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Teaching Video NeuroImage: Unilateral Gaze Palsy With Nystagmus and Facial Weakness

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Case Summary

A 27-year-old man presented with 6 months of binocular horizontal diplopia worsening over 2 weeks. Examination (Video 1) showed near complete inability to look to the left with left-beating nystagmus. He was orthotropic on alignment testing in primary gaze. There was mild left facial weakness with nasolabial fold flattening. MRI revealed left pontine cavernoma with small area of acute hemorrhage (Figure 1). Horizontal gaze palsy with ipsilateral facial weakness

localizes to the sixth nerve nucleus and encircling facial nerve fascicles¹; esotropia is minimal unlike fascicular sixth nerve palsy. Involvement of the horizontal gaze integrator/nucleus prepositus hypoglossi accounts for horizontal nystagmus.

slides ---<http://links.lww.com/WNL/B781>

vid1 -- <http://links.lww.com/WNL/B782>

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Figure Caption

Figure 1. Pontomedullary cavernous hemangioma causing left gaze palsy. Axial T2-weighted and FLAIR MRI images show a hyperintense left dorsal pontomedullary lesion with surrounding edema (A,B). There is intrinsic mild T1 hyperintensity consistent with subacute hemorrhage (C). Susceptibility-weighted imaging (SWI) shows hemosiderin deposition within this vascular lesion (D).

Video Caption

Video 1. Left gaze palsy with lower motor neuron pattern of facial weakness. Motility testing showed inability to look toward the left, with left-beating nystagmus on attempted left gaze (part 1). In primary position there is no esotropia (part 2). There is flattening of the left nasolabial fold and left orbicularis oculi weakness. Decreased left forehead wrinkling with brow elevation indicates frontalis involvement and localizes his facial palsy to the lower motor neuron (part 3).

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