



# 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*<sup>®</sup> Web site at [www.neurology.org](http://www.neurology.org)).

PAN refers to horizontal nystagmus that periodically reverses direction.<sup>1</sup> 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.<sup>1</sup> PAN may emerge with impairment of central visual stabilization mechanisms or deficient visual input.<sup>2</sup> This case demonstrates that the presence of PAN may correlate with ambient lighting and maintenance of visual fixation.

## REFERENCES

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Supplemental data at  
[www.neurology.org](http://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.

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