

(1.5%) included small radial artery pseudoaneurysm (n=2) treated conservatively. In 26 patients who underwent successful follow-up angiography via TRA, (mean follow-up time 10 months), 24 patients (92%) had a patent radial artery while 8% (n=2) had partial thrombosis of the radial artery which was recanalized by the access wire.

Conclusion Using a short 8-Fr sheath during TRA for neurointerventional procedures with large bore 8-Fr guide catheters is safe and feasible with a high procedural success and favorable safety profile.

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E-015 MECHANICAL THROMBECTOMY VS INTRAVENOUS THROMBOLYSIS IN DISTAL MEDIUM VESSEL ACUTE ISCHEMIC STROKE: A MULTINATIONAL STUDY

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Background The management of acute ischemic stroke (AIS) due to distal medium vessel occlusion (DMVO) remains uncertain, particularly in comparing the effectiveness of Mechanical Thrombectomy (MT) versus Intravenous Thrombolysis (IVT). This study aimed to evaluate the safety and efficacy outcomes in DMVO patients undergoing treatment with either MT-IVT or IVT alone.

Methods This multinational study analyzed data from 37 centers across North America, Asia, and Europe. Patients with AIS due to DMVO were included, with data collected from September 2017 to July 2023. The primary outcome was functional independence, with secondary outcomes including mortality and safety measures such as types of intracerebral hemorrhage.

Results The study involved 1,057 patients before matching, and 640 patients post-matching. Functional outcomes at 90 days showed no significant difference between groups in achieving good functional recovery (mRS 0–1 and 0–2), with adjusted odds ratios (OR) of 1.21 (95% CI 0.81 to 1.79; P=0.35) and 1.00 (95% CI 0.66 to 1.51; P>0.99), respectively. Mortality rates at 90 days were similar between the two groups (OR 0.75, 95% CI 0.44 to 1.29; P=0.3). The incidence of symptomatic intracerebral hemorrhage (sICH) was comparable, but any type of intracranial hemorrhage (ICH) was significantly higher in the MT-IVT group (OR 0.43, 95% CI 0.29 to 0.63; P<0.001).

Conclusion The results of this study indicate that while MT-IVT and IVT alone show similar functional and mortality outcomes in DMVO patients, MT-IVT presents a higher risk of hemorrhagic complications. Further prospective randomized trials are needed to identify patient subgroups most likely to benefit from MT-IVT treatment in DMVO.

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E-016 COMPARATIVE EFFICACY, SAFETY, AND DMSO COMPATIBILITY OF DETACHABLE VS. NON-DETACHABLE TIP MICROCATHETERS IN NEUROENDOVASCULAR TREATMENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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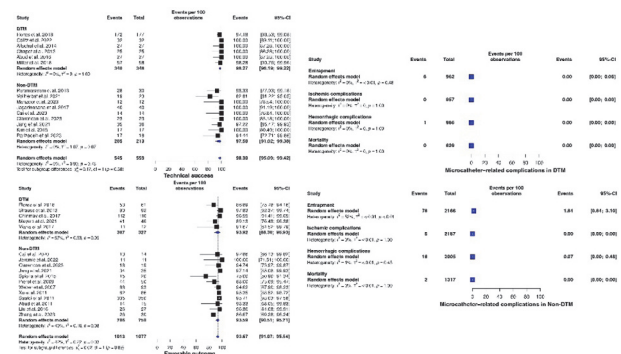
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Background Advancements in embolic materials require microcatheters compatible with dimethyl sulfoxide (DMSO), with detachable tip microcatheters (DTMs) emerging as a notable innovation aimed at reducing the risk of catheter entrapment during embolization procedures. This study aims to compare the effectiveness, safety, and DMSO compatibility of DTMs with non-detachable tip microcatheters (Non-DTMs) in the treatment of neurovascular diseases through embolization.

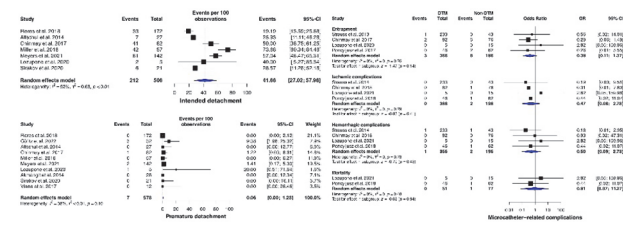
Method Following PRISMA guidelines, a systematic literature search was conducted across PubMed, Scopus, Embase, and Web of Science databases until February 25, 2024. Primary outcomes were technical success and microcatheter-related complications, with a meta-analysis performed using a random-effects model to calculate proportions and odds ratios (OR) with 95% confidence intervals (CI).

