Logistic regression models, with baseline predictors of age, gender, baseline NIHSS, ASPECTS and mRS scores, were run to assess whether CTP acquisition predicted intracerebral hemorrhage (ICH) presence and functional outcome at discharge and 90 days. CTP acquisition did not add any significant predictive value on functional outcomes at discharge ($p=0.439$), at 90 days ($p=0.271$), or on the presence of intraparenchymal hemorrhage ($p=0.626$). Age and baseline NIHSS significantly predicted bad outcome at discharge (Age: $p=0.009$, OR=1.071; NIHSS: $p=0.003$, OR=1.183) and 90 days (Age: $p=0.012$, OR=1.066; NIHSS: $p=0.023$, OR=1.121). A separate regression model using image acquisition time as a predictor of bad outcome at discharge showed a positive trend that did not meet significance ($p=0.106$, OR=1.018).

Conclusion Our retrospective analysis highlights the prolonged time to treatment in late window presenters evaluated with CTP due to the additional image acquisition time which could include inter-imaging delays such as image processing and interpretation. Acquisition of CTP for patient selection for EVT is neither justified by added safety, as determined by the presence of ICH, nor better functional outcomes at discharge or 90 days. Future randomized, controlled trials should evaluate the workflow time continuum and effect on outcomes for further optimization of patient selection methods for EVT in the late time window.

Disclosures K. Wu: None. A. Ouf: None. J. Mocco: None. J. Fifi: None. H. Shorrah: None.

E-046

SAFETY AND EFFICACY OF CANGRELOR IN NEUROINTERVENTION

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10.1136/neurintsurg-2020-SNIS.82

Background Acute ischemic stroke with tandem cervical and intracranial disease is a morbid entity. Despite the advances in

endovascular therapies (EVT), a significant percentage of treated patients develop symptomatic intracranial hemorrhagic conversion. The risk increases with the use of intravenous Glycoprotein IIb/IIIa inhibitors (GPI) during acute stenting. Cangrelor is a novel intravenous P2Y12 inhibitor that has been established as an effective alternative to GPI in cardiac interventions. However, little is known about the safety and efficacy of Cangrelor in neuro-interventions.

Methods This is a series of all cerebrovascular patients treated with EVT in whom Cangrelor was used between January 2019 and August 2019 in a single tertiary center. We describe patient characteristics, technical and pharmacological details and outcomes.

Results Our cohort included 16 patients treated with Cangrelor, 56.3% were male patients, and the median age was 66 years (IQR=18). The majority of patients (75%) were stroke cases, while 3 (18.8%) were diagnosed with aneurysms and 1 (6.3%) received Cangrelor post-op. Out of the 12 stroke patients, 7 patients had a tandem occlusion and 5 patients had intracranial atherosclerotic disease (ICAD) of a single vessel (table 1). Standard dosing was used in all patients, with median bolus of 2.36 mg (IQR=0.52) and a median infusion dose of 58.8 mg (IQR=84). Platelet reactivity unit test (PRU) was performed in 7 patients, 10–30 minutes after the bolus dose with a median value of 7 (IQR=63). 62.5% of patients were transitioned to clopidogrel and 25% to ticagrelor. All patients had follow-up vessel imaging 2 days after the procedure. Only 2 patients experienced re-occlusion of their stents while the rest of the stents remained patent. Only 1 patient experienced a symptomatic subarachnoid hemorrhage. Median cost of Cangrelor was \$1796 per patient.

M, Male; F, female; icad, Intracranial atherosclerotic disease; L, Left; r, right; ica, internal carotid artery; cica, cervical internal carotid artery; va, vertebral artery; m1–3, m1–3 segments of the middle cerebral artery; sah, subarachnoid hemorrhage.

