

Aim of Study To investigate early clinical surrogates for long-term independency of patients treated with mechanical thrombectomy for M2 occlusion stroke in comparison to patients with M1 occlusion stroke.

Methods All patients enrolled in the German Stroke Registry-Endovascular Treatment (05/2015–12/2021; N=13082) were screened for anterior circulation stroke. Receiver-operating-characteristics(ROC)-curve analyses and area-under-the-curve (AUC) were used to evaluate the performance of admission NIHSS, 24h NIHSS and NIHSS percentage and absolute change to predict functional outcome at 90d. Excellent and good outcome were defined as modified Rankin Scale(mRS) 0–1 and 0–2, respectively.

Results 1268 patients with M2 and 2749 patients with M1 occlusion were included. For both cohorts, 24h NIHSS had the highest discriminative ability to predict excellent functional outcome with AUC=0.86(95%CI=0.84–0.88) for M2 and AUC=0.86(0.84–0.88) for M1 occlusions. Optimal cutoffs were NIHSS≤7 and NIHSS≤8, respectively. Good long-term functional outcome was predicted with AUC=0.86(0.85–0.88) for M2 and AUC=0.86(0.85–0.88) for M1 occlusions with optimal cut-offs NIHSS≤8 and NIHSS≤9, respectively.

Conclusion 24h NIHSS was identified as best surrogate for long-term functional outcome after thrombectomy for patients with M1 and M2 occlusion, while optimal cut-offs to predict good and excellent outcome were 1 NIHSS-point higher in M2 occlusions compared to M1 occlusions.

Disclosure of Interest HK has financial interest in Eppdata GmbH.

GT received fees as consultant and lecturer from Acandis, Alexion, Amarin, Boehringer Ingelheim, Bayer, BMS/Pfizer, Daiichi Sankyo and Portola. He serves in the board of the TEA Stroke Study and of ESO.

JF is consultant for Cerenovus, Medtronic, Microvention, Penumbra, Phenox, Roche, Stryker and Tonbridge. He is stock holder of Tegos Medical, Eppdata and Vastrax. He serves as Associate Editor at JNIS.

All other authors have nothing to disclose.

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ACUTE STROKE WITH TREATMENT OF TANDEM LESIONS UNDER TRIPLE ANTIPLATELET THERAPY: PROCEDURAL SAFETY, STENT PATENCY AND OUTCOME AT 90 DAYS

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Introduction Acute stroke treatment with intracranial thrombectomy and stent-PTA of ipsilateral carotid artery stenosis/occlusion (“tandem lesion” TL) in one session is considered safe. However, the risk of stent restenosis after TL treatment is high. Antiplatelet (AP) therapy to prevent restenosis must be well balanced to avoid intracranial hemorrhage. We investigated the procedural safety and 90 days outcome of patients receiving TL treatment under triple-AP with a focus on stent-patency and possible disadvantageous comorbidities.

Aim of Study To ensure stent patency after TL treatment without putting the patient at risk of recurrent stroke or intracranial hemorrhage.

Methods Patients receiving TL treatment at our institution in the setting of acute stroke between 2013 and 2022 were analyzed regarding peri-/postprocedural safety and stent patency after 90 days. All treatments were with i.v. administration of eptifibatid and acetylsalicylic acid and one of the three drugs prasugrel, clopidogrel, or ticagrelor. Follow-up was done with duplex imaging at discharge and 90 days, with digital subtraction angiography upon suspected restenosis.

Results 176 patients were included. No periprocedural death occurred, periprocedural complications rate was 2.3%, in-hospital death rate 13.6%. 92.61% of patients maintained or improved the discharge mRS score at 90 days follow-up. 4.54% had an in-stent-restenosis within 90 days, no recorded comorbidity rendered significantly disadvantageous for stent patency.

Conclusion TL treatment under triple AP was safe in our experience, resulting in a low rate of restenosis and with favorable outcome in 92%. The influence of comorbidities on restenosis could be negligible within the described follow-up period.

Disclosure of Interest Philipp von Gottberg:

Nothing to disclose.

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Alexandru Cimpoaca:

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Hans Henkes:

Proctoring for phenox GmbH, Co-Founder and Co-Owner of CONTARA GmbH

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PROXIMAL BALLOON-GUIDED CATHETER WITH FLOW INVERSION VS. DISTAL FILTER PROTECTION DURING THE CAROTID STENT PLACEMENT, A SEVEN YEARS EXPERIENCES IN A COLOMBIA REFERENCE CENTER

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Introduction The carotid stent placement as a therapeutic option for carotid stenosis has been increasing among years; therefore, studies are required to evaluate the security and efficacy of its materials.

