A 55-year-old woman presented with a third nerve palsy and impaired abduction of her right eye. MRI showed a lesion at the orbital apex extending into the cavernous sinus. A biopsy showed invasive *Aspergillus fumigatus* and she was treated with antifungals with only partial improvement.

Twelve years later, she had complete ptosis, partially restricted abduction, adduction, and depression of the right eye. The right pupil, which did not constrict to light or near vision, constricted on downgaze (video on the Neurology® Web site at Neurology.org), diagnostic of aberrant regeneration,\(^1\) which occurs when regenerating axons are misdirected to muscles they were not intended, such as the iris sphincter.\(^2\)

Olga R. Rosenvald, MD, Simmons Lessell, MD
From the Division of Neuro-ophthalmology, Massachusetts Eye and Ear Infirmary, Harvard Medical School, Boston.

**Author contributions:** Dr. Rosenvald provided patient care, wrote the manuscript draft, and edited the video. Dr. Lessell provided patient care, edited the manuscript, and supervised the video recording and edition.

**Study funding:** No targeted funding reported.

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

**Correspondence to Dr. Rosenvald:** olga.rosenvald@gmail.com

Pupillary sign of aberrant regeneration of the third nerve
Olga R. Rosenvald and Simmons Lessell
Neurology 2016;86;1746
DOI 10.1212/WNL.0000000000002642

This information is current as of May 2, 2016

Updated Information & Services
Updated Information & Services including high resolution figures, can be found at:
http://n.neurology.org/content/86/18/1746.full

Supplementary Material
Supplementary Material can be found at:
http://n.neurology.org/content/suppl/2016/04/30/WNL.00000000000002642.DC1

References
This article cites 2 articles, 0 of which you can access for free at:
http://n.neurology.org/content/86/18/1746.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
Fungal infections
http://n.neurology.org/cgi/collection/fungal_infections
Ocular motility
http://n.neurology.org/cgi/collection/ocular_motility
Orbit
http://n.neurology.org/cgi/collection/orbit
Pupils
http://n.neurology.org/cgi/collection/pupils

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 © 2016 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.