(TICI) score, discharge mortality, and favorable clinical outcomes (measured by modified Rankin Scale (mRS) of 0–2 at 90 day follow up) were compared between distal and proximal groups.

Results Total of 150 patients treated with BGC (58% male; median age: 66 years, median NIHSS at presentation: 14) were included. 104 (69%) of these patients had proximal occlusion (58.7% male, median age: 65 years, median presenting NIHSS=16), while 46 (31%) had distal occlusion (56.5% male; median age: 67 years, presenting NIHSS: 13). 32 (30.8%) of patients with proximal occlusion were treated with intravenous thrombolysis prior to thrombectomy, compared 17 (37.0%) of patients in distal group (p=.467). Stent retriever plus local aspiration thrombectomy was performed in 67 (64.4%) of patients with proximal occlusion and 23 (50.0%) of the distal occlusion group (p=.067). No significant differences were observed between proximal and distal occlusion groups in FPE (35.6%, 0.4%, p=.540), mFPE (53.8% vs 50.0% p=.708), TICI ≥2c (59.6% vs 20.0% p=.273), discharge mortality (20.8% vs 12.5% p=.253), and favorable clinical outcome at 90 day follow up (48.5% vs 56.8% p=.358), embolization to new territory (3.8% vs 0.0% p=.178), or perioperative complications (11.5% vs 4.4% p=.173). Similarly, after excluding patients with tandem occlusions, no significant difference in outcomes was observed. However, in a sub analysis comprising patients treated with aspiration plus stent retriever, a significant difference in discharge mortality was noted between proximal (24.6%) and distal (4.8%) occlusion (p=.048).

Conclusion Our preliminary analysis suggests there is no difference in clinical and radiographic outcomes between proximal and distal vessel occlusion treated with BGC. However, in sub-analysis consisting of patients treated with stent retriever and local aspiration, lower discharge mortality was observed among those with distal occlusion. Further analysis with larger patient cohort and propensity matched analysis to account for confounding variables is planned.

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E-099 DIRECT STA-MCA BYPASS IN MOYAMOYA DISEASE: PREDICTING POST-OPERATIVE CONTRALATERAL STROKE USING CLINICAL CHARACTERISTICS AND ANGIOGRAPHIC COLLATERALIZATION PATTERNS

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Background Moyamoya disease (MMD) is a rare cerebrovascular disorder marked by internal carotid artery narrowing, collateral neovascularization, and symptomatic cerebral ischemia. Select patients can benefit from direct bypass (STA-MCA bypass) by restoring blood flow to hypoperfused territories. Contralateral stroke (CS) following STA-MCA bypass is a devastating, poorly understood complication. We investigate clinical and radiographic risk factors influencing CS incidence after bypass surgery.

Methods A retrospective review of bilateral MMD patients undergoing STA-MCA bypass at our institution (2018–2022) included demographic details, comorbidities, average pre-operative systolic blood pressure (SBP), post-operative SBP goal, and angiographic patterns. Pre-operative diagnostic angiograms were analyzed for collateral vascular patterns. Post-operative clinical course was recorded. Statistical analyses employed parametric and non-parametric tests for small sample size.

Results Six of 39 patients (15.4%) experienced CS post-bypass. No baseline demographic differences were identified between patients with and without CS. CS patients had higher pre-operative SBP (146.2 vs. 131.1, p<0.05), were more likely to have post-operative SBP goals below their average pre-operative SBP (66.7% vs 15.2%, p=0.018) and had longer time from symptom onset to surgery (51.8 vs 13 months, p=0.039). There were no differences in specific angiographic patterns in either hemisphere for CS patients versus those without CS.

Conclusions CS patients following bypass had significantly higher pre-operative SBP, post-operative SBP goals below their average pre-operative SBP, and longer time from symptom onset to surgery compared to patients without CS. Patient-specific post-operative SBP management and timely surgical revascularization are crucial for preventing CS in MMD patients undergoing STA-MCA bypass.

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E-100 INTRAVENOUS THROMBOLYSIS IN DISTAL MEDIUM MIDDLE CEREBRAL ARTERY OCCLUSION PATIENTS WITH UNSUCCESSFUL MECHANICAL REPERFUSION