Aim of Study The purpose of this study was to evaluate the distal filter and the proximal balloon-guided catheter with flow inversion as protection devices during carotid angioplasty and stenting.

Methods This is a retrospective, observational study of patients diagnosed with carotid stenosis treated with angioplasty between January 1, 2014, and June 30, 2020; we analyzed a radiology service database to compare the distal filter and the proximal balloon-guided catheter as protection devices during angioplasty.

Results One hundred seventy-five angioplasties were performed, the distal filter was the most prevalent embolic protection device used (66%), patients baseline characteristics did not differ between groups with different embolic protection devices, except for history of dyslipidemia ($p < 0.000$). As well, we did not find any significant differences between the groups in the device related complications, intervention time ($p = 0.140$), unrelated complications ($p = 0.693$) and functional independence at 90 days ($p=0.096$).

Conclusion In our study the proximal balloon-guided catheter and the distal filter protection device as protection devices during the carotid stenting didn't show significant differences regarding complications related to the system.

Disclosure of Interest Nothing to disclose

P162/231 GOOD CLINICAL OUTCOME DECREASES WITH NUMBER OF RETRIEVAL ATTEMPTS IN POSTERIOR CIRCULATION STROKE THROMBECTOMY

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Introduction Endovascular therapy (EVT) has been shown to be superior for the treatment of acute basilar-artery occlusion compared to standard medical care. However, it is unknown if the number of retrieval attempts performed during EVT for posterior circulation stroke (PCS) influence the clinical outcome.

Aim of Study Our goal was to quantify the influence of EVT on clinical outcome depending on the number of retrievals needed for successful reperfusion in a large multi-center cohort of PCS patients.

Methods Of 6635 patients from the German Stroke Registry, patients who received EVT for posterior circulation stroke with known admission National Institutes of Health Stroke Scale (NIHSS) score, final Thrombolysis in Cerebral Infarction (TICI) score, and number of retrievals were included. Successful reperfusion was defined as a TICI score of 2b/3. The primary outcome was defined as a modified Rankin scale (mRS) of 0–3 at day 90.

Results The inclusion criteria were met by 528 patients from 21 centers. Besides the highly significant negative association with older age, higher NIHSS and positive association with iv. thrombolysis, the odds of good clinical outcome were highest if only one retrieval attempt was required (adjusted OR 4.91, 95%CI 2.55–9.44) and decreased considerably for the second (adjusted OR 2.37, 95%CI 1.19–4.72) and third attempts (adjusted OR 3.07, 95%CI 1.39–6.76).

Conclusion Successful reperfusion within the first three retrieval attempts is associated with improved clinical outcome compared to patients without reperfusion. We conclude that at least three retrieval attempts should be performed in EVT of posterior circulation strokes.

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P163/235 THROMBOLYSIS AND COLLATERAL FLOW IN INTERHOSPITAL TRANSFER FOR THROMBECTOMY: IMPLICATIONS FOR RECANALIZATION AND INFARCT GROWTH

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Introduction Collateral flow may mediate the effect between thrombolysis and macro and microvascular reperfusion in patients with large-vessel occlusion (LVO) transferred for endovascular treatment (EVT).

Aim of Study To investigate the interaction between thrombolysis and collateral flow in interhospital infarct growth and recanalization before EVT.

Methods This was a cohort study of consecutive anterior circulation LVO transferred patients from a primary stroke center (PSC) to a single comprehensive stroke center (CSC). We included patients who underwent repeated CT scans, and the rate of ASPECTS decay (RAD) was defined as (ASPECTS PSC – ASPECTS CSC) divided by the hours elapsed between scans. Collateral score was assessed in the PSC single-phase CTA on a scale from 0 to 3.

Results We included 264 transferred patients who underwent CT before EVT, of whom 91 (34.5%) received thrombolysis in PSC and 116 (43.9%) had good collaterals. RAD in each collateral score was not modified by bridging thrombolysis (mean, SD) [score 0: 1.49 (0.4) vs. 1.52 (1.1); score 1: 0.66 (0.7) vs. 0.70 (0.6); score 2: 0.33 (0.5) vs. 0.45 (0.6); score 3: 0.24 (0.4) vs. 0.23 (0.3)]. In patients with good collaterals, 7.9% of those without bridging thrombolysis recanalized before EVT, while 16.7% of patients with bridging thrombolysis recanalized. In patients with poor collaterals, recanalization was observed in 2.9% and 6.5% of patients, respectively.

Conclusion Collateral flow and thrombolysis may have a positive interaction in macrovascular recanalization. However, thrombolysis does not appear to interfere with collateral-mediated infarct growth

Disclosure of Interest Nothing to disclose