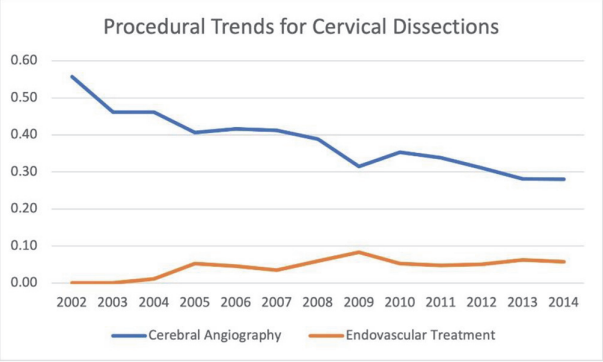
optimal medical management and/or complications. Given the generally increased use of ET for other indications, advancement in devices and treatment techniques, and increase in operator comfort, we sought to analyze trends in the use of endovascular therapy among patients with cervical artery dissection in a large, population-based sample of patients with stroke or TIA across the U.S.

Methods We used the 2002 to 2014 releases of the National Inpatient Sample and validated International Classification of Diseases, Ninth Revision, Clinical Modification codes (ICD-9-CM) to identify hospitalizations with the combination of cervical artery dissection and either ischemic stroke or TIA. Survey weights were used to report nationally representative estimates. We used logistic regression to assess trends and to examine the association between endovascular therapy and outcomes.

Results Over the study period, there were 22,533 hospitalizations with both a cervical artery dissection and either an ischemic stroke or TIA. The rate of cerebral angiography decreased from 0.56%, 95% CI (confidence interval), 0.37–0.74 in 2002 to 0.28%, 95% CI, 0.24–0.32 in 2014, p<0.001, while the rates of endovascular therapy increased from 0.01% (95% CI, 0–0.03%) to 0.06% (95% CI, 0.04–0.08%) (p=0.004) over the same period. endovascular therapy was not associated with an improvement in hospital mortality (OR, 0.8 ;95% CI, 0.5–1.3, p = 0.350) or discharge disposition (OR, 1.1; 95% CI, 0.8–1.4, p = 0.545).



Abstract E-094 Figure 1

Conclusions Despite an increase in the overall use of endovascular therapy for the treatment of cervical artery dissection in patients with ischemic stroke or TIA, there was no significant association with early clinical outcomes. Future studies looking at long term outcomes including stroke-recurrence are warranted.

Disclosures M. Bouslama: None. **C. Zhang:** None. **H. Kamel:** 1; C; PI for the NIH-funded ARCADIA trial (NINDS U01NS095869) which receives in-kind study drug from the BMS-Pfizer Alliance for Eliquis® and ancillary study support from Roche Diagnostics. 2; C; Deputy Editor for JAMA Neurology, steering committee member of Medtronic's Stroke AF trial, trial executive committee for Janssen, endpoint adjudication committee for a trial of empagliflozin for Boehringer-Ingelheim. **A. Merkler:** 2; C; personal fees for medicolegal consulting on neurological disorders.

E-095 FIRST-PASS EFFECT PREDICTS CLINICAL OUTCOME AND INFARCT GROWTH AFTER THROMBECTOMY FOR DISTAL MEDIUM VESSEL OCCLUSIONS

A Guenego, B Lubicz. *Erasme Hospital, Brussels, BELGIUM*

10.1136/neurintsurg-2022-SNIS.206

Background and Purpose The First Pass Effect (FPE) in endovascular thrombectomy (EVT) has been associated with better clinical outcomes and lower stroke progression in large-vessel-occlusion but has not been evaluated in distal, medium vessel occlusions (DMVOs). We sought to assess the impact on clinical outcome and stroke progression of the modified FPE (defined as a single-pass successful [mTICI 2b/2c/3] revascularization) in patients who underwent EVT for a primary DMVO.

Methods We collected the data of consecutive patients who underwent EVT for a primary DMVO in one large academic center and compared the rate of good clinical outcome (modified Rankin Scale of 0–2 at 3 months) and stroke progression between patients who achieved mFPE to non-mFPE patients.

