Teaching NeuroImages:

Acute Parinaud syndrome

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Figure 1 Bilateral ptosis

Bilateral ptosis with forehead corrugator activation on attempted eyelid opening. Infarction of the central caudal subnucleus results in bilateral dysfunction of the levator palpebrae superioris.

An 82-year-old man with atrial fibrillation, nonadherent to rivaroxaban, presented with sudden bilateral ptosis. Examination demonstrated bilateral ptosis (figure 1), pupils midline, fixed midsize, not reactive to light but constricting to accommodation, impaired vertical eye movements, paresis of superior greater than inferior rectus, and upgaze convergence nystagmus. MRI showed infarction of bilateral third nerve nuclei and mesial thalami consistent with an artery of Percheron infarct (figure 2), presumed cardioembolic origin. Artery of Percheron is a single P1 branch that supplies the bilateral paramedian thalami and rostral midbrain. Infarcts may present with vertical gaze palsy, memory impairment, and impairment of arousal.¹

AUTHOR CONTRIBUTIONS

Emily Swinkin drafted the manuscript, edited images for the publication, and revised the manuscript. Esther Bui conceptualized the study, obtained images for the manuscript, and revised the manuscript for intellectual content.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

REFERENCE

1. Lazzaro N, Wright B, Castillo M, et al. Artery of Percheron infarction: imaging patterns and clinical spectrum. *AJNR Am J Neuroradiol* 2010;31:1283–1289.

Figure 2 MRI brain

MRI diffusion-weighted imaging sequence demonstrates infarction of the bilateral cranial nerve III nuclei and mesial thalami corresponding to the artery of Percheron territory.

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