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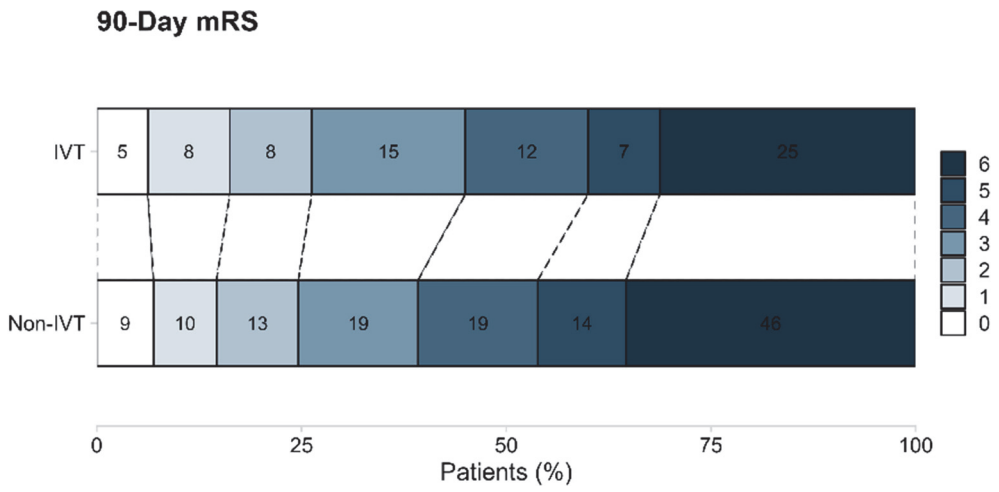
Background The efficacy and safety of intravenous thrombolysis (IVT) in acute ischemic stroke (AIS) patients undergoing mechanical thrombectomy (MT) for distal, medium vessel occlusions (DMVO) is not well established. This study investigates whether IVT impacts outcomes in DMVO patients, particularly in those with unsuccessful or partial recanalization after MT.

Methods We conducted a retrospective, multicenter study using data from the Multicenter Analysis of primary Distal medium vessel occlusions: effect of Mechanical Thrombectomy (MAD-MT) registry. The study population included acute ischemic stroke patients with DMVO in the M2, M3, and M4 segments of the MCA, treated with or without IVT followed by MT and a final modified Thrombolysis in Cerebral Infarction (mTICI) score of 0, 1, or 2a. The primary outcome was functional independence, assessed by the 90-day modified Rankin Scale (mRS) of 0–1 or 0–2.



Abstract E-100 Figure 1

Outcome	Unadjusted model		Adjusted Model*	
	OR (95% CI)	p-value	OR (95% CI)	p-value
90-day mRS 0-1	1.13 (0.52 to 2.45)	0.75	1.17 (0.41 to 3.33)	0.76
90-day mRS 0-2	1.09 (0.57 to 2.07)	0.79	1.22 (0.50 to 2.96)	0.67
90-day Mortality	0.83 (0.46 to 1.51)	0.54	1.29 (0.57 to 2.90)	0.54
sICH	0.61 (0.28 to 1.32)	0.21	0.52 (0.20 to 1.34)	0.17
ICH (any type)	1.43 (0.78 to 2.60)	0.24	1.19 (0.56 to 2.53)	0.65
SAH	1.15 (0.39 to 3.41)	0.8	0.40 (0.08 to 2.01)	0.26
Embolization in new territories	1.06 (0.23 to 4.90)	0.94	1.13 (0.11 to 11.3)	0.92
*All estimates were adjusted for Sex, Age, High blood pressure, High cholesterol, Diabetes, Atrial fibrillation, Smoking, mRS before stroke, Baseline NIHSS, ASPECTS, Occlusion Site, pre-operative blood glucose, Onset to Arterial Puncture, and final mTICI (0,1,2a)				

Abstract E-100 Figure 2

Results The study comprised 210 patients with final mTICI 0 to 2a, with 130 undergoing MT alone and 80 receiving IVT followed by MT (figure 1). Logistic regression analysis revealed no significant difference in clinical outcomes between groups, with odds ratios (ORs) for achieving a 90-day mRS of 0–1 and 0–2 being 1.13 (95% CI 0.52 to 2.45; p=0.75) and 1.09 (95% CI 0.57 to 2.07; p=0.79), respectively. The odds of symptomatic intracerebral hemorrhage (sICH) were similar between groups (OR 0.68, 95% CI 0.30 to 1.54; p=0.37), as were the odds of intracranial hemorrhage (ICH) of any type (OR 1.50, 95% CI 0.89 to 2.52; p=0.22) (figure 2).

Conclusions In AIS patients with DMVO and unsuccessful or partial recanalization after MT, IVT did not significantly improve clinical outcomes. Additionally, IVT did not increase the risk of hemorrhagic complications. These findings suggest that while IVT is safe in this context, its may not improve outcomes for patients with unsuccessful MT.

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E-101 GENDER DIFFERENCES PERTAINING TO VARIATIONS IN TERMS OF CIRCLE OF WILLIS

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Introduction The circle of Willis (CoW) is an important factor affecting collateral blood flow to the brain and plays a key role in sustaining sufficient cerebral perfusion especially during instances of impaired flow.[2] Past studies have indicated that there are variations in CoW composition and that often the various segments of the arteries comprising CoW are either not present or are hypoplastic.[1 4] This study investigated 1) mean and median age, and 2) gender in patients with complete vs. incomplete circle. In addition, we investigated the association of missing segment(s) with the age and gender in patients with incomplete circle

Methods

Study Population

One hundred randomly selected individuals were examined in this study. These patients had undergone CT scans for