Results Between January 2018 and January 2021, we included 60 patients who underwent an EVT for an acute ischemic stroke (AIS) with a primary DMVO. Overall, mFPE was achieved in 32% (19/60) of EVT. mFPE was associated with a significantly higher rate of good clinical outcome compared to non-mFPE patients (89% versus 46%, ODDS ratio = 16.04 [2.23–115.39], p=0.006 in multivariate analysis). Final stroke volume was lower among mFPE patients (6.9mL [4.7–13.6] versus 23mL [14.6–47], p=0.001) as-well-as stroke progression (6.8mL [4–12.1] versus 17.8mL [8.1–34.9], p=0.016).mFPE was still associated with higher rates of good clinical outcome when compared to patients reaching an mTICI score ≥2b in more than one pass (89% versus 53%; ODDS ratio = 7.37 [1.43–38.08], p=0.017).

Conclusion mFPE is associated with better clinical outcomes and lower stroke progression in DMVO.

Disclosures A. Guenego: None. **B. Lubicz:** None.

E-096 COVID STATUS IS RELATED TO CLOT BURDEN DURING THROMBECTOMY IN ACUTE STROKE PATIENTS

[1]J Fraser, [2]A Dabney, [3]J Vicari, [4]D Rivet, [5]B Woodward, [6]A Nanda, [7]D Fiorella, [8]S Baltan, [9]F Sohrabji, [10]K Pennypacker, [3]C Kellner. *[1]Neurosurgery, University of Kentucky, Lexington, KY; [2]Biostatistics, Texas AandM, College Station, TX; [3]Neurosurgery, Mount Sinai School of Medicine, New York, NY; [4]Neurosurgery, Virginia Commonwealth University School of Medicine, Richmond, VA; [5]Vista Radiology, Knoxville, TN; [6]SSM Health, Fenton, MO; [7]SUNY Stonybrook, Stony Brook, NY; [8]Oregon Health and Science University, Portland, OR; [9]Texas AandM University, Bryan, TX; [10]University of Kentucky, Lexington, KY*

10.1136/neurintsurg-2022-SNIS.207

Background The INSIGHT Registry, a multicentered 'multi-omic' analysis of thrombi associated with acute hemorrhagic and ischemic stroke is currently enrolling, with over 300 subjects already enrolled. Through this effort, we can evaluate ischemic stroke thrombi in the setting of concurrent medical conditions. While it has been reported that COVID positivity can affect clotting mechanisms, there is a paucity of data on histopathology of stroke clot in this setting.

Aim Our aim in this analysis was to study the relationship between COVID positivity and clot histopathology in large vessel occlusive stroke.

Methods Patients, aged ≥18 years, treated frontline with the Penumbra System® for thrombectomy are included in this analysis. Patient demographics, medical history, radiographic, and procedural information are collected in conjunction with extracted clot and concurrent extracranial arterial blood. While the protocol includes analysis for proteomics and transcriptomics, for this analysis we used histopathological evaluation of the thrombi.

Results/Conclusion Of 230 patients included in this interim analysis across 24 centers in the United States, between 02/2021 and 01/2022, 16 patients had a history of COVID. Comparing COVID-positive to non-positive, patients with COVID were younger (median 66.5 years vs 71.5 years, p 0.042), and had more intracranial clot by weight (median 101.0 mg vs 42.0 mg, p 0.047). There was a trend toward COVID positive patients to have more clot volume (median 180 cc vs 77.5 cc p 0.08), suggesting the difference was a higher clot burden instead of more density to the thrombus. These results suggest different histopathological characteristics in clot formation in COVID patients with large vessel occlusive stroke.

Abstract E-096 Table 1

Sample Characteristics	All Subjects (N=230)	COVID(N=16)	Non-COVID (N=214)	P-Value[1]
Age				0.0416
N	230	16	214	
Mean (SD)	69.2 (15.11)	60.4 (17.81)	69.9 (14.73)	
Median [IQR]	70.5 [59.0, 82.0]	66.5 [44.5, 74.5]	71.5 [59.0, 83.0]	
Range (min, max)	(27.0, 98.0)	(27.0, 83.0)	(30.0, 98.0)	
Female	55.7% (128/230)	68.8% (11/16)	54.7% (117/214)	0.3090
Clot Weight (mg)				0.0471
N	225	15	210	
Mean (SD)	91.7 (177.29)	114.5 (106.38)	90.1 (181.35)	
Median [IQR]	44.0 [19.0, 82.0]	101.0 [22.0, 172.0]	42.0 [18.0, 77.0]	
Range (min, max)	(0.5, 1563.0)	(1.0, 420.0)	(0.5, 1563.0)	
Clot Volume (mm^3)				0.0813
N	225	15	210	
Mean (SD)	167.6 (366.14)	214.7 (225.07)	164.2 (374.32)	
Median [IQR]	80.0 [40.0, 150.0]	180.0 [36.0, 300.0]	77.5 [40.0, 132.0]	
Range (min, max)	(1.0, 4500.0)	(2.0, 900.0)	(1.0, 4500.0)	

[1] Pvalues based on the Wilcoxon Signed Rank Test for continuous outcomes, Fisher's Exact Test for categorical outcomes.

