

Fusiform A2 anterior cerebral artery aneurysm

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Most of these aneurysms arise at the origin of the [frontopolar artery](#) and are usually saccular.

Alurkar et al. present a rare case of a fusiform proximal pericallosal artery aneurysm arising from the distal part of A2 prior to the origin of [callosomarginal artery](#) and treated with endovascular [coil](#) occlusion ¹⁾.

Case reports

Ibrahim et al report a case of right-sided de novo giant A2 aneurysm 6 years after an anterior communicating artery (ACoA) aneurysm clipping. They believe this de novo aneurysm developed in part due to patient-specific risk factors but also a significant change in cerebral hemodynamics. The ACoA became occluded after surgery that likely altered the cerebral hemodynamics and contributed to the de novo aneurysm.

They believe this to be the first reported case of a giant de novo aneurysm in this location. Following parent vessel occlusion (mostly of the carotid artery), there are no reports of any de novo aneurysms in the pericallosal arteries let alone a giant one. The patient had a dominant right A1 and the sudden increase in A2 blood flow likely resulted in increased wall shear stress, particularly in the medial wall of the A2 where the aneurysm occurred 2 mm distal to the A1-2 junction.

ACoA preservation is a key element of aneurysm surgery in this location. Suspected occlusion of this vessel may warrant closer radiographic follow-up in patients with other risk factors for aneurysm development ²⁾.

Unclassified

Burkhardt JK, Winkler E, Tabani H, Gandhi S, Benet A, Lawton MT. A2 Anterior Cerebral Artery-to-A3 Anterior Cerebral Artery Interpositional Bypass with Radial Artery Graft for a Ruptured Mycotic Fusiform Aneurysm: 2-Dimensional Operative Video. *Oper Neurosurg (Hagerstown)*. 2018 Nov 1;15(5):601. doi: 10.1093/ons/oxp301. PubMed PMID: 30321425.

Shekhtman OD, Gorozhanin VA, Kulikov AS, Okisheva EA. [Proximal clipping of a large fusiform aneurysm of the A2 segment of the left anterior cerebral artery with awakening of the patient (a case report and literature review)]. *Zh Vopr Neurokhir Im N N Burdenko*. 2018;82(4):97-102. doi: 10.17116/neiro201882497. Review. Russian. PubMed PMID: 30137043.

References

1)

Alurkar A, Karanam LS, Oak S, Nayak S. Endovascular treatment of fusiform A2 aneurysm with parent artery occlusion. Surg Neurol Int. 2014 Jul 30;5(Suppl 4):S199-202. doi: 10.4103/2152-7806.137752. eCollection 2014. PubMed PMID: 25184100; PubMed Central PMCID: PMC4138823.

2)

Ibrahim TF, Hafez A, Andrade-Barazarte H, Raj R, Niemela M, Lehto H, Numminen J, Jarvelainen J, Hernesniemi J. De novo giant A2 aneurysm following anterior communicating artery occlusion. Surg Neurol Int. 2015 Oct 23;6(Suppl 21):S560-S565. eCollection 2015. PubMed PMID: 26664872.

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Last update: **2024/06/07 02:55**

