

Abstract O-060 Table 1

Demographics	Overall, N = 100,820	Low, N = 78,600	High, N = 22,220	p-value
Age (± SD, Range)	60.01 ± 15.70 (0.00–90.00)	60.69 ± 15.87 (0.00–90.00)	57.59 ± 14.84 (0.00–90.00)	<0.001
Sex (% Female)	62,775 (62.26%)	48,570 (61.79%)	14,205 (63.93%)	0.008
Race				0.01
White	60,955 (60.46%)	48,105 (61.20%)	12,850 (57.83%)	
Asian	4,895 (4.86%)	3,830 (4.87%)	1,065 (4.79%)	
Black	16,295 (16.16%)	11,995 (15.26%)	4,300 (19.35%)	
Hispanic	13,600 (13.49%)	10,885 (13.85%)	2,715 (12.22%)	
Native American	635 (0.63%)	470 (0.60%)	165 (0.74%)	
Other	4,440 (4.40%)	3,315 (4.22%)	1,125 (5.06%)	
Location and Teaching Status of Hospital				<0.001
Rural	1,450 (1.44%)	1,450 (1.84%)	0 (0.00%)	
Urban Non-Teaching	9,325 (9.25%)	8,790 (11.18%)	535 (2.41%)	
Urban Teaching	90,045 (89.31%)	68,360 (86.97%)	21,685 (97.59%)	
<b>Presentation and Ancillary Treatments</b>				
NIS Subarachnoid Severity Score (NIS-SSS) (± SD, Range)	5.75 ± 10.34 (0.32–147.08)	5.73 ± 10.35 (0.32–147.08)	5.83 ± 10.31 (0.32–88.60)	0.664
High Grade NIS-SSS (≥ 9)	10,965 (10.88%)	8,510 (10.83%)	2,455 (11.05%)	0.73
Vasospasm	20,775 (20.61%)	14,955 (19.03%)	5,820 (26.19%)	<0.001
Intraarterial Vasospasm Treatment	3,270 (3.24%)	2,285 (2.91%)	985 (4.43%)	<0.001
Hydrocephalus	36,900 (36.60%)	26,560 (33.79%)	10,340 (46.53%)	<0.001
Hydrocephalus Shunting	31,445 (31.19%)	22,230 (28.28%)	9,215 (41.47%)	<0.001
Gastrostomy	9,195 (9.12%)	7,085 (9.01%)	2,110 (9.50%)	0.394
Tracheostomy	6,570 (6.52%)	4,880 (6.21%)	1,690 (7.61%)	0.002
<b>Treatment Strategy</b>				
Endovascular Treatment	33,460 (33.19%)	25,170 (32.02%)	8,290 (37.31%)	<0.001
Surgical Clipping	11,260 (11.17%)	7,380 (9.39%)	3,880 (17.46%)	<0.001
<b>Outcomes</b>				
NIS Subarachnoid Outcome Measure	60,585 (60.09%)	47,715 (60.71%)	12,870 (57.92%)	0.003
Inpatient Mortality	19,385 (19.23%)	15,760 (20.05%)	3,625 (16.31%)	<0.001
Total Charges (± SD)	278,395.58 ± 314,319.16	271,485.95 ± 319,528.69	303,140.63 ± 293,612.63	0.005
Length of Stay (±SD, Range)	12.46 ± 13.21 (0.00–295.00)	11.90 ± 13.06 (0.00–273.00)	14.41 ± 13.56 (0.00–295.00)	<0.001

0.843, 95% CI [0.760–0.943],  $p = 0.001$ ) and inpatient mortality (aOR 0.824, 95% CI [0.735–0.924],  $p < 0.001$ ).

**Conclusions** In this NIS analysis, we re-demonstrate higher aSAH cases volumes are associated with lower rates of poor outcome and inpatient mortality.

**Disclosures** L. Fry: None. C. Heskett: None. A. Brake: None. K. Le: None. F. De Stefano: None. A. Williams: None. A. Rouse: None. J. Peterson: None. K. Ebersole: None.

O-061

### ISCHEMIC STROKE IN INDIA: A 30-YEAR EPIDEMIOLOGICAL STUDY FROM THE GLOBAL BURDEN OF DISEASES OF TEMPORAL TRENDS, SEX DIFFERENCES, AND ATTRIBUTABLE RISK FACTORS

<sup>1</sup>A Gajjar\*, <sup>2</sup>N Muhammad, <sup>3</sup>O Tang, <sup>2</sup>G Sioutas, <sup>2</sup>R Jabarkheel, <sup>4</sup>R Singh, <sup>5</sup>N Gupta, <sup>2</sup>J Burkhardt, <sup>2</sup>V Srinivasan. <sup>1</sup>Neurosurgery, Albany Medical College, Albany, NY; <sup>2</sup>Neurosurgery, Hospital of University of Pennsylvania, Philadelphia, PA; <sup>3</sup>Neurosurgery, University of Pittsburgh, Pittsburgh, NY; <sup>4</sup>Neurosurgery, University of Rochester, Rochester, NY; <sup>5</sup>Campbell University School of Osteopathic Medicine, Lillington, NC