Conclusions Cangrelor has a safer and more effective profile in comparison with GPI in patients undergoing emergent endovascular treatment of cerebrovascular pathologies

Abstract O-046 Table 1 Individual patient characteristics

Case ID	Demographics	Indication	Target Vessels			Transition Agent	tpA	Complications	Stent Patency
1	70–75 M	ICAD (R VA)	R VA stent			Brilinta	No	None	patent
2	70–75 M	Tandem occlusion	R cICA stent,M1 thrombectomy			Plavix	No	None	patent
3	50–55 F	Tandem occlusion	L ICA stent,M1 thrombectomy			Plavix	No	None	patent
4	65–70 F	Tandem occlusion	L ICA stent,M1 thrombectomy			Plavix	Yes	None	patent
5	50–55 M	AIS – ICAD	Basilar			Plavix	No	Occlusion	occluded
6	55–60 F	Tandem occlusion	R cICA stent,M3 thrombectomy			Plavix	No	None	patent
7	40–45 M	AIS - ICAD	L M2			Brilinta	Yes	None	N/A
8	60–65 F	Tandem occlusion	L ICA stent,M1 thrombectomy			Plavix	Yes	None	patent
11	85–90 M	ICAD (Basilar occlusion)	Basilar a.			Brilinta	No	None	patent
13	65–70 M	Tandem occlusion	R ICA stent,M1 thrombectomy			Plavix	No	None	Patent
14	85–60 M	ICAD	R ICA			Plavix	No	None	patent
15	95–100 F	Iatrogenic Dissection	L cICA			None	Yes	Symptomatic SAH	N/A
16	65–70 M	Post-operative sub-occlusive thrombus	R M1			None	No	None	N/A
			Hunt & Hess						
			Modified Fisher						
9	45–50 M	Ruptured R ICA aneurysm	R ICA	Grade 1	Group 3	Plavix	No	None	patent
10	65–70 F	Ruptured L MCA aneurysm	L MCA	Grade 2	Group 1	Plavix	No	None	patent
12	55–60 F	Symptomatic R supra-clinoid ICA aneurysm	R ICA	N/A	N/A	Brilinta	No	Occlusion	Occluded

requiring stenting, particularly patients with tandem occlusion. Further prospective studies are warranted to expand its use in neuro-interventions.

Disclosures A. Ouf: None. S. ElSayed: None. N. Musallam: None. N. Davis: None. M. Tanprayoon: None. J. Fifi: None. J. Mocco: None. H. Shoirah: None.

E-047 ACUTE STROKE THROMBECTOMY IN THE POSTERIOR CIRCULATION IN THE UNITED STATES: REAL WORLD EVIDENCE FROM THE NEUROVASCULAR QUALITY INITIATIVE-QUALITY OUTCOMES DATABASE

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10.1136/neurintsurg-2020-SNIS.83

Introduction Endovascular stroke thrombectomy is currently the standard of care for anterior circulation large vessel occlusions (LVO), based on multiple randomized control trials. Due to the grave consequences of posterior circulation occlusions, no randomized control trials have been performed to assess the benefit and outcome of mechanical thrombectomy in the posterior circulation. We aim to evaluate the real-world evidence for mechanical thrombectomy in posterior circulation LVO using the Neurovascular Quality Initiative (NVQI) registry.

Methods Data from the NVQI registry database was analyzed and compared for anterior versus posterior circulation acute ischemic stroke treated with endovascular thrombectomy in 23 US centers (17 states) from February 2015 to October 2019. Mann Whitney and Fischer exact tests were used for continuous and categorical variables, respectively.

