antagonist infusion and balloon angioplasty has been at the forefront of treatment in mitigating neurological deficits and improving outcomes.

Materials and Methods In this retrospective review, we are studying patients admitted for aneurysmal subarachnoid hemorrhage, from July 2003-August 2021, updating single-center outcomes at UCSF.

Results Of 640 patients studied thus far, who suffered subarachnoid hemorrhage within 72 hours prior to admission, 323 patients (50%) experienced symptomatic cerebral vasospasm that was refractory to medical therapy. Of these patients, 281 patients underwent endovascular therapy (87%). Overall, 535 endovascular interventions were performed, of which there were 435 intraarterial infusions, 3 angioplasties and 101 combined therapies (intra-arterial infusion and angioplasty). Due to persistence of vasospasm after the first endovascular session, 170 patients underwent repeat endovascular therapy (60%). While there were no major complications associated with vasospasm therapy, there were 7 minor complications related to vasospasm therapy which did not result in increased morbidity. A modified Rankin scale (mRS) was used to determine patient outcome at the latest follow up. If a patient was lost to follow up, the latest discharge evaluation was used to determine the mRS. At follow-up, 187 patients had a good outcome (67%), whereas 74 patients had a poor outcome (26%). Of the patients that died, 18 died of complications from subarachnoid hemorrhage while 3 died due to other medical causes.

Conclusions In this updated retrospective review, outcomes continue to improve in patients treated with endovascular therapy, with relatively few treatment-related complications in a high-volume center. Combination and stand-alone verapamil therapies continue to be safe and effective in treating vasospasm. Although the percentage of cases in which angioplasty and verapamil are both used (severe vasospasm, in a proximal distribution) is similar when compared to the prior series, new technologies over the past decade may have impacted the endovascular approach to treatment of vasospasm. In understanding how changes in treatment modalities have impacted outcomes in the recent decade by lengthening the span of this retrospective study, we can continue to hone our approach to detecting and treating cerebral vasospasm.

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E-246 MULTICENTER US CLINICAL EXPERIENCE WITH THE SCEPTER MINI BALLOON CATHETER

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Introduction Distal catheter navigability and imprecise delivery of embolic agents remain the two most important limitations encountered during endovascular liquid embolization of cerebrospinal vascular malformations. The new dual lumen Scepter-Mini Balloon (SMB) microcatheter was introduced with the aim of overcoming these limitations encountered with conventional microcatheters with few small single-center reports suggesting favorable results; however, multicenter data remain lacking.

Methods Series of consecutive patients undergoing endovascular embolization utilizing SMB were extracted from prospectively maintained registries in 7 North American cerebrovascular centers (November 2019- December 2021).

Results 42 patients undergoing embolization utilizing the SMB were included (median age 58.5; 55.9% females). Cranial dural arteriovenous fistula (dAVF) embolization was the most common indication (55.8%) followed by cranial arteriovenous malformation (AVM) embolization (20.6%). Staged/pre-operative embolization was done in 23.5% of the cases, with 94.1% of procedures utilizing Onyx-18 as the embolic agent. The majority of procedures utilized the transarterial approach (88.3%), while arterial flow arrest utilizing Scepter-Mini currently with transvenous embolization was utilized in 4.7% of procedures. Femoral access and triaxial setups were utilized in most procedures (85.2% and 59%, respectively). The median vessel diameter where balloon was inflated of 1.7mm, with median 1.5cc of injected embolic material per procedure. Technical failures were encountered in 9.5% of procedures requiring replacement with other microcatheters without clinical sequelae in any of the patients, with SMB-related procedural complications of 2.4%. Complete occlusion (100%) or >50% occlusion on last follow-up were documented in 78.3% of the cases, with unplanned retreatments needed in 2.4% of the cases, over a median of 3.4 months of follow-up. Conclusion The Scepter-Mini Balloon microcatheter is a useful new adjunctive device for balloon-assisted embolization of cerebrospinal vascular malformations requiring distal access with a high technical success rate, favorable outcomes, and reasonable safety profile.


E-247 APPLICATION OF A TREVO DEVICE FOR ACCESS TO AN ACUTELY ANGLED COMMON CAROTID ARTERY VIA BOVINE AORTIC ARCH

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Background Access to the common carotid artery is crucial for any neuro-interventional procedures. Bovine aortic arch followed by an acutely angled proximal common carotid artery (CCA) can pose a great challenge. Owing to urgency, we resorted to a non-conventional method to obtain an access to the CCA: TREVO device.

Case A 69 year old female with subarachnoid hemorrhage due to a ruptured left sided posterior communicating artery (PCOMM) aneurysm was prepped for a coil embolization. In addition to severely tortuous femoral artery and bovine aortic arch, her proximal CCA was also acutely curved, which precluded the guiding catheter advancing to the CCA. Following several attempts with different catheters and wires, a TREVO device was introduced and deployed in the proximal internal carotid artery (ICA), which ultimately allowed a soffia intermediate catheter to reach the distal ICA. Through this rather