RESIDENT & FELLOW SECTION

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Teaching Video NeuroImages: Vestibular neuritis

Basic elements for clinical and instrumental diagnosis

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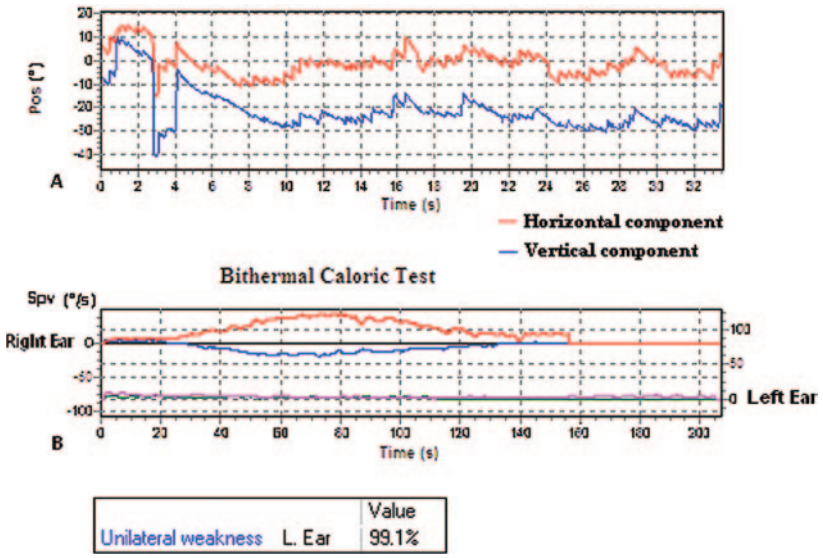
Figure Spontaneous and caloric nystagmus in left vestibular neuritis



(A) Horizontal and vertical components of spontaneous nystagmus. (B) Bithermal caloric testing with plot of slow-phase velocity. The lower tracings demonstrate left canal paresis.

A 48-year-old man presented with vertigo, unsteadiness, nausea, and vomiting that developed subacutely when he was at work. Hearing was preserved.

Apart from left displacement during the Fukuda stepping test, nothing relevant was found through neurologic examination (see video on the *Neurology*® Web site at www.neurology.org).

Head impulse test (HIT) was positive on the left side. Asymmetry of the vestibulo-ocular reflex determines the eyes' lag on the target after rapid head turn toward the pathologic side, followed by a catch-up saccade to refixate on the target.

Video-oculography showed right-beating horizontal nystagmus with vertical and counterclockwise torsional components (figure, A). Spontaneous nystagmus is mixed horizontal-torsional probably due to multicanalar involvement from damage to the superior division of the vestibular nerve. Unlike central forms, this type of nystagmus does not change direction. Usually, visual fixation dampens or abolishes it. Bithermal caloric testing demonstrated left canal paresis (figure, B).

The patient recovered in 10 days. Vestibular neuritis is the most frequent cause of unilateral vestibular hypofunction,[1] and viral infection is the most favored hypothesis. The nystagmus disappeared, but HIT, a most useful test to sort central from peripheral causes,[2] persisted unchanged on successive examinations.

REFERENCES

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2. Newman-Toker DE, Kattah JC, Alvernia JE, Wang DZ. Normal head impulse test differentiates acute cerebellar strokes from vestibular neuritis. Neurology 2008;70:2378–2385.

Supplemental data at www.neurology.org

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