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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E-184 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 ‘radical 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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