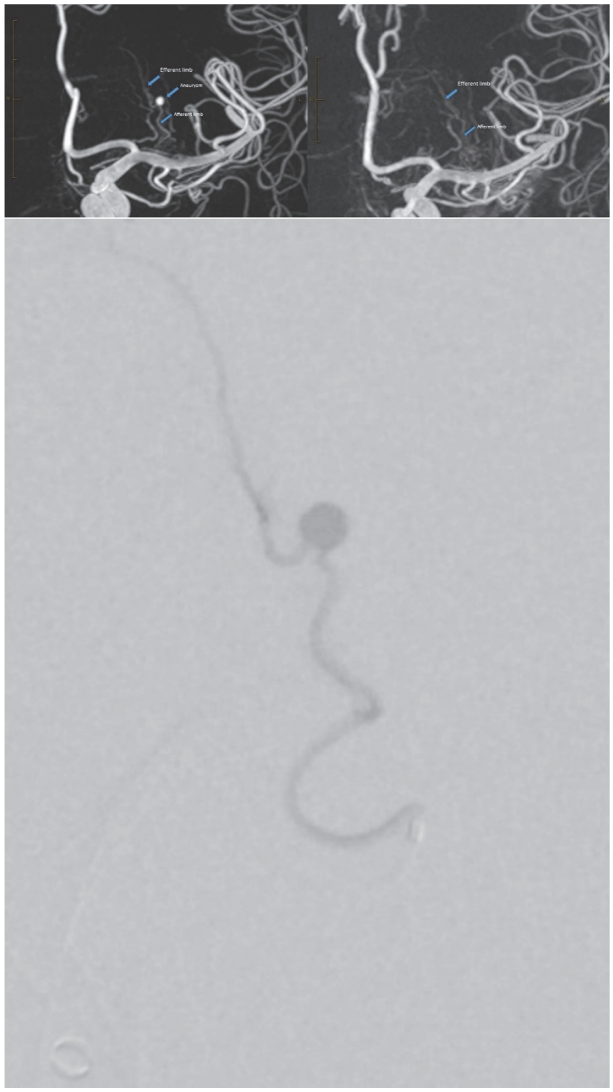

Abstract E-040 Figure 1

increase in size measuring 1.7 mm. At this point, with multideciplinary team approach, we decided to consider securing the aneurysm with endovascular approach. Patient also had functional MRI and tractography to complete open surgical planning evaluation if endovascular approach was unsuccessful. Meanwhile pateint's neurological deficits were completely resolved at approximately two month mark. Selective microcatheter angiographic runs on the day of treatment showed that the aneurysm had side wall morphology (2.3mm) with parent perforator blood vessel having significant basal ganglia territory supply. Considering inevitable sacrifice of the perforator while using endovascular approach, we proceeded with open surgical clipping of the aneurysm. The aneurysm was secured with surgical clipping preserving the parent perforator vessel.Distal lenticulostriate aneurysms are uncommon pathology. Considering very high risk of neurologic deficits with either endovascular or open surgical approach, these lesions need meticulous multidisciplinary team planning.

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E-041 USE OF REVERSE ANGLE GUIDE CATHETER WITH TRANS-RADIAL APPROACH IN PATIENTS UNDERGOING LEFT MIDDLE MENINGEAL ARTERY EMBOLIZATION

[1]M Fayad*, [2]S Patel, [2]A Elmashad, [1]J Lima, [1]M Ollenschleger, [1]C Bruno, [3]I Kureshi, [2]T Mehta. *[1]Department of Radiology, Hartford Hospital, Hartford, CT; [2]Department of Neurology, Hartford Hospital, Hartford, CT; [3]Department of Neurosurgery, Hartford Hospital, Hartford, CT*

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Introduction Early evidence suggests that MMA (Middle Meningeal Artery) embolization for prevention of cSDH (chronic subdural hematoma) is safe and efficacious. A significant number of cSDH patients are elderly with higher likelihood of relatively difficult aortic arch anatomy. Transradial approach for intracranial embolization has been associated with lower access site complications, lower cost, and higher patient satisfaction. However, catheterizing the left MMA via trans-radial approach can be challenging and could be associated with higher risk of guide catheter herniation into the aortic arch. In this single center retrospective review, we compare the outcomes of trans-radial approach utilizing reverse angle guide catheter with transfemoral approach.

Method We performed a retrospective review of all patients who underwent left MMA embolization between 01/01/2020 - 03/01/2021 for cSDH. For all trans-radial approach cases, we used a 6 F 90 cm Envoy (Codman & Shurtleff, Inc., Rayham, MA) Simmons 2 shape guide catheter keeping its distal tip in the left common carotid artery. Also, in all trans-radial cases we used a 5F 125 cm Sofia (Microvention, Aliso Viejo, CA) intermediate catheter to mitigate any possibility of embolic material embolizing to the left internal carotid artery while pulling back the microcathter. All trans-femoral cases were performed using a 5F 90 cm Enovy angled tip Guide catheter or 5F 120 cm Penumbra Select (Penumbra, Alameda, CA) angled tip catheter. Variables including age, gender, access site complications, total fluoroscopy time, radiation dose, initial size of subdural at first follow up, midline shift size before embolization, and reduction in SDH size on initial follow up head CT.

Results A total of 20 patients who underwent left MMA embolization with 7 trans-radial and 13 trans-femoral cases during the specified time period. There were no access site related complications in either group. Proceduralists were able to obtain adequate access in all cases without requiring to switch the route from trans-radial to trans-femoral or vice versa. There was no significant difference in mean patient age for trans-radial versus trans- femoral groups (72.7 years vs. 74.6 years, p=0.7). The mean fluoroscopy time for trans-radial vs trans-femoral approach of left MMA embolization was 24.75 vs 43.12 (P=0.012). The mean radiation dose of trans-radial vs trans-femoral was 14973.2 vs 22670.6 mcGym2 (P=0.072).

Conclusion Use of 6F reverse angle guide catheter (Simmons 2 shape) may represent a relatively safe and proficient approach to embolizing left MMA with trans-radial approach in elderly patients with complex and tortuous aortic arch anatomy.

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