

P138 THROMBECTOMY VERSUS COMBINED THROMBOLYSIS AND THROMBECTOMY FOR PRIMARY MEDIUM AND DISTAL INTRACRANIAL OCCLUSIONS: A PROPENSITY-SCORE MATCHED MULTICENTER ANALYSIS

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10.1136/jnis-2024-ESMINT.174

Introduction Mechanical thrombectomy (MT) has demonstrated superiority over medical therapy for acute ischemic stroke (AIS) with large vessel occlusion (LVO). The role of adjunctive intravenous thrombolysis, such as IVtPA in MT remains unclear, especially for medium vessel occlusion (MeVO).

Aim of Study This multicenter study aimed to compare outcomes between MT alone and MT+IVtPA in patients with MeVO.

Methods Data from 827 patients treated at 37 academic centers in America, Asia, and Europe were collected between September 2017 and July 2021. Propensity score matching was performed to create two well-balanced groups: MT alone and MT+IVtPA. Baseline characteristics, procedural details, and clinical outcomes were analyzed.

Results After propensity score matching, a total of 577 patients (315 in the MT alone group and 262 in the MT+IVtPA group) were included in the analysis. The two groups had comparable baseline characteristics. Periprocedural details were similar. In univariable regression, all outcomes were comparable between the two groups, except for higher mRS 0-2 rates in the MT+IVtPA group. Multivariable regression analysis showed no significant differences in first pass effect (FPE), number of passes, Thrombolysis in Cerebral Infarction (TICI) scores, rates of mRS 0-1, mRS 0-2, mortality, or intracranial hemorrhage between the groups.

Conclusion In patients with primary medium and distal intracranial occlusions, MT alone and MT+IVtPA yielded similar clinical outcomes. These findings suggest that adding IVtPA to MT may not confer additional benefit in this population. Further research is needed to determine the optimal treatment approach for MeVO.

Disclosure of Interest no.

2.2. Imaging

P139 CORRELATION OF LEPTOMENINGEAL RECRUITMENT DURING ACUTE ISCHEMIC STROKE WITH CT PERFUSION VALUES AND PATIENT OUTCOMES

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10.1136/jnis-2024-ESMINT.175

Introduction Leptomeningeal arteries are recruited in the acute phase of an ischemic stroke and their role is to increase brain perfusion to the hypoperfused area via retrograde flow.

Aim of Study To investigate the effects of leptomeningeal collaterals on Computed Tomography Perfusion (CTP) values and their correlation with patient outcomes.

Methods 158 patients with anterior circulation stroke who underwent mechanical thrombectomy were included in the study. Using the Tan classification, which rates collateral circulation on a 4-point scale (0–3), we examined the collateral

grade score of the patients on Computed Tomography Angiography (CTA). We correlated the collateral recruitment with core and penumbra volumes, as well as the potential recuperation ratio (PRR) and mismatch ratio on CTP. We also correlated them with the rate of functional independence 3 months after stroke (mRS) and mortality.

Results The incidence of atrial fibrillation, diabetes mellitus, and anticoagulant use were similar across all patients; however, the incidence of arterial hypertension varied ($p=0.022$). Higher Tan scores were associated with lower core volumes ($p<0.001$), higher PRR ($p<0.001$), and mismatch ratios ($p<0.001$). Tan scores did not correlate with penumbra volumes ($p=0.122$) or successful recanalization ($p=0.383$). Higher Tan scores were associated with a decreased mortality rate ($p<0.001$) and better mRS scores in stroke patients ($p<0.001$).

Conclusion Leptomeningeal arteries are an important compensatory mechanism in the event of an acute ischemic stroke. There is a strong correlation between the arteries' visibility and CTP values, as well as improved functional outcomes in acute ischemic stroke patients.

2.3. Treatment

P140 MECHANICAL THROMBECTOMY WITH COMBINED STENT RETRIEVER AND CONTACT ASPIRATION IN ACUTE BASILAR ARTERY OCCLUSIONS

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10.1136/jnis-2024-ESMINT.176

Introduction Fast reperfusion after large vessel occlusion (LVO) is a strong predictor of good clinical outcomes in patients with LVO. Therefore, how to improve the mechanical thrombectomy (MT) technique for the first-pass effect is paramount. **Aim of Study** To evaluate safety and efficacy of combined stent retriever and contact aspiration MT technique in acute basilar artery occlusion.

Methods We have retrospectively reviewed basilar artery occlusions treated with MT and combined technique in our institution in a six months period and analyzed the angiographic and clinical outcomes, including first-pass complete recanalization, number of passes, procedure duration, 90-day modified Rankin Scale (mRS).

Results We have treated 5 patients with a combined MT technique in a selected period. In all cases complete recanalization was achieved. Mean procedure time, from puncture to recanalization, was 55 (45-82) min. In all patients' groin puncture and femoral artery was used for access. First-pass complete recanalization was achieved in 4 cases, whereas in one case 2 passes were needed for complete recanalization. All cases were performed under general anesthesia. In 2 cases 90-day mRS was 0, in 2 cases was 1, and one patient died from pulmonary complications on the day 14 (mRS 6).

