outcomes. Future research should aim to investigate different thrombolytic agents to determine the most optimal choice for patients with congestive heart failure.

Disclosures K. Tong: None. T. Colburn: None. P. Brauer: None.

E-104 THE USE OF MECHANICAL THROMBECTOMY IN POSTERIOR CIRCULATION ACUTE ISCHEMIC STROKES

A Sweid*, K Hafazalla, S Tjoumakaris, V Xu, K Shivashankar, T Alexander, M Gooch, N Herial, N Chalouhi, R Rosenwasser, P Jabbour. *Neurosurgery, Thomas Jefferson University, Philadelphia, PA*

10.1136/neurintsurg-2019-SNIS.179

Objective 20% of all acute ischemic strokes (AIS) occur in the posterior circulation (PC), which carry a high mortality rate close to 95%. Early recanalization improves outcomes as shown by several reports. Often trials excluded patients with posterior circulation strokes. We sought to investigate the prevalence, safety, and the clinical outcomes of PC-MT at our institution.

Methods A retrospective review of patients presenting with PC AIS who underwent mechanical thrombectomy at a tertiary referral center between 2010 and 2018.

Results Out of 453 patients who underwent mechanical thrombectomy for AIS, 45 patients had a PC stroke (av age 58 years, 56% male). The mean NIHSS upon admission was 17 (95%CI:14–20). The mean time from symptoms onset to groin puncture was 9 hours (95%CI:6–11), the mean procedure time was 53 minutes (95%CI:43–64) and mean time to revascularization, from symptoms onset was 866 minutes (95%CI:602–1129). Only 33% received tPA. Vessels involved included the basilar artery (87%, $n=39$), the posterior cerebral artery (4%, $n=2$), and the vertebral artery (9%, $n=4$). The procedures were divided into stentriever alone (22%, $n=10$), aspiration alone (13%, $n=6$), and stentriever with aspiration (51%, $n=23$), and failed procedure in 13% ($n=6$) of individuals. Most procedures required one pass to recanalize the vessel (44%, $n=20$). TICI $\geq 2b$ was achieved in 69% of the subjects. Mean length of stay was 11 days (95%CI:8–14). Mortality rate was 38% and independent functional outcome of