THE BRACHIORADIAL ARTERY, A MAKE-OR-BREAK VARIANT FOR TRANSRADIAL APPROACH ENDOVASCULAR INTERVENTIONS


Introduction/Purpose The brachioradial artery, or high origin of the radial artery, is defined as an origin of the radial artery proximal to the cubital fossa. This congenital anatomic variant is estimated to be present in as high as 10% of the population. At our institution, transradial access has become the preferred approach of performing diagnostic cerebral angiograms, and has also been utilized for neurointerventions in select patients. The purpose of this work is to describe this variant anatomy to the Neurointerventionalist, and suggest techniques to avoid or navigate this unique challenge.

Methods A retrospective cohort of 72 patients who underwent transradial artery approach neurointerventions at our institution from January 2018 to March 2021 was reviewed. Patients with the brachioradial artery variant were identified.

Results At our institution, this variant anatomy was identified in 4 of 72 radial neurointervention cases (5.6%), leading to access site conversion or case termination. The average diameter of the radial artery in these patients was 1.9 mm +/- 0.1 mm, and the ostium of the vessel was 1.5 mm +/- 0.1 mm. Access site conversion to the contralateral radial artery was performed in two of these patients; this variant was bilateral in one of these patients, and unilateral in the other.

Conclusion In our experience, the brachioradial artery variant has presented a significant challenge specific to neuroendovascular procedures requiring larger caliber (6 French or greater) co-axial sheaths and catheters.


ENDOVASCULAR TREATMENT FOR PRIMARY ISOLATED DISTAL MEDIUM VESSEL OCCLUSION ISCHEMIC STROKE: SYSTEMATIC REVIEW

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Introduction Benefit of endovascular treatment (EVT) for distal medium vessel occlusion (dMEVO) ischemic stroke in the early time window (< 6 hours from symptoms onset) is not well established. We defined dMEVO as an isolated primary occlusion in the following arteries: segments M3-M4 in the medial cerebral artery (MCA), A2-A5 in the anterior cerebral artery (ACA), P2-P4 in the posterior cerebral artery (PCA), posterior inferior cerebellar artery (PICA), anterior inferior cerebellar artery (AICA) and superior cerebellar artery (SCA).

Objective To assess the value of EVT in dMEVO ischemic strokes.

Methods A systematic review in accordance with PRISMA guidelines was conducted. Searches were conducted using the PubMed/Medline, Scopus, Embase, and Cochrane databases up to Jan 7, 2022, including randomized clinical trials (RCT) and observational studies describing 90 days outcomes in isolated dMEVO ischemic strokes in the early time window. Our primary outcome was functional independence, defined as modified Rankin Scale score (mRS): 0–2. Secondary outcomes were 90 days mortality, intracranial hemorrhage (symptomatic and all) and excellent functional outcome (mRS 0–1). We performed a systematic review using the random effect model. Freeman-Tukey double arc sine transformation was used to stabilize the proportion variances. Heterogeneity was evaluated using the I² 2 and considered high if over 50%.