Disclosures J. Fraser: 1; C; University of Kentucky, American Heart Association. 2; C; Stream Biomedical, Penumbra, Medtronic. 4; C; Fawkes Biotechnology, Cerelux. **A. Dabney:** None. **J. Vicari:** None. **D. Rivet:** None. **B. Woodward:** None. **A. Nanda:** None. **D. Fiorella:** None. **S. Baltan:** None. **F. Sohrabji:** None. **K. Pennypacker:** None. **C. Kellner:** None.

E-097 IDENTIFYING BLOOD PRESSURE THRESHOLDS FOR BETTER THROMBECTOMY OUTCOMES

[1]A Killedar, [1]V Fuchs, [2]S Shah, [1]M Hill, [1]P Pema, [1]R Budzik, [1]A Alhajeri, [1]A Koss, [1]N Dedhia, [1]A Loochtan, [1]V Rai, [1]B Katz, [1]W Hicks, [1]B Raetzke, [1]N Vora. *[1]Neurology, OhioHealth Riverside Methodist, Columbus, OH; [2]Stanford University School of Medicine, Stanford, CA*

10.1136/neurintsurg-2022-SNIS.208

Background We sought to determine if a pre-reperfusion blood pressure threshold exists for large vessel occlusion, acute ischemic stroke (LVO AIS) patients which independently prognosticates a good clinical outcome.

Methods We retrospectively reviewed patients from July 2013 to December 2015 that were treated with a thrombectomy for a middle cerebral artery M1 (MCA M1) occlusion at our comprehensive stroke center (CSC). We obtained pre-procedure arterial blood pressure from available records at the time of EMS activation to the time of reperfusion and calculated an average ischemic time mean arterial pressure (MAP). All patients in our series underwent a cerebral angiogram to assess collateral status prior to initiating thrombectomy. We also defined angiographic arterial collateral status to the middle cerebral artery distribution as robust if any leptomeningeal supply from the anterior or posterior circulation extended into the pre-sylvian divisions and marginal if leptomeningeal supply did not reach the sylvian fissure. All patients included in our analysis, achieved TICI 2b or better reperfusion. Our endpoint was a modified Rankin Scale (mRS) ≤2 at 90 days. For analysis, the averaged mean arterial pressure (MAP) range was segmented and dichotomized into the following groups: greater than 85mmHg, 90mmHg, 95mmHg, 100mmHg, 110 mmHg and 115mmHg. We considered 60-minute time epochs from symptom onset to thrombectomy completion, pre-treatment ASPECTS score, t-PA treatment and collateral status. Significant parameters from a univariate analysis of the above were included into a multivariate logistic regression to determine which variables significantly influenced a better outcome.

Results We reviewed 52 patients. The mean age was 70±14; NIHSS was 16±6; 40% (21) received t-PA; 58% (30) had robust collaterals; the median ASPECTS score was 10±1; TICI 3 score was achieved in 63% (33) and 67% (35) had a mRS of ≤2 at 90 days. The number of patients having a mean arterial blood pressure threshold were as follows: >85mmHg [96% (50)], >90mmHg [83% (43)], >95mmHg [73% (38)], >100mmHg [58% (30)], >110mmHg [31% (16)] and >115mmHg [15% (8)]. The number of patients that were within a particular temporal threshold from symptom onset to end of mechanical thrombectomy were as follows: 3hrs [4% (2)], 4hrs [21% (11)], 5hrs [39% (20)], 6hrs [52% (27)], 7hrs [67% (35)], 8hrs [79% (41)], 9hrs [87% (45)] and 12hrs [90% (47)]. We used binomial logistic regression for the above variables. After considering positive univariates from above, our multivariate logistic regression model identified that mean arterial pressure threshold more than 95mmHg was the sole factor that was statistically significant to determine a better outcome post thrombectomy procedure [**OR 15.1, CI 1.3-170.1, *p=0.02***]. The rate of good clinical outcome in those patients with a mean arterial blood pressure maintained