A 33-year-old woman experienced chronic dizziness for 2 years. Examination disclosed gaze-evoked nystagmus and hypermetric saccades. Macrosaccadic oscillations (MSOs) were induced by a gaze shift and horizontal head impulses (video at Neurology.org). Brain MRI demonstrated a large (3.8 × 3.9 × 5.3 cm$^3$) epidermoid cyst at the fourth ventricle that compresses the brainstem and cerebellum (figure).

MSOs are hypermetric saccades around the fixation point with intersaccadic intervals that are usually induced by a gaze shift, but may occur during attempted fixation or even in darkness. MSO occurs with pontine or cerebellar lesions that compromise either the omnipause neurons or fastigial nucleus input, to premotor burst neurons. Retinal slip following horizontal head impulses can also trigger MSO.

**REFERENCES**
Teaching Video NeuroImages: Macrosaccadic oscillations induced by horizontal head impulses
Seo-Young Choi, You Jin Choi, Jae-Hwan Choi, et al.
Neurology 2017;89;e116
DOI 10.1212/WNL.0000000000004291

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