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Fenestration aneurysm of the basilar artery

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A 58-year-old man was admitted to the neurology clinic with a 3-week history of persistent headache. Physical examination revealed no neurological deficit. Magnetic resonance angiography demonstrated a ventrally angulated well-circumscribed unruptured aneurysm and a short segment of basilar artery just below this, indicating a fenestration aneurysm in the proximal segment of the basilar artery (Figure 1a). Initial digital subtraction angiography and endovascular treatment was offered but the patient opted to stay in magnetic resonance angiographic follow up with watchful waiting.

The prevalence of basilar artery fenestration is up to 5% in autopsy series (Wollschlaeger et al, 1967). Although fenestration itself is usually asymptomatic, aneurysms occur more frequently at points of fenestration (Guo et al, 2018). As a result of turbulent flow dynamics, fenestration aneurysms can show right or left lateralisation or angulation contralateral to the dominant vertebral artery (Figure 1b) (Ferguson, 1972).

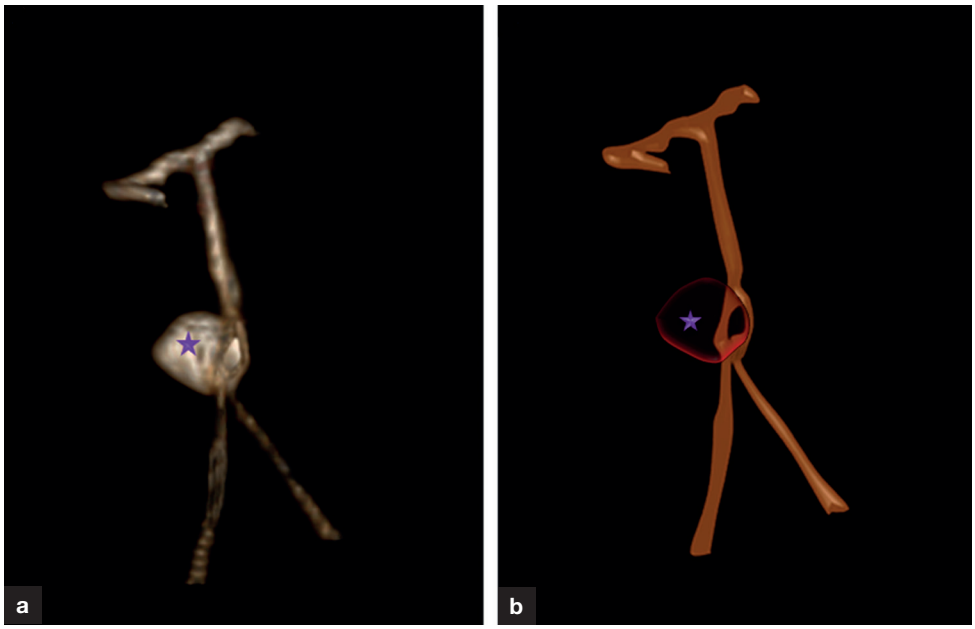

Figure 1. a. Posteroanterior coronal projection volume-rendering three-dimensional magnetic resonance angiography image showing a fenestration aneurysm (star) in the proximal segment of the basilar artery. b. Illustration demonstrating the association between the fenestration and the aneurysm (star).

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