vessel (such as a ThP or an AchA) between January of 2014 and January of 2022. Males were more represented than females in our cohort (16 (57.1%) vs 12 (42.9%)). Of these 28 patients, 14 (50%) are currently undergoing treatment, 13 (46.4%) have achieved at least 95% and up to complete cure of the VOGM, and one patient (3.6%) passed away. A total of 46 thalamoperforator embolizations were performed during the treatment course of our cohort with an average of 1.64 (SD: 1.13) treatments per patient. A total of 20 patients underwent neuromuscular junction monitoring on at least one occasion to ascertain avoidance of eloquent brain in the embolization procedure. This was typically performed as a selective WADA test with a 2% Xylocaine (Lidocaine) solution and 25mg of Sodium Amytal, but has also included methohexitol in later years. In one case, neuromonitoring revealed that the MEP wave disappeared for five minutes after two rounds of 2% Xylocaine and 25mg Sodium Amytal infusion. This led to termination of embolizing the thalamoperforator.

Conclusions We have found that ThP and AchA embolization are feasible and effective means for achieving cure of VOGM and tectal/thalamic AVM. We report favorable, post-procedural outcomes in the majority of our patients; however, as with any embolization within the thalamic region of the brain, we maintain that caution should always be used due to the risk of stroke which we observed in one of our patients. If there is any doubt as to the safety of a given embolization, provocative testing with neuromonitoring is performed. In the case of the patient who experienced a post-procedural stroke, neuromonitoring was performed and still MEP/SEP waves were maintained after injection of amytal and lidocaine. To improve the safety of ThP and AchA embolization, we perform intraoperative neurophysiologic monitoring of MEP and SEP with sodium amytal and lidocaine. We intend to expand this practice beyond VOGM and tectal/thalamic AVM into other eloquent AVMs as we have seen great success in our own clinic and in the literature.

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AcomA aneurysms are at increased risk of rupture when compared to other locations. Due to morphological particularities in this region, different technical challenges may arise for the mainstream treatments. We aim to report the experience of flow diverters (FDs) as an emerging strategy for treating AcomA aneurysms.

Methods This is a retrospective, self-adjudicated, multicentric experience from 7 centers across three countries (United States, France, and Turkey). Inclusion criteria encompassed patients with AcomA treated with FDs between January 2012 and December 2021. Outcomes of interest included aneurysm occlusion, complications, and functional outcomes. Complete occlusion was defined as O’Kelly-Marotta class D (OKM-D).

Clinical outcomes were assessed using the modified Rankin Scale (mRS) at discharge and last follow-up. Postoperative complications included hemorrhage, parent vessel occlusion, ischemic events, intra-stent thrombosis, and intra-stent stenosis. Mortality rates were based on the last follow-up. Statistical analysis was performed using R (R Foundation for Statistical Computing, Vienna, Austria).

Results One-hundred and eighty-two patients harboring 183 AcomA treated with FDs met inclusion criteria. Mean age was 58.8±12.7, and the majority of patients were female (105/182, 56.1%). Most aneurysms were unruptured (143/183, 76.5%), and the most common location was on the AcomA itself (110/183, 58.9%), followed by A1-A2 junction with the involvement of the AcomA (45/183, 24.1%). In half of the patients, both anterior cerebral arteries had similar sizes (47.5%), whereas the mean neck size was 3.77mm (SD 1.69mm, range 2.7–4.7mm). Mean follow-up time was 17.2 months (SD 11.5, range 6.5–35), with a complete occlusion rate of 83.4%. Favorable functional (mRS 0–2) outcome at the last follow-up was reported at 96.8%. Univariate analysis demonstrated that smoking, aneurysm located in Acom proper artery, and previously ruptured aneurysm were more likely to have a complete occlusion in late follow-up. The mortality rate was 1.6% (3/182), where two cases were adjudicated as procedure-related. In one case, acute postoperative occlusion of the left A1 and supraclinoid internal carotid artery led to a high stroke burden, despite successful thrombectomy. A second patient developed an extensive intraparenchymal hemorrhage. The last patient presented with a ruptured aneurysm with worsening vasospasm and delayed cerebral ischemia despite adequate management and aneurysm securing.

Conclusion Flow diverters appear to be a safe and effective treatment for anterior communicating artery aneurysms, presenting as an alternative strategy in the armamentarium of interventionalist. Mid-term results were favorable, and complication rates were low. Additional studies with longer follow-up time and independent adjudication are warranted to confirm the safety and effectiveness of the technique.

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Abstract E-183 Figure 1 Use of proximal anchoring technique (left) with Protege 8x60 mm carotid stent on the end of a long Surpass Streamline construct used to treat a complex double-barrel dissection with pseudoaneurysm (not shown) in a 36 year-old female. Twelve-month control angiogram (right) demonstrates definitive reconstruction without migration or proximal in-stent intimal reaction

Background Flow diverting stents (FDs) are routinely used to safely reconstruct the arteries of the head and neck. When these constructs in the internal carotid artery (ICA) extend proximally into the mobile cervical segment the FDs runs the risk of migration or proximal intimal hyperplasia reaction from normal movement of the neck post-procedure. We report our experience using a novel proximal anchoring technique to prevent this potentially deleterious result.

Methods We retrospectively reviewed a prospectively-main-Admitted IRB-approved institutional database of the senior authors to identify cases where patients undergoing flow diversion stent (FDS) treatment in the mobile petrocervical segments had the proximal FDS ‘anchored’ down with a laser-cut nitinol stent. Case details were recorded including patient demographics, pathology, devices used, and technical success.

Results FDS treatment was successfully performed in the mobile cervical segment a total of 9 times over the study period (December 2019 to January 2022). Each case involved a complex ICA dissection with 66% (n=6) having an accompanying pseudoaneurysm. Fifty-six percent (n=5) were female.