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Teaching Video NeuroImages: Minimal anomalies of dorsal midbrain syndrome (Parinaud syndrome)

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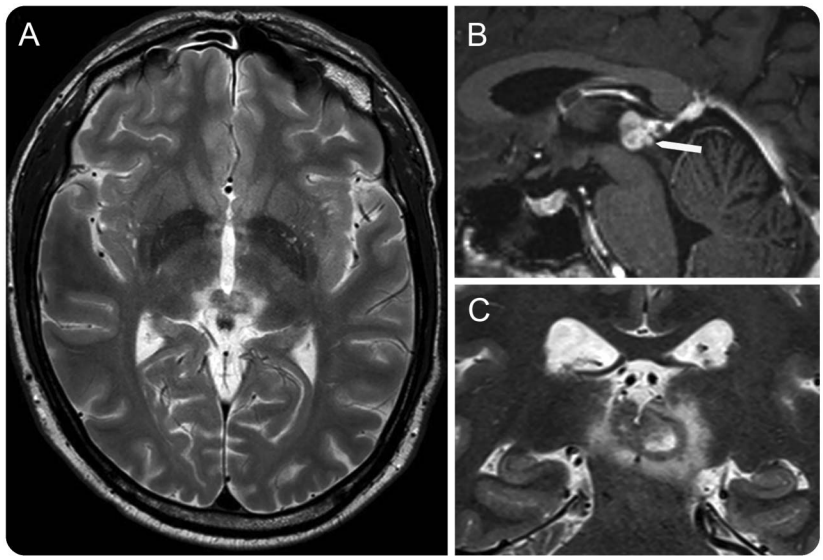
Figure Brain MRI



T2 axial and coronal cuts (A, C) and T1 sagittal cut with gadolinium (B) revealed a tumor originating from the walls of the third ventricle posteriorly, with an invasion of the posterior commissure (white arrow). The lesion was later biopsied and pathology revealed a pilocytic astrocytoma.

Parinaud syndrome results from posterior commissure dysfunction, and is associated with 4 major signs: limitation of upgaze, pupillary light-near dissociation, convergence abnormalities, and Collier sign.[1,2]

A 46-year-old man complained of vertical diplopia due to a subtle left skew deviation. Upgaze pursuit was normal, but upward saccades were slowed, without convergence abnormalities or Collier sign (video at Neurology.org). Pupillary light-near dissociation was present (video). MRI revealed a tectal mesencephalic lesion (figure).

Slowed upward saccades and pupillary light-near dissociation represent an early stage of posterior commissure dysfunction, before frank upgaze palsy, Collier sign, or convergence abnormalities.

AUTHOR CONTRIBUTIONS

Pilar Rojas is an author and contributed to drafting and revising the manuscript. Philippe Maeder is an author, contributed to data acquisition, and revised the manuscript. François-Xavier Borruat is an author, contributed to data acquisition, and revised the manuscript.

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DISCLOSURE

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

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2. Miller NR, Newman NJ. Clinical Neuro-Ophthalmology, 5th ed. vol 1, ch 29. Baltimore: Williams & Wilkins; 1998: 1304–1311.

Supplemental data at Neurology.org

Download teaching slides: Neurology.org

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