

## SNIS 20th annual meeting oral abstracts

**O-001 TRENDS IN ENDOVASCULAR MECHANICAL THROMBECTOMY FOR ACUTE ISCHEMIC STROKE: A REGIONAL COMPARISON ANALYSIS USING UNITED STATES NATIONAL INPATIENT SAMPLE DATA**

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**Background** Little is known about the national regional variations in the care and outcomes of acute ischemic stroke (AIS) treated with endovascular thrombectomy (EVT) within the United States (US). This study aims to investigate regional variation in EVT outcomes for AIS.

**Methods** Using the National Inpatient Sample (2016-2020), we identified adults hospitalized for AIS who underwent EVT. Patients were subclassified geographically by nine United States census regions: East North Central (ENC), East South Central (ESC), Middle Atlantic (MA), Mountain (Mtn), New England (NE), Pacific (Pa), South Atlantic (SA), West North Central (WNC), and West South Central (WSC). Data including demographic, comorbidities, and intravenous thrombolysis (IVT) rates were collected. Nearest-neighbor matching was performed among patients who received EVT based on age, gender, NIHSS, and comorbidities. Comparative analyses with Chi-squared tests for categorical variables and Kruskal-Wallis tests for continuous variables were performed to identify differences in outcomes among regions. Primary outcomes included favorable functional outcomes discharge home without assistance or discharged to a rehabilitation hospital). Secondary outcomes included in-hospital mortality and functional independence (discharge to home without assistance).

**Results** There were 121,970 cases of EVT collected. There were significant differences in age among patients receiving EVT among the regions ( $p < 0.001$ ), with the lowest average age of  $68.37 \pm 13.72$  in ESC and the highest average age of  $72.43 \pm 13.74$  in NE. There were significant differences in presenting NIHSS of EVT patients between the regions ( $p = 0.006$ ), with the highest average of 17.38 in Pa and the

lowest average of 16.17 in the SA. Rates of diabetes, dyslipidemia, hypertension, kidney disease, and CHF were also significantly different among the regions ( $p < 0.001$ ). After nearest-neighbor matching, outcomes also varied significantly between regions ( $p = 0.006$ ), with the highest rates of 30.38% in Pa and the lowest rate of 16.60% in NE. Functional independence significantly differed among regions ( $p < 0.001$ ), with the highest rate of 22.85% in WNC and the lowest rate of 13.87% in NE. In-hospital mortality rates differed significantly among regions ( $p < 0.001$ ), with the highest rates of 13.77% in ESC and the lowest rate of 10.60% in the SA.

**Conclusions** There remain significant regional differences in the outcomes of EVT for AIS. More analysis is required to determine what is driving these differences. More work is needed to ensure optimal and equitable patient outcomes.

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**O-002 SAFETY AND FUNCTIONAL OUTCOMES WITH EARLY INITIATION OF ANTIPLATELET THERAPY FOLLOWING MECHANICAL THROMBECTOMY IN EMERGENT LARGE VESSEL OCCLUSION STROKES: A SINGLE INSTITUTION REGISTRY STUDY**

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**Introduction** Mechanical thrombectomy (MT) remains the standard of care for patients presenting with acute ischemic stroke (AIS) due to large vessel occlusions (LVO). Favorable functional outcomes have been shown to be independently associated with early recanalization. Therefore, early initiation of antiplatelet (AP) medication may be beneficial in maintaining vessel recanalization or preventing recurrent stroke in high-risk individuals. Nonetheless, there is concern for increased risk of intracranial hemorrhage with peri-procedural AP therapy (with or without prior tPA). We sought to

Abstract O-001 Table 1

Characteristic (p value)	East North Central	East South Central	Middle Atlantic	Mountain	New England	Pacific	South Atlantic	West North Central	West South Central
Age in Years Mean ( $\pm$ SD)( $p < 0.001$ )	68.69 $\pm$ 14.43	67.04 $\pm$ 14.85	70.09 $\pm$ 14.39	68.72 $\pm$ 14.53	70.27 $\pm$ 14.92	70.26 $\pm$ 14.51	68.81 $\pm$ 14.29	69.21 $\pm$ 14.51	67.63 $\pm$ 14.24
NIHSS Mean ( $\pm$ SD)( $p = 0.006$ )	14.68 $\pm$ 7.87	14.74 $\pm$ 7.81	14.89 $\pm$ 7.83	15.33 $\pm$ 7.75	15.01 $\pm$ 7.42	15.63 $\pm$ 8.25	14.80 $\pm$ 7.55	15.02 $\pm$ 8.17	14.76 $\pm$ 7.95
Female( $p = 0.781$ )	50.02%	51.46%	52.12%	50.00%	52.44%	50.30%	49.80%	50.13%	50.68%
IV tPA( $p < 0.001$ )	37.24%	39.15%	33.35%	39.42%	37.94%	39.95%	34.99%	40.74%	40.73%
ICH( $p < 0.001$ )	17.66%	18.69%	19.31%	16.56%	25.34%	18.80%	16.66%	16.83%	17.93%
Favorable functional outcomes( $p < 0.001$ )	21.49%	24.23%	19.99%	23.40%	17.07%	31.64%	25.67%	24.80%	26.32%
Functional Independence( $p < 0.001$ )	20.21%	23.23%	18.43%	22.12%	15.04%	19.80%	23.16%	24.36%	25.10%
Inpatient Mortality( $p = 0.300$ )	10.62%	11.38%	11.07%	11.86%	12.20%	11.14%	9.54%	11.69%	11.10%
Length of stay in days Mean ( $\pm$ SD)( $p < 0.001$ )	8.01 $\pm$ 7.69	7.93 $\pm$ 9.42	8.61 $\pm$ 11.16	7.27 $\pm$ 6.77	7.15 $\pm$ 6.24	7.70 $\pm$ 10.87	8.52 $\pm$ 10.12	6.60 $\pm$ 5.71	8.07 $\pm$ 7.59