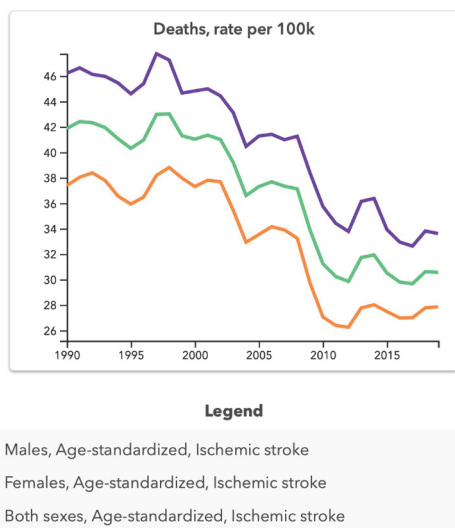
10.1136/jnis-2024-SNIS.61

**Introduction** India faces a substantial challenge in the management of stroke, a leading cause of mortality with risk factors amplified by lifestyle and environmental factors. This study aims to quantify the temporal trends of ischemic stroke burden and identify contributing risk factors.

**Objective** This study aims to determine changes in mortality due to ischemic stroke in India from 1990 to 2019.

**Methods** Data regarding ischemic stroke in India was queried from the 2019 *Global Burden of Disease (GBD)* study. We estimated incidence, prevalence, mortality, disability-adjusted life years (DALYs), years of life lost (YLLs), and years lived with disability (YLDs) for ischemic stroke in India. We also quantified attributable mortality and DALYs of underlying risk factors through a comparative risk assessment approach.

**Results** In 2019, India noted 535,700 (453,200–631,800) incident ischemic stroke cases, with incidence rates increasing by 118.8% since 1990. Females exhibited a steeper increase (131.1%) compared to males (107.5%). Although age-standardized incidence decreased by 4.2%, the number of stroke deaths escalated by 148.5%. Female fatalities outpaced males, recording a 183.5% rise versus 123.0%. The total stroke prevalence jumped by 130.4%, translating to a rise in prevalence rates of 41.7% and a mild 5.7% increase in age-standardized prevalence. Stroke DALYs surged by 121.0%, with females encountering a 145.7% rise against males' 102.8%. The average increase in DALY rates per 100,000 was 36.0%, whereas age-standardized DALYs dropped by 23.1%. YLDs related to stroke soared by 135.5%, matched by a 44.9% rise in YLD rates, while age-standardized YLD rates climbed marginally by 6.7%. YLL due to stroke expanded by 118.4%, with females witnessing an excessive increase of 147.0%. Despite a 34.4% increase in YLL rates, a decline of 26.3%



Abstract O-061 Figure 1

was seen in age-standardized YLL rates. Metabolic risks were the predominant risk factor for stroke DALYs, with high blood pressure contributing significantly across both sexes. Environmental risks like particulate matter pollution, dietary habits, and substance use also featured prominently as risk factors for stroke.

**Conclusions** India has experienced an increase in ischemic stroke incidence, but a decrease in mortality, indicating more effective treatments and improvement in access to care.

**Disclosures** A. Gajjar: None. N. Muhammad: None. O. Tang: None. G. Sioutas: None. R. Jabarkheel: None. R. Singh: None. N. Gupta: None. J. Burkhardt: 2; C; MicroVention. V. Srinivasan: None.

O-062

#### ASSOCIATION OF ADMISSION HYPERGLYCEMIA WITH SYMPTOMATIC INTRACRANIAL HEMORRHAGE AMONG PATIENTS RECEIVING TENECTEPLASE VERSUS ALTEPLASE BEFORE STROKE THROMBECTOMY

<sup>1</sup>P Hendrix\*, <sup>1</sup>P Koul, <sup>1</sup>C Schirmer, <sup>2</sup>M Lang, <sup>2</sup>A Al-Bayati, <sup>2</sup>R Nogueira, <sup>2</sup>B Gross, <sup>1</sup>Geisinger, Danville, PA; <sup>2</sup>UPMC, Pittsburgh, PA

