Teaching Video *NeuroImages*: Periodic alternating nystagmus evident only in darkness

Ali Razmara, MD, PhD
Devin Mackay, MD
Steven L. Galetta, MD
Sashank Prasad, MD

Correspondence to
Dr. Prasad:
sprasad2@partners.org

An 81-year-old man with retinitis pigmentosa had severe, slowly progressive visual loss that began at age 20. Intermittent nystagmus was observed for 1 decade. Examination revealed severe retinal atrophy and periodic alternating nystagmus (PAN) that occurred only in darkness (video on the *Neurology*® Web site at www.neurology.org).

PAN refers to horizontal nystagmus that periodically reverses direction.¹ It is caused by instability of brainstem velocity storage mechanisms that regulate rotationally induced nystagmus, with intact vestibular “repair mechanisms” that are calibrated by visual

input.¹ PAN may emerge with impairment of central visual stabilization mechanisms or deficient visual input.² This case demonstrates that the presence of PAN may correlate with ambient lighting and maintenance of visual fixation.

REFERENCES

1. Waespe W, Cohen B, Raphan T. Dynamic modification of the vestibulo-ocular reflex by the nodulus and uvula. *Science* 1985;228:199–202.
2. Cross SA, Smith JL, Norton EW. Periodic alternating nystagmus clearing after vitrectomy. *J Clin Neuroophthalmol* 1982;2:5–11.

Supplemental data at
www.neurology.org

From the Department of Neurology (A.R., D.M., S.P.), Brigham and Women’s Hospital, Harvard Medical School, Boston, MA; and Department of Neurology (S.L.G.), University of Pennsylvania School of Medicine, Philadelphia.

No targeted funding reported.

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

Neurology®

Teaching Video *NeuroImages*: Periodic alternating nystagmus evident only in darkness

Ali Razmara, Devin Mackay, Steven L. Galetta, et al.

Neurology 2013;80:e32

DOI 10.1212/WNL.0b013e31827f07ab

This information is current as of January 21, 2013

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/80/4/e32.full
Supplementary Material	Supplementary material can be found at: http://n.neurology.org/content/suppl/2013/01/20/80.4.e32.DC1
References	This article cites 2 articles, 1 of which you can access for free at: http://n.neurology.org/content/80/4/e32.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Neuro-ophthalmology http://n.neurology.org/cgi/collection/all_neuroophthalmology Nystagmus http://n.neurology.org/cgi/collection/nystagmus Visual loss http://n.neurology.org/cgi/collection/visual_loss
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright © 2013 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.