feasibility of balloon assisted coil embolization or liquid embolic injection. We describe our experience with the Scepter Mini (SM) microballoon in treatment of four different neurovascular diseases.

Methods and Supplies We present technical details and procedural complications of all patients who underwent embolization with the SM.

Results Five procedures were performed with SM assistance over two months: one aneurysm coilings, embolizations of two DAVFs (cervical and posterior fossa) and one large brain AVM, and one preoperative meningioma embolization. In one patient with a small, ruptured, wide-necked pericallosal aneurysm, the SM was placed across the A2 bifurcation (vessel size: 1.3–1.7 mm) and inflated multiple times during coilings, providing excellent neck remodeling with no distal embolization or vascular damage. In one patient with multiple symptomatic cervical DAVFs, the SM was positioned and inflated into a distal thyrocervical trunk feeder (1.2 mm) and Onyx 34 was infused through the second lumen, obviating the need for plug creation and obliterating the target dAVF. A patient with hemorrhage from a posterior fossa DAVF was treated by Onyx injection through a SM inflated very proximally in the posterior meningeal artery. Despite proximal position of the SM due to extreme tortuosity of the vessel, Onyx 18 could reach the fistulous point after balloon inflation, yielding an uncomplicated obliteration of the shunt. Two SMs were used to embolize a large medial frontoparietal AVM with numerous enlarged anterior cerebral artery feeders. An SM was advanced into each pedicle (average 2.3 mm) and inflated prior to infusing Onyx 18 over an average 20 minutes in each feeder, achieving excellent nidal penetration without reflux. The procedure was performed under evoked potential monitoring without complication. In a patient with a large frontal meningioma, the SM was navigated in the main meningial feeder (1.4 mm). Onyx 18 was infused under balloon inflation with extensive parenchymal penetration and devascularization of 90% of the tumor bed. All SMs were prepared with full contrast for optimal visibility and navigated over a 0.008” Hybrid Microwire with the patient fully heparinized. Navigation was possible in all cases, and no balloon-related vascular injuries occurred.

Conclusions The SM can allow balloon assisted endovascular procedures in very distal territories and in small vessels.
through the 3 max catheter resulting in TICI 3 revascularization was achieved, and patient improved to NIH score of 4 immediate post operatively. Patient further improved with targeted physical therapy and was discharged home with NIHSS 0 and modified ranking of 2. Direct anticoagulation was switched to warfarin with INR goals of 2–3.

Conclusion Endovascular aspiration mechanical thrombectomy of MSVO is feasible in pediatric patients presenting with AIS and associated with good functional outcome. Additionally, when acute ongoing neurological deficit is present and CTA is inconclusive, a digital subtraction angiography is deemed needed to identify MSVO as the yields of CTA diminishes significantly beyond LVO. Further studies are required.

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### E-115

**TRANSRADIAL VERSUS TRANSFEMORAL ACCESS FOR MIDDLE MENINGEAL ARTERY EMBOLIZATION FOR CHRONIC SUBDURAL HEMATOMAS: PROPENSITY SCORE-MATCHED STUDY**

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**Introduction** Middle meningeal artery (MMA) embolization has emerged as a promising treatment option for chronic subdural hematoma (cSDH) patients. With transradial access (TRA) being more progressively utilized in neuroendovascular procedures, we sought to compare TRA versus transfemoral access (TFA) in terms of clinical and radiological outcomes.

**Methods** A series of consecutive patients undergoing MMA embolization for cSDH at 9 North American centers (2018–2021) were included. Patients were categorized into two groups: those who were treated with TRA or TFA. Patients’ and SDH characteristics and technical/clinical outcomes were analyzed and compared between groups. All patients had follow-up imaging (i.e., ≥ 2 scans) during the following post-procedure time points: 24 hours, 2 weeks, 6 weeks, and 90 days. Propensity score matching (PSM) using nearest neighbor was implemented to match groups according to the following characteristics: age, sex, concurrent surgical evacuation, history of prior surgical evacuation, maximal hematoma thickness, and midline shift both in millimeters, pre-treatment baseline platelets count and antiplatelet/anticoagulation therapy. The primary clinical endpoint was treatment failure defined as requiring additional surgical treatment within 90days of index treatment, with secondary outcomes of technical feasibility and access-related procedural complications. The primary radiological outcome was the proportion of patients with at least a 50% reduction in maximal hematoma thickness on the last available imaging follow-up.

**Results** This study included a total of 538 patients undergoing 625 embolization procedures (mean age 72.3 years, 27.2% females), of which 188 (34.9%) were treated using TRA and 350 (65.1%) underwent TFA. Following PSM, 132 matched pairs were generated with similar baseline clinical and radiographic characteristics (76 in each group). There were no significant differences in treatment failures requiring rescue treatment between the TRA and TFA groups (7.4% vs 8.9% respectively; p=0.83). Technical failures were not significantly different between TRA and TFA (0% vs 6.5% respectively; p=0.19), without procedural access-related complications encountered in either group. Concurrently, the rates of radiological improvement of ≥50% of hematoma thickness on the last imaging follow-up were similar between TRA and TFA groups (91.7% vs 75.9% respectively; p=0.13).

**Conclusions** TRA offers comparable outcomes to TFA in MMA embolization for cSDH in terms of clinical efficacy and radiological improvement, with similar technical feasibility and access-related complications.


### E-116

**ASSISTANT PROFESSOR NEUROENDOVASCULAR SURGERY SOUTHEASTERN NEUROSURGERY AND SPINE PRISMA HEALTH – UPSTATE**

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**Introduction** In addition to enlarging the catheter tip diameter, recent aspiration catheters were designed with a novel angled tip design. We aimed to evaluate the efficacy of new generation angled tip aspiration catheters in comparison to commonly used straight tip large bore aspiration catheters.

**Methods** We performed a multicenter retrospective analysis of consecutive cases with M1 occlusion treated with aspiration thrombectomy from July 2016 to February 2021. Patients were divided into two cohorts: those in whom a 0.07" angled tip catheter was used and those in whom a 0.068–0.074" flat tip catheter was used.

**Results** 384 patients were identified. The angled tip catheter was used in 129 (33.6%) patients, while 255 (66.4%) patients were treated with flat tip catheters. There was no significant difference in age, sex, baseline mRS, side of occlusion, initial NIHSS, time from last known normal to access, or rate of IV rt-PA administration. Use of the angled tip reperfusion catheter was associated with average 5 minutes faster time to TICI 2B or better (22.13 +/- 21.05 vs 27 +/- 24.54 minutes, p=0.012) and 7 minutes faster time to final recanalization (25.85 +/- 25.22 vs 32.96 +/- 29.26 minutes, p=0.011). There was no difference in the rate of good outcome or hemorrhagic transformation.

**Conclusions** We report a multicenter, retrospective review of patients treated with current generation large bore aspiration catheters. Angled tipped catheters were associated with shorter times to TICI 2B and final reperfusion. There were no differences in 90-day mRS, rates of intracranial hemorrhage, or complications.

**Disclosures** J. Vargas: 2; C; Medtronic, Cerenovus, Imperative Care, Q’Apel, Viz.AI, Avail. 4; C; Viz.AI, Imperative Care.