10.1136/jnis-2024-SNIS.62

**Background and Purpose** Admission hyperglycemia is an independent predictor of poor functional outcome in acute ischemic stroke. Stroke thrombolysis with alteplase (TPA) among patients with admission hyperglycemia is associated with increased risk of symptomatic intracranial hemorrhage (sICH) and decreased recanalization rates. Lately, tenecteplase (TNK) has been established as a non-inferior alternative to TPA in acute ischemic stroke care. The impact of admission hyperglycemia in TNK compared to TPA prior to large vessel occlusion (LVO) stroke thrombectomy requires further investigation. **Methods** LVO stroke patients who received intravenous thrombolysis with TPA or TNK before endovascular treatment were retrospectively reviewed. During the study period 01/2020 - 06/2023, the authors' stroke-systems switched from TPA to TNK as their primary thrombolytic. Of consecutive 569 patients, 476 met inclusion criteria: proximal LVO, pre-stroke modified Rankin Scale (mRS) < 3, last-known-well to intravenous thrombolysis (LKW-to-IVT) ≤ 4.5 hours. Admission

hyperglycemia was defined as ≥ 140 mg/dl and sICH as parenchymal hemorrhage associated with neurological decline of National Institute of Health Stroke Scale (NIHSS) ≥ 4. Multivariate logistic analysis was performed.

**Results** Among 476 patients, 261 (54.8%) received TNK and 215 (45.2%) TPA prior to EVT. The site of occlusion was the M1 middle cerebral artery (MCA) (45.6%), M2 MCA (27.9%), internal carotid artery (14.3%), tandem carotid with M1 or M2 MCA (9.5%) and basilar artery (2.7%). Baseline demographics (age, sex, NIHSS, LKW-to-IVT, Alberta Stroke Program Early CT Score) and admission hyperglycemia rates (TNK 32.8% and TPA 33.5%) were comparable. Admission hyperglycemia was significantly associated with sICH (area under the curve 0.71, 95% CI 0.66 - 0.75, p=0.003). In multivariate analysis, admission hyperglycemia remained independently associated with sICH (adjusted odds ratio 3.9, 95% CI 1.3 - 12.0, p=0.017). Admission hyperglycemia effects were similar in TNK compared to TPA groups.

**Conclusions** Among LVO stroke patients receiving intravenous thrombolysis prior to EVT, admission hyperglycemia is significantly associated with risk of sICH. The detrimental effects of admission hyperglycemia were similar with TNK compared to TPA prior to EVT.

**Disclosures** P. Hendrix: None. P. Koul: None. C. Schirmer: None. M. Lang: None. A. Al-Bayati: None. R. Nogueira: None. B. Gross: None.

O-063

#### ENDOVASCULAR THERAPY VS BEST MEDICAL MANAGEMENT IN DISTAL MEDIUM MIDDLE CEREBRAL ARTERY ACUTE ISCHEMIC STROKE: A MULTINATIONAL MULTICENTER PROPENSITY SCORE-MATCHED STUDY

<sup>1</sup>B Musmar\*, <sup>2</sup>N Adeb, <sup>3</sup>AA Dmytriw, <sup>4</sup>A Guenego, <sup>5</sup>H Salim, <sup>1</sup>SI Tjoumakaris, <sup>5</sup>V Yedavalli, <sup>1</sup>P Jabbar. <sup>1</sup>Neurological Surgery, Thomas Jefferson University Hospital, Philadelphia, PA; <sup>2</sup>Neurological Surgery, Louisiana State University, Shreveport, LA; <sup>3</sup>Neuroendovascular Program, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA; <sup>4</sup>Neurological Surgery, Erasme University Hospital, Brussels, Belgium; <sup>5</sup>Radiology, Johns Hopkins University Hospital, Baltimore, MD

10.1136/jnis-2024-SNIS.63

**Background** The efficacy of endovascular treatment (EVT) in acute ischemic stroke due to distal medium vessel occlusion (DMVO) remains uncertain. Our study aimed to evaluate the safety and efficacy of EVT compared to best medical management (BMM) in DMVO.

**Methods** In this prospectively collected, retrospectively reviewed, multicenter cohort study, we analyzed data from MAD-MT registry. Patients with acute ischemic stroke due to DMVO in the M2, M3, and M4 segments who underwent EVT or received BMM were included. The primary outcomes were functional independence (modified Rankin Scale [mRS] score of 0–2) at 90 days, with secondary outcomes including excellent outcome (mRS 0–1), mortality (mRS 6), and safety outcomes focused on hemorrhagic complications. Propensity score matching was employed to balance the cohorts.

**Results** A total of 1,779 patients were analyzed before propensity score matching (374 in the BMM group and 1,405 in the EVT group). After matching, 694 patients were included (347 in each group). The EVT group did not demonstrate significant improvement in functional independence at 90 days compared to the BMM group (adjusted OR 0.94, 95% CI 0.61–1.45; p=0.78). However, the EVT group exhibited increased 90-day mortality (adjusted OR 1.73, 95% CI 1.02–2.96;