Conclusion Combined use of BGC and aspiration catheter during thrombectomy may be effective in patients with anterior LVO.

Disclosure of Interest nothing to disclose

P145/93 IMPACT OF COLLATERALS STATUS ON OUTCOMES OF MECHANICAL THROMBECTOMY – IN VITRO STUDY

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Introduction The presence or lack of an extensive cerebral collateral net is becoming more widely considered as an independent prognostic factor in stroke patients.

Aim of Study We aimed to assess whether the extent of collaterals had modifying effects on first-pass recanalization (FPR) and distal emboli measures (DEM) in mechanical thrombectomy (MT).

Methods Two in-vitro neurovascular models were created: good collaterals model (GCM) and poor-collaterals model (PCM). Two models were identical up to the M2 segment of middle cerebral artery (MCA). The GCM included anastomoses of the M2-MCA branches with anterior cerebral arteries and vertebrobasilar circulation. In the PCM these anastomoses were missing. Synthetic uniform clots (stiffness=95.77 ±5.80 kPa) were embolized to the M1-MCA. In all cases MT was performed using Solumbra technique. The primary outcome measure was FPR. The secondary outcomes assessed DEM.

Results Sixty MTs were performed (thirty experiments per study arm). The overall rate of FPR was 32%. FPR was higher in GCM (57%) than in PCM (7%; $p<0.001$). Maximum embolus size (1.51±1.31 mm vs. 0.58±0.46 mm; $p=0.001$), mean embolus size (MES) (0.95±1.1 vs. 0.35 ±0.28; $p<0.01$), total area of emboli (2.49±3.45 vs. 0.41 ±0.64; $p<0.01$), and total count of emboli >1 mm (0.97 ±1.03 vs. 0.27±0.69; $p<0.01$) in the new territory as well as MES (0.78±0.88 vs. 0.39±0.56; $p<0.05$) and area of emboli >1 mm (2.03±8.43 vs. 1.86±3.33; $p<0.01$) in a previously affected territory were also lower in GCM than in PCM.

Conclusion The degree of collateral circulation may modify MT outcomes. Good collaterals might facilitate the achievement of FPR and prevent distal embolization.

Disclosure of Interest Magda Jablonska has nothing to disclose.

Jiahui Li has nothing to disclose.

Riccardo Tiberi has nothing to disclose.

Alejandro Tomasello reports receiving consulting fees from Anaconda Biomed, Balt, Medtronic, MicroVention, Cerus, Merlin Medical, and Stryker.

Marc Ribo is a consultant for Medtronic, Cerenovus, Vesalio.

P146/118 NEVA ONE REGISTRY INTERIM ANALYSIS: RECANALIZATION OUTCOMES FROM A LARGE, REAL-WORLD PATIENT COHORT

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Introduction The NeVa stent retriever has proven it's safety and performance for treating large vessel occlusion (LVO) in acute ischemic stroke (AIS) across multiple clinical studies including the most recently published CLEAR Trial. This trial was conducted under rigorous scrutiny, with independent boards adjudicating outcomes. Real-world data is helpful in assessing the reproducibility of patient outcomes.

Aim of Study NeVa ONE is a multicenter, international, prospective registry designed to assess outcomes in a real-world cohort of patients.

Methods AIS LVO patients treated with NeVa either as first-line or as a rescue device are included. This interim analysis reports performance results of 175 subjects from 15 centers in 7 countries treated with NeVa used as first-line device. Study endpoints are successful (TICI2b-3) and/or complete (TICI 2c-3) recanalization at first pass (mFPE/FPE), up to three passes, and at procedure end. Secondary endpoints include neurological deterioration at 24 hours and device/procedure-related adverse events.

Results Mean patient age was 71±14 years. Most frequently reported conditions in medical history included: Hypertension (39%); Dyslipidemia (19%); Diabetes (14%) and Atrial Fibrillation (14%). Median admission-NIHSS was 16 (IQR:12–20). IV-tPA was administered in 43,1% of subjects. Occlusion sites were: ICA (23%), MCA (71%), posterior circulation (5%), and ACA (1%). Recanalization rates were: mFPE: 72.6%; FPE: 58.3%; ≤3pass eTICI 2b-3: 90.9%; ≤3pass eTICI 2c-3: 76.0%; Final eTICI 2b-3: 98.9% and final eTICI 2c-3: 83.4%.

Conclusion NeVa ONE Registry represents real-world data obtained from LVO AIS subjects treated with NeVa.

Disclosure of Interest Nothing to disclose

P147/148 TRANSRADIAL ACCESS FOR MECHANICAL THROMBECTOMY: TECHNICAL OUTCOMES AT OUR INSTITUTION

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Introduction More than ten years of experience as reported by interventional cardiologists has demonstrated several advantages of transradial access (TRA). The decreased risk of access site haemorrhagic complications is particularly relevant for mechanical thrombectomy (MT). This alternative approach should be explored in greater detail, as questions regarding feasibility and safety still exist among interventional neuroradiologists.

