Teaching NeuroImages:

A case of partial oculomotor palsy

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Figure 1 Examination of conjugate extraocular movements showing right adduction palsy and right partial ptosis

A 68-year-old hypertensive man presented with binocular horizontal diplopia associated with drooping of right eyelid. Examination revealed medial rectus palsy, noncorrectable ptosis of the right eye (figure 1), normal pupils, and no long tract signs. Brain MRI showed a hyperintense T2 signal in the dorsal midbrain and diffusion restriction on diffusion-weighted imaging with corresponding reduced apparent diffusion coefficient (figure 2, A, C, and D). At 2 months, diplopia and ptosis improved significantly. Individual third nerve fascicles in the ventral mesencephalon have a topographic arrangement (figure 2B).¹ The medial rectus fascicle occupies the intermediate position

between superior rectus and levator palpebrae superioris.^{1,2}

AUTHOR CONTRIBUTIONS

Dr. Sinha: drafting of manuscript, data acquisition. Dr. Khurana: drafting and revising of manuscript, concept of the manuscript.

REFERENCES

1. Castro O, Johnson LN, Mamourian AC. Isolated inferior oblique paresis from brain-stem infarction: perspective on oculomotor fascicular organization in the ventral midbrain tegmentum. *Arch Neurol* 1990;47:235–237.
2. Johnson LN, Castro O. Monocular elevation paresis and incomplete ptosis due to midbrain infarction involving the fascicular segment of the oculomotor nerve. *J Clin Neuroophthalmol* 1992;12:73.

(A) Brain MRI shows hyperintense signal in the dorsal midbrain on the right side on axial T2-weighted image and (B) schematic representation of the oculomotor nerve fascicles in the midbrain with the arrangement of various fibers in the oculomotor nerve fascicle: IO = inferior oblique; IR = inferior rectus; LPS = levator palpebrae superioris; MR = medial rectus; PF = pupillary fibers; SR = superior rectus. (C, D) Diffusion-weighted imaging (coronal) with reduced apparent diffusion coefficient on the corresponding site.

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