

Medical Image of the Week: Artery of Percheron Infarction

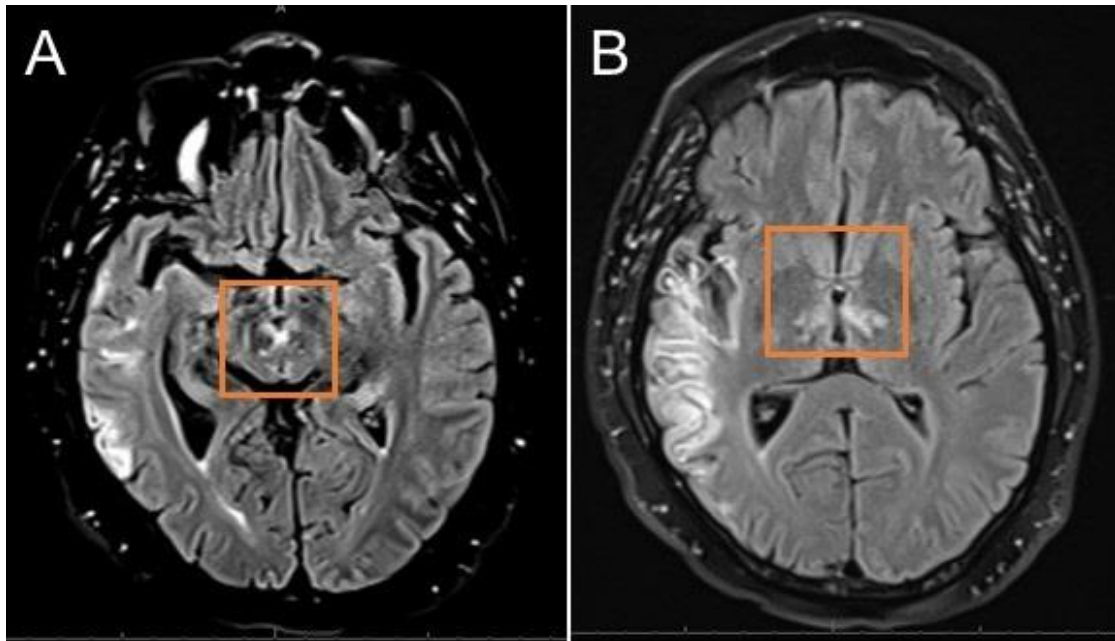


Figure 1. T2 weighted MRI demonstrating bilateral infarcts of the rostral midbrain (A, orange box) and thalami (B, orange box).

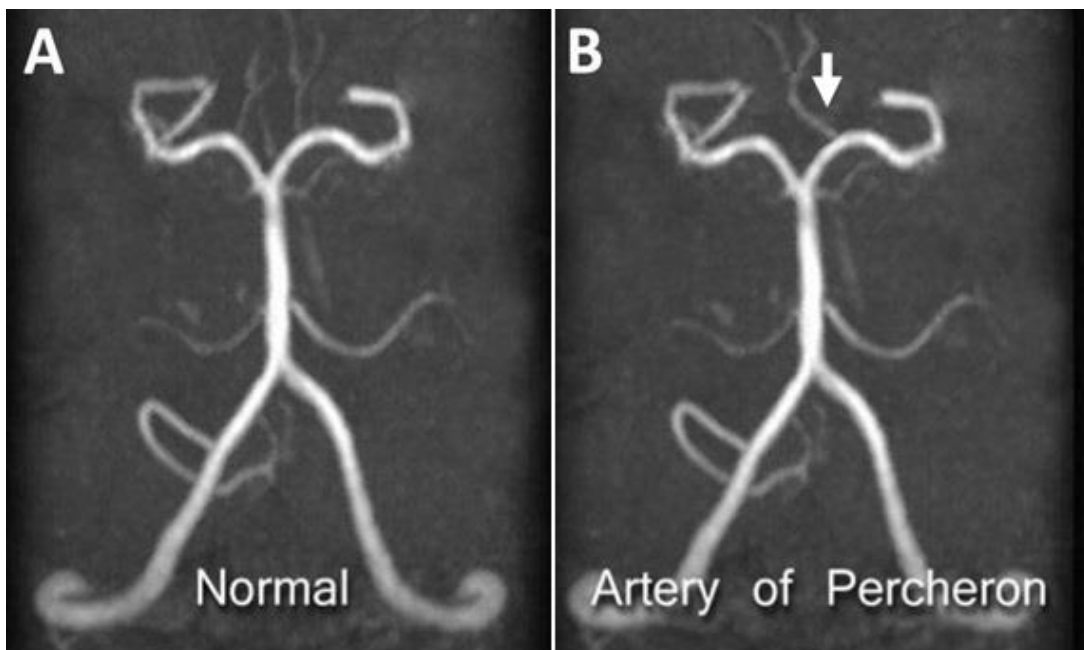


Figure 2. CT angiogram of posterior cerebral artery circulation demonstrating normal vascularization (A) and artery of Percheron (B, white arrow) (1).

A 55-year-old African-American man presented to the Emergency Department for acute altered mental status which started 4 hours ago. His medical history was significant for heart failure with reduced ejection fraction, diabetes mellitus, marijuana and opioid use. On admission, the patient appeared to be in a deep sleep, unarousable, with grimacing to noxious stimuli. He occasionally moved all extremities. He was intubated for airway protection. Initial CT head non-contrast demonstrated a previous right MCA infarct, with no new acute hemorrhage. MRI/MRA brain revealed complete infarction of the artery of Percheron (AOP), likely due to a left ventricular thrombus (Figure 1). The patient remained somnolent throughout hospitalization with minimal neurologic improvement, and was ultimately transferred to a long-term care facility after a tracheostomy and PEG placement.

The artery of Percheron is a rare, normal intracranial vascular variant in which a single arterial trunk originates from the posterior cerebral artery, giving rise to the vascular supply of both thalami and upper midbrain (Figure 2) (2). Acute occlusion of the artery results in posterior circulation infarction and is associated with impairment of consciousness, sleep and alertness. Diagnosis is usually based on magnetic resonance imaging demonstrating bilateral thalami and midbrain infarct. Management primarily consists of supportive measures, as reperfusion of cerebral microvascular carries significant surgical risk. Given the rarity of incidence, the prognosis of AOP infarct is unknown (3).

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