One Bedside Test - Two Clinical Signs: One Vestibular, The Other Ocular Motor

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Contributions:
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A 60-year-old patient had progressive imbalance. Examination revealed saccadic smooth pursuit, downbeat nystagmus, ataxia of stance and gait and reduced vibration sense. Video-head impulse and caloric testing both showed vestibulo-ocular reflex deficits (VOR, Figure). The patient has Cerebellar Ataxia Neuronopathy Vestibular Areflexia Syndrome (CANVAS) (1, 2). Slow head turns while looking at an earth-fixed target produce saccadic rather than smooth compensatory eye movements (Video) due to impairment of both the VOR and smooth pursuit (the visually enhanced VOR): one simple bedside test, two clinical signs and one precise diagnosis.

**Video legend**
(A) Saccadic smooth pursuit during slow horizontal head movements: regular video-camera and head-fixed camera; (B) bilateral pathological bedside head-impulse test; (C) saccadic smooth pursuit; and (D) false-normal visual suppression of the VOR – there is no VOR to suppress. (A) Would be enough to diagnose combined VOR and smooth pursuit deficit.

**Figure legend**
Fig. Caloric irrigation (A) and video-head impulse test (B) show a severe VOR deficit.

![Figure A](http://links.lww.com/WNL/B382)
Reference List


(2) Boesch SM, Nance MA. Intronic pentanucleotide expansion in the replication factor 1 gene (RFC1) is a major cause of adult-onset ataxia. *Neurol Genet.* 2020 May 20;6(3):e436. doi: 10.1212

Appendix 1: Authors

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