Conclusion Our series suggests that MT technique with the combined stent retriever and contact aspiration yielded high recanalization rate in acute basilar artery occlusion patients

and is a safe and effective method followed by favorable functional outcomes.

Disclosure of Interest no.

P141 5-YEAR ANALYSIS OF INTRAVENOUS THROMBOLYSIS RELATED INTRACRANIAL HAEMORRHAGE – DID CEREBRAL MICROBLEEDS PRECLUDE TREATMENT IN PATIENTS WITH ACUTE ISCHEMIC STROKE?

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10.1136/jnis-2024-ESMINT.177

Introduction Early treatment with intravenous thrombolysis (IVT) < 4.5 hours from symptom onset increases the proportion of patients who survive with a favourable outcome after an acute ischemic stroke (AIS). Intracerebral haemorrhage (ICH) is the feared risk of systemic thrombolysis and may be secondary to haemorrhagic transformation, bleeding into an ischaemic area following reperfusion or cerebral microbleeds (CMBs).

Aim of Study The primary aim is to examine the association between IVT in patients with AIS and post IVT ICH. The secondary aim is to evaluate CMBs as an independent risk factor for post IVT ICH.

Methods A 5-year retrospective analysis of all patients treated with IVT for AIS in our institution was performed. Gradient Echo MRI sequences were used to evaluate the presence, number, and location of CMBs. Statistical models were used to determine the relationship between CMBs and haemorrhagic transformation.

Results Of 434 patients (average age 65 years, 54% women, mean NIHSS score 9), the incidence post IVT intra or extra axial bleeding was 9.9%. Of those, 79.5% had ICH, 18.2% had SAH and 2.3% had SDH. Of patients with ICH, 30 (85.7%) patients had haemorrhagic transformation (HT). Old age, extensive small vessel disease, chronic infarcts and early cortical swelling were predisposing factors in these cases. 5 patients (14.3%) had >10 CMB consistent with probable CAA.

Conclusion The rate of post IVT ICH is approximately 1 in 10 in our cohort. Reliable risk assessment for probable CAA requires pre-existing MRI head prior to IVT treatment. This is a practical limitation of current practice.

Disclosure of Interest no.

2.1. Logistics

P142 THE BRAIN GAIN: HOW ÖREBRO IS TURNING THE TIDE ON STROKE CARE IN SWEDEN

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10.1136/jnis-2024-ESMINT.178

Introduction Central Sweden has faced significant stroke care disparities. The Örebro Comprehensive Stroke Center was established to address these challenges, transforming regional care pathways, and influencing national stroke care approaches. This study evaluates the center's success,

particularly the implementation of parallel information flow pathways.

Aim of Study

Methods A retrospective analysis was conducted using data from the Swedish Stroke Registry and The Swedish Endovascular Stroke Registry, covering June 2021 to March 2024. This study assessed the impact of a new stroke care pathway in Örebro, featuring enhanced parallel information flows for faster data access and decision-making. The analysis focused on changes in transport times, thrombectomy rates, and clinical outcomes.

Results Previously, Örebro was the most conservative center in the country, sending only 2% of all stroke patients for thrombectomy. Post-intervention, this rate increased to 21%, making Örebro a leader in national rankings and gaining international recognition. These improvements led to significantly better clinical outcomes for the first 500 treated stroke patients. Success is largely attributed to strong administrative support and the rapid implementation of efficient information flow among healthcare stakeholders.

Conclusion The Örebro Comprehensive Stroke Center has significantly reduced regional disparities and serves as a potential blueprint for national healthcare strategies. Its innovative approach and dramatic increase in thrombectomy rates demonstrate a promising direction for the evolution of stroke care across Sweden.

Disclosure of Interest no.

P143 COMPARATIVE ANALYSIS OF STROKE CARE PERFORMANE IN WEST GEORGIA AND WEST UKRAINE

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10.1136/jnis-2024-ESMINT.179

Introduction West Georgia Medical Centre (WGMC) and the 1st Lviv Territorial Medical Union (1TMU) serve as the exclusive comprehensive stroke centers in West Georgia and West Ukraine, respectively. WGMC spans 31,500 km², serving 950,000 residents in 23 cities/towns, while 1TMU extends over 21,833 km², catering to 2,478,100 residents across 78 cities/towns. Despite distances of up to 220 km from WGMC and 138 km from 1TMU, patient transfer delays vary, highlighting their vital roles in stroke care.

Aim of Study To evaluate the quality and performance of stroke services provided by these institutions.

Methods Retrospective analysis was conducted on electronic medical records of patients undergoing mechanical thrombectomy (MT) at both institutions. Ukrainian data covers September 2022 to August 2023, while WGMC data spans from July 2019 to August 2023. Assessment parameters included the National Institutes of Health Stroke Scale (NIHSS), Alberta Stroke Program Early CT Score (ASPECTS), and Modified Rankin Scale (mRS).

Results Enrollment comprised 72 1TMU and 65 WGMC patients. NIHSS scores, initial ASPECTS, and mRS upon discharge showed no significant differences. Symptom onset-to-admission time averaged 294 minutes at WGMC and 115 minutes at 1TMU. Sedation was prevalent in 91% of cases at