Results Posterior circulation (PC) thrombectomy was performed in a minority of 9.2% (284/3103 patients) compared to anterior circulation (AC) thrombectomy. LVO sites were predominantly basilar artery occlusions (68% basilar trunk and 19.4% basilar apex/PCA) with the remainder as vertebral artery occlusions (12.7%). Mean age at the intervention was 66±15.5 years (61.6% male) PC versus 68.8±15.4 years AC, $p=0.004$. Mean NIHSS at presentation was 17±10.2 PC versus 15.8±6.8 AC, $p=0.007$. CT/CTA was performed in 94% of cases whereas MRI was performed in 19% of cases (versus 14% AC, $p=0.03$). Median arrival to groin puncture time was 110 min PC versus 87 min AC, onset to groin time was 375 min PC versus 291 min AC, and median procedure time was 38 min PC versus 33 min AC. Successful recanalization was achieved in 84.5% (TICI 2b/3) versus 84% AC ($p=0.87$) with 50.4% reporting single pass recanalization and 3.9% technical failures (3.2% access related). Intraprocedural complications were reported in 4.9% of cases (0.7% vessel perforations, 0.4% hemorrhagic transformations, 1.4% non-target embolization, and 1.8% iatrogenic dissections). Mean post-operative length of stay was 9.5±9.5 days, with 24.6% in hospital mortality versus 11.2% AC, ($p<0.001$). Clinical 90 day follow up mRS was reported in 64.2% of cases with independent mRS≤2 achieved in 40.4% versus 37.3% AC, $p=0.31$). 90-day mortality was reported in only 0.9% of cases. Missing data was most common in technical failure, intraprocedural complications, and 90-day mRS amounting to 16.5%, 17.3% and 35.8% of cases, respectively.

Conclusion Real-world evidence from the NVQI procedural registry suggests posterior circulation stroke to be more common in younger patients with significantly higher NIHSS presentations, and increased utilization of preprocedural MRI for endovascular thrombectomy selection. Given the historical high morbidity and mortality of basilar artery occlusion, there is strong evidence for the benefit of mechanical thrombectomy in the posterior circulation with 3-month functional outcomes nearly identical to thrombectomy outcomes in the anterior circulation.

Disclosures D. Cantrell: None. R. Abdalla: None. A. Shaibani: None. M. Hurley: None. B. Jahromi: None. M. Potts: None. S. Ansari: None.

E-048 PREDICTIVE FACTORS OF GOOD OUTCOMES IN PATIENTS WITH ACUTE BASILAR ARTERY OCCLUSION AFTER ENDOVASCULAR TREATMENT

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10.1136/neurintsurg-2020-SNIS.84

Background and Purpose Basilar artery occlusion (BAO) is associated with high risk of disability and mortality. The objective of this study was to investigate prognostic factors in patients with acute basilar artery occlusion treated with mechanical thrombectomy, focusing on collateral status and recanalization time from symptom onset.

Methods All eligible patients from January 2012 to October 2019 undergoing endovascular treatment (EVT) due to acute BAO were retrospectively reviewed. The baseline posterior circulation collateral status was assessed with Basilar Artery on Computed Tomography Angiography (BATMAN) score and Posterior Circulation Collateral Score (PC-CS). Good outcome was defined as a modified Rankin scale score of ≤2 at 3 months and successful recanalization as thrombolysis in cerebral infarction (TICI) grade 2b or 3. The association between baseline and clinical parameters including and favorable outcome was evaluated with logistic regression.

Results Our sample included a total of 81 eligible patients (49 males, mean age 70.3 years) with a median baseline and discharge National Institute of Health Stroke Scale (NIHSS) score of 12. Patients with good clinical outcome showed a lower baseline National Institute of Health Stroke Scale (NIHSS) score, a more proportion of distal BAO, and a higher BATMAN and PC-CS ($p<0.001$). According to the analysis subdivided of patients within and over 6 or 12 hours, the time from symptom onset to recanalization was no correlation with good outcome. Multivariable logistic analysis showed Baseline NIHSS <15 (odds ratio [OR] 8.49 95% confidence interval [CI]: 2.01–35.82, $P=0.004$), PC-CS ≥ 6 (OR 3.79 95% CI: 1.05–13.66, $P=0.042$) and distal BAO (OR 3.67 95% CI: 1.10–12.26, $P=0.035$) were independent predictors of good clinical outcomes.

Conclusion This study suggested that good collateral circulation and distal BAO are independent predictors of clinical outcome after EVT in patients with acute BAO. In particular, patients with good initial collateral status and distal BAO may consider EVT even if the treatment is started beyond appropriate time line.

Computed tomographic angiography, acute ischemic stroke, basilar artery occlusion, collateral circulation

Disclosures S. Ha: None.