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 (45.1±12.7, range 6.5–25), 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.
Surpass Streamline was the FDS utilized in all cases. An average of 2 +/- 1 FDS devices were utilized (range 2–4 FDS), with each case utilizing a laser-cut nitinol carotid stent as proximal anchor stent. Each case received 1 proximal anchor stent with average stent diameter of 7 +/- 1 mm (range 6–8 mm) and length of 42 +/- 12 mm (range 30–60 mm). No cases of stent migration or proximal neointimal hyperplasia were seen on most recent control angiography.

Conclusion Utilization of the proximal anchoring technique on FDS constructs in the mobile cervical ICA segment may provide additional protection from stent migration and intimal reaction attributed to patient neck movement post-procedure.

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**TRANSRADIAL APPROACH FOR PEDIATRIC DIAGNOSTIC AND NEUROINTERVENTIONAL SURGERY: SINGLE CENTER CASE SERIES AND SYSTEMATIC REVIEW**


**Background** Recent widespread adoption of a transradial approach (TRA) in adults has encouraged its use and expansion in children; however, the safety and feasibility of the TRA in the latter has not been established. We evaluated these characteristics in our pediatric case series and compared our results with those in the literature.

**Methods** Our prospectively maintained database was retrospectively searched for consecutive patients ≤18 years of age who underwent diagnostic and interventional neuroangiography through the TRA. Patient demographics, indications for the procedure, use of ultrasound guidance, arterial size at the access site, intra- and post-procedure complications, and outcomes were recorded. For the literature review, systematic searches of PubMed, MEDLINE, and Embase databases were conducted using keywords with Boolean operators (‘radial artery’ AND ‘pediatric’) for studies published in English between January 2000 and September 2021. Continuous variables were reported as means or medians and respective standard deviations and interquartile ranges according to data normality. Categorical variables were reported as frequencies.

**Results** Twenty-one patients were included in our series (mean age, 16.6±2.23 years, range 9–17 years; male, 11[52.4%]). The TRA was used for diagnostic angiography in 15 cases (71.4%) and intervention in 6(28.6%). Ultrasound guidance and a ‘radial cocktail’ (verapamil-heparin-nitroglycerin) were used in all cases. Mean radial artery access-site diameter was 2.2±0.46mm. Two cases (9.5%) required conversion to femoral access. Two patients (9.5%) suffered reversible vasospasm. No radial artery occlusion or permanent neurologic deficits were recorded. Our systematic review showed similar results for vasospasm rates and procedural outcomes.

**Conclusions** Our results and the literature review demonstrate that the TRA is a safe and feasible option for pediatric patients. Routine use of ultrasound guidance, selection of appropriately sized catheters, and prophylactic use of vasodilators and antispasmodics can help ensure the success of the procedure and limit common access-site complications.

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