Aim of Study To present our single institution experience considering the feasibility, complications, and technical features of TRA.

Methods Retrospective review of MT performed via TRA between May 2021 and February 2023.

Results A total of 17 patients were identified (female 10, male 7, mean age of 79,25 years). Of the 17 TRA performed, 15 were conducted after transfemoral access (TFA) failure and 2 were performed as the primary approach. Right-sided TRA was obtained in all cases. Successful revascularization (Thrombolysis in Cerebral Infarction score $\geq$2b) was obtained in 9 cases. The single-pass recanalization rate was 44% and the average number of passes was 1,87. No major radial artery complications were recorded, except for one case of artery rupture, that was well-managed with manual compression. Anatomical variant with bovine aortic arch was present in two patients. The main cause for TRA failure was small radial artery diameter.

Conclusion These results suggest that TRA is a viable alternative to TFA. In addition to the decreased incidence of haemorrhagic complications, TRA may also be particularly useful for stroke patients whose vascular anatomy presents a challenge for TFA (e.g., bovine aortic arch configuration and marked supra-aortic branch tortuosity).

Disclosure of Interest Nothing to disclose.

P148/154 SAFETY AND EFFICACY OF EPTIFIBATIDE IN MECHANICAL THROMBECTOMY COMPLICATED BY INTRACRANIAL ATHEROSCLEROTIC DISEASE OR OTHER PATHOLOGY WARRANTING AGGRESSIVE ANTI-PLATELET THERAPY

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Introduction Mechanical thrombectomy for large vessel occlusion can be complicated by undelrying intracranial atherosclerotic disease (ICAD), dissection or tandem occlusions predisposing to re-occlusion and poor outcomes. The terminology unstable vessel wall (UVW) has been used to describe these conditions mandating aggressive anti-platelet therapy (aAPT). Data on concurrent aAPT therapy with thrombectomy is lacking.

Aim of Study To evaluate the safety and efficacy of Eptifibatide (EPT) in thrombectomy complicated by UVW.

Methods This study analysed characteristics, procedural details and follow-up imaging of patients who received Eptifibatide between March 2022 and May 2023. Haemorrhage defined by ECASS criteria and patency of the index artery on follow-up imaging has been evaluated to assess the safety and efficacy of EPT respectively.

Results 16 consecutive patients (mean age: 57.0 ± 18.3 years, male n = 13) presenting with a mean NIHSS score of 11 received Eptifibatide during study period. 11 had thrombectomy complicated by ICAD while 5 had extracranial carotid stenting with one having both. In the ICAD group, 8 patients had repeat thrombectomy while 3 had intracranial angioplasty and one patient proceeding to intracranial stenting. TICI2b/3 recanalisation was achieved in all patients except one presenting with flow diverting stent occlusion. H12 haemorrhage occurred in 3 patients on early follow-up CT, but no HI1 or PH haemorrhage. Follow-up CTA confirmed vascular patency in all patients with successful TICI 2b/3 recanalisation.

Conclusion Eptifibatide was shown to be a safe and effective adjunct to mechanical thrombectomy complicated by UVW. Further studies are recommended.

Disclosure of Interest Presenting author has/had consultancy agreements with Stryker Neurovascular, Medtronic and Microvention Terumo and served as PI for SWIFT DIRECT study at St.George's NHS Foundation Trust, London.

P149/163 A COMPARATIVE IN VITRO STUDY OF MANUAL AND ROBOT-ASSISTED MECHANICAL THROMBECTOMY

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Introduction Robot-assisted endovascular treatment (EVT) of stroke is a promising alternative to allow immediate treatment in patients located away from comprehensive stroke centers.

Aim of Study We aimed to explore the feasibility and efficacy of robot-assisted EVT.

Methods Clot analogs were used to create middle cerebral artery (M1-MCA) occlusions in a benchtop 3D printed model. After occlusion, experiments were allocated to be treated manually by a peripheral interventionalist with basic EVT training (Manual-EVT) or with the Corindus Corepath robot by an expert neurointerventionalist (Robotic-EVT). Thrombectomy technique consisted of retrieving the SR into a balloon guide catheter under proximal flow arrest and continuous aspiration.

First pass recanalization (FPR= TICI 2c-3) was assessed, and distal emboli were collected and analyzed after each experiment.

Results Overall, 45 experiments were performed with Robotic-EVT (n=24) or Manual-EVT (n=21). Rate of complete recanalization tended to be higher with Robotic-EVT (95.8%) than with Manual-EVT (71.4%; p=0.06). The mean count of collected emboli in the distal filter was similar: Robotic-EVT: 19.67±17 Vs Manual-EVT: 16.67±13 (p=0.59). The mean duration per pass was longer with Robotic-EVT (6.8±1.5 minutes) than with Manual-EVT (3.8±1.6 minutes; p<0.01).

Conclusion In experimental bench conditions, robot-assisted EVT performed by experienced neurointerventionalists is feasible and highly effective without inducing substantial procedural delays.