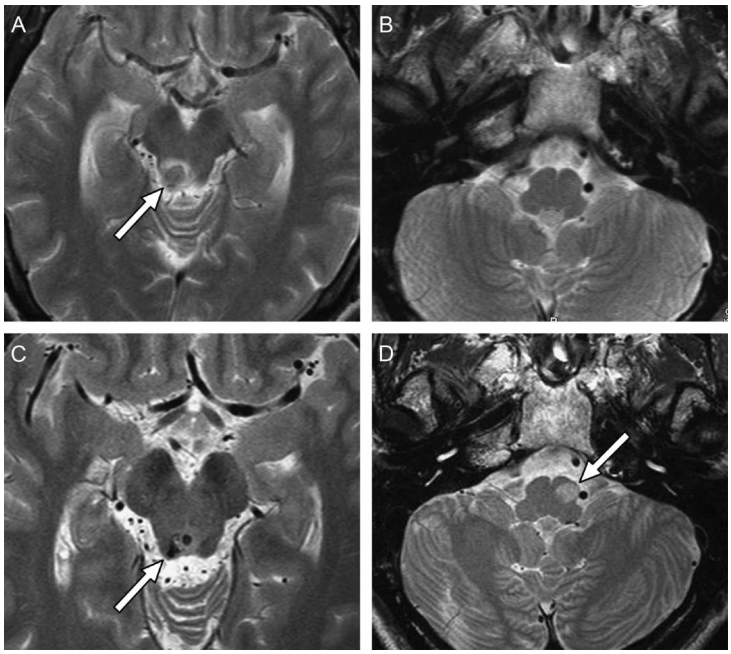
Teaching Video NeuroImages: Micronystagmus of oculopalatal tremor

Liuna Jang, MD
François-Xavier Borruat, MD

Correspondence to Dr. Borruat: francois.borruat@fa2.ch

Figure MRI, axial T2 sequences



Initially: right inferior colliculus hemorrhage (A, arrow) and normal inferior olivary nucleus (B). Three months later: resolution of hemorrhage (C, arrow) and left inferior olivary nucleus hyperintense signal (D, arrow).

Three months after brainstem hemorrhage, MRI revealed a hyperintense lesion of the left inferior olivary nucleus of a 45-year-old man (figure). The patient was completely asymptomatic, but exhibited oculopalatal tremor (OPT), rhythmic palatal oscillations, and small-amplitude vertical pendular nystagmus of the right eye, best visualized on fundus examination (see video).

OPT is caused by interruption of the inhibitory dentato-olivary pathway, resulting in synchronous oscillations of the olivary neurons. This pathway crosses the midbrain then descends to the contralateral inferior olivary nucleus.[1,2]

Asymptomatic OPT is rare. Micronystagmus can be overlooked with simple observation but is readily detected during fundus examination.

AUTHOR CONTRIBUTIONS

Liuna Jang is an author, and contributed to drafting and revising the manuscript. François-Xavier Borruat is an author, and contributed to data acquisition and revising the manuscript.

DISCLOSURE

L. Jang reports no disclosures. F.-X. Borruat received honoraria from Novartis for participating in clinical trials and from Allergan for speaking engagements. Go to Neurology.org for full disclosures.

REFERENCES

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2. Shaikh AG, Hong S, Liao K, et al. Oculopalatal tremor explained by a model of inferior olivary hypertrophy and cerebellar plasticity. Brain 2010;133:923–940.

Supplemental data at www.neurology.org

From the Hôpital Ophtalmique Jules-Gonin, University Ophthalmology Department, University of Lausanne, Switzerland.
This study was approved by the Swiss Federal Department of Health (authorization # 035.0003-48).

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