

Teaching NeuroImages: Stroke presenting with isolated superior branch of cranial nerve III palsy

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Figure MRI brain and photographs of the patient



(A) MRI brain noncontrast reveals abnormal T2 prolongation with mild restricted diffusion seen involving the medial aspect of the right cerebral peduncle. (B–E) Extraocular movements. (B) Right ptosis. (C–E) Normal infraduction, abduction, and adduction bilateral. (F) Impaired supraduction of right eye on upgaze.

A 53-year-old man presented with diplopia. On examination, he had mild to moderate right ptosis and limited supraduction in the right eye with no abnormalities of adduction, abduction, infraduction, or pupillary reactivity (figure, B–E). MRI brain revealed restricted diffusion consistent with acute infarction involving the medial aspect of the right cerebral peduncle (figure, A).

In the orbit, the third nerve divides into superior (supplying superior rectus and levator palpebrae superioris) and inferior (supplying medial and inferior recti, inferior oblique and ciliary ganglion) divisions. This case supports the consistency of third nerve structural organization within the midbrain, a rare manifestation of partial third nerve palsy caused by a stroke.^{1,2}

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Disclosure

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Yash D. Shah, MD, MPH	Cohen Children's Medical Center	Author	Major role in the acquisition and interpretation of data, drafted the manuscript for intellectual content
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