Results Findings indicate that DTMs exhibited comparable rates of technical success (98.3% vs. 97.6%, p=0.68), favorable outcomes (93.9% vs. 93.6%, p=0.89), and microcatheter-related complications compared to Non-DTMs. (Figure 1) Notably, DTMs demonstrated a 0.0% rate of microcatheter entrapment and hemorrhagic complications, with intended detachment achieved with minimal complications in 38.7% of cases (95% CI = 24.91–54.63), while premature detachment was rare (0.1%; 95% CI = 0.00–1.23). (Figure 2) Comparative studies revealed no significant difference in microcatheter-related complications between DTM and Non-DTM groups. (Figure 2).

Conclusion Our study shows the safety and efficacy of DTMs in embolization treatments, emphasizing their compatibility with DMSO-based embolic agents and their potential to enhance patient outcomes in neuroendovascular treatments. Future research should focus on well-designed, larger,



Abstract E-016 Figure 1



Abstract E-016 Figure 2

prospective, comparative multi-center studies to strengthen the evidence base and further optimize the use of DTMs in endovascular interventions.

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E-017 ATYPICAL CAROTID WEBS: A NOVEL CASE SERIES

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Background Typical carotid webs (TCW) are a rare type of fibromuscular dysplasia defined by a posteriorly located, non-atherosclerotic shelf-like projection between 3 mm and 3 cm in size extending into the proximal internal carotid artery (ICA) lumen. TCW have been demonstrated to induce local hemodynamic alterations that precipitate acute cryptogenic stroke, particularly in younger patients. Atypical carotid webs (ACW) include carotid webs that are abnormal in size, in eccentric locations, or associated with calcifications. ACW are far less well-studied than TCW; to date, no existing literature provides a comprehensive picture of the outcomes of patients with ACW. In this study, we describe six patients from a single institution with symptomatic ACW identified on vascular imaging and our philosophy for ACW management.

Methods Our electronic medical record database was queried for all imaging impressions containing the words ‘carotid web,’ ‘shelf,’ or ‘protrusion’ obtained between 2013–2018. All imaging was reviewed by an experienced neurosurgeon. We excluded all patients without verified CW or with TCW. Six

patients were found to have ACW and were included in our study. All patients’ charts were reviewed and their hospital courses were documented.

Results Our case series consists of six patients, four male and two female, with biopsy-confirmed carotid webs. Overall, the median age at diagnosis and treatment was 49.5 years. Amongst males, median age at diagnosis and treatment was 46 years, while for females it was 44 years. All patients presented with neurological deficits consistent with a diagnosis of stroke. Three (3) out of six patients in the series were found to have carotid webs at the level of the carotid bifurcation, two (2) were found to have carotid webs in the anterior/ventral wall of the internal carotid artery, and one (1) was found to have carotid web with concurrent atherosclerosis. All patients were treated with a carotid endarterectomy (CEA). Two (2) patients were re-evaluated for an additional cerebrovascular accident/transient ischemic attack over six months after CEA; one (1) patient had a confirmed cerebrovascular accident and one (1) patient presented with neurological deficits possibly consistent with a tPa-aborted infarction or vestibular migraine.

Conclusion Our study represents the first case series to date consisting of patients with symptomatic atypical carotid webs. This series followed their course from initial presentation to six (6) months postoperatively. Four out of six patients were found to be asymptomatic at six-month follow-up. Although our sample size is small, and further study is needed, our results suggest that CEA may be effective in preventing future stroke in patients with ACW, and that prophylactic CEA in these patients may be warranted.

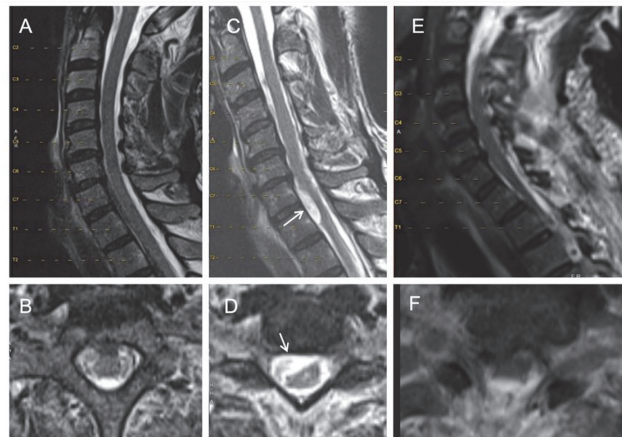
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E-018 DELAYED ONSET SPINAL ARACHNOID WEB AFTER INTRACRANIAL SUBARACHNOID HEMORRHAGE: REPORT OF TWO CASES

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Spinal Arachnoid Web (AW) is a rare pathological entity which may cause myelopathy. While most cases are idiopathic,



Abstract E-018 Figure 1