

Posterior communicating artery aneurysm associated with duplicated posterior communicating artery and bilateral fetal posterior cerebral arteries

Sir,

A 60-year-old man presented to us with sudden severe headache since two days. NCCT revealed subarachnoid hemorrhage and a diagnosis of ruptured aneurysm was entertained. Digital subtraction angiography revealed a posterior communicating artery (PcomA) aneurysm with duplicated PComA and bilateral fetal posterior cerebral arteries (PCAs) [Figure 1]. Microsurgical clipping was performed with preservation of both PcomAs [Figure 2], with an excellent postoperative course.

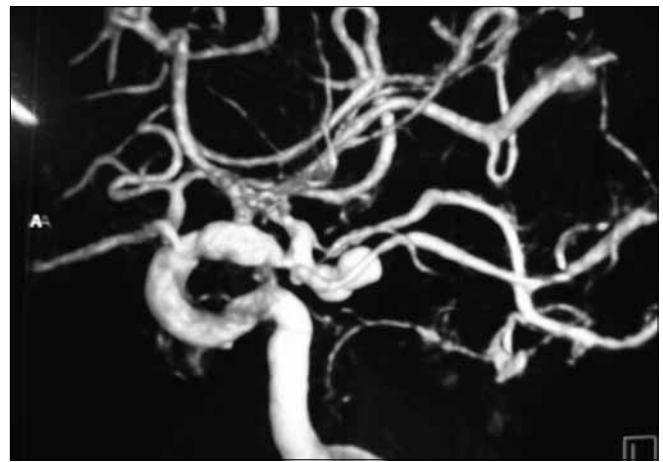


Figure 1: 3D digital subtraction angiography showing a posterior communicating artery aneurysm with presence of bilateral fetal posterior cerebral artery and duplicated posterior communicating artery



Figure 2: Postoperative angiography showing a well-clipped aneurysm with preservation of both the posterior communicating arteries

Presence of fetal PCA in association with PcomA aneurysms makes surgery challenging as preservation of PcomA becomes vital to ensure vascular supply in the PCA territory. This is because the PCA territory is being perfused predominantly from the ICA through the PcomA in patients with fetal PCA. Duplication of the PcomA is a rare variation in which two arteries arise independently from the ICA and accounts for less than 0.2% of anatomical variations in cerebral vasculature.^[1] Though anatomical variations like aplasia and fenestration of PcomA have been reported,^[2,3] presence of bilateral fetal PCA with a duplicated PcomA in association with a PcomA aneurysm is distinctly rare.^[1] Knowledge of such an anatomical variation is surgically important to prevent inadvertent complications.

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