RESIDENT & FELLOW SECTION

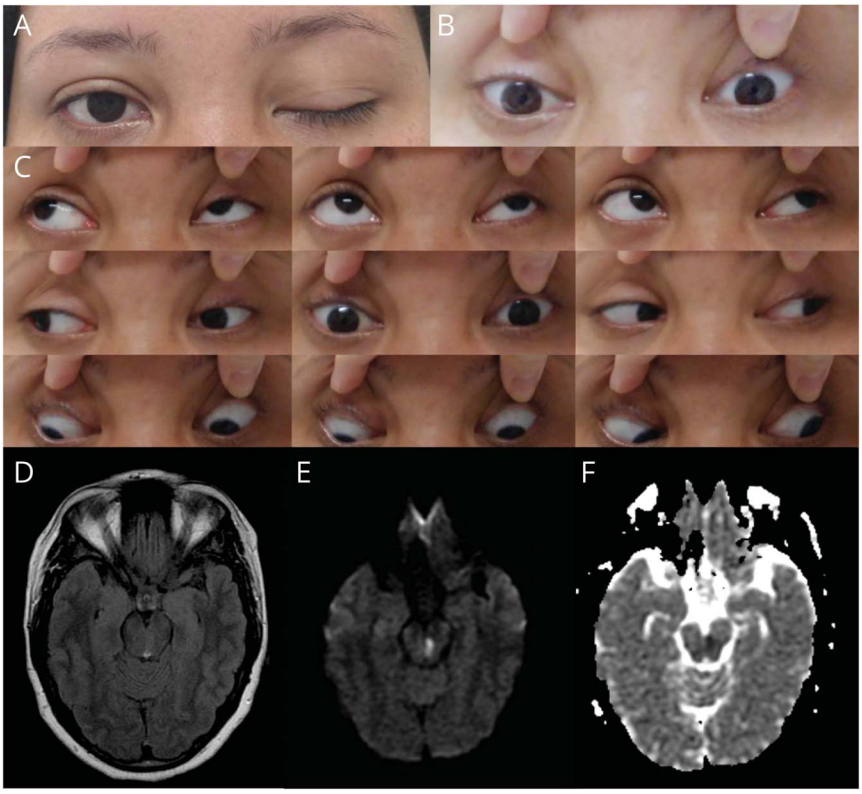
Teaching Video NeuroImage: Pupil-Sparing Infranuclear Third Nerve Palsy Pattern Caused by a Mesencephalic Stroke

Paulo Eduardo Lahoz Fernandez, MD, Vanessa de Sousa Brito, MD, Coralia Gabrielle Vieira Silveira, MD, Guilherme Diogo Silva, MD, and Eduardo Genaro Mutarelli, MD, PhD, FAAN

Neurology® 2021;97:e1166-e1167. doi:10.1212/WNL.0000000000012189

Correspondence
Dr. Lahoz Fernandez
lahoz.paulo@gmail.com

Figure Photograph and Brain MRI



(A, B) Left eye ptosis and pupil-sparing pattern. (C) Nine cardinal positions of gaze show impairment of adduction, supraduction, and infraduction of the left eye. (D–F) Brain MRI reveals a lesion in the left midbrain in fluid-attenuated inversion recovery, diffusion-weighted, and apparent diffusion coefficient sequences.

A 27-year-old obese woman, a smoker, presented diplopia. She showed ptosis, impaired adduction, supraduction, and infraduction of the left eye with pupil-sparing (figure, A–C and video 1). Brain MRI showed restricted diffusion in the left midbrain, revealing ischemia (figure, D–F). Pupil-sparing third nerve palsy is usually associated with microvascular diabetic ischemia of central fibers in the cisternal segment, but is also related to partial fascicular lesions in brainstem stroke, ophthalmoplegic migraine, and, rarely, aneurysm. Although microvascular and brainstem ischemia have a better prognosis, regardless of pupillary involvement, the investigation is important for secondary stroke prevention, particularly in young patients, as in this case.[1,2]

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Video

Teaching slides
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From the Neurology Department (P.E.L.F., V.d.S.B., C.G.V.S., G.D.S., E.G.M.), Syrian Lebanese Hospital; and Neurology Department (G.D.S., E.G.M.), University of São Paulo, Brazil.

Go to Neurology.org/N for full disclosures. Funding information and disclosures deemed relevant by the authors, if any, are provided at the end of the article.

Study Funding

The authors report no targeted funding.

Disclosure

The authors report no disclosures. Go to Neurology.org/N for full disclosures.

Appendix Authors

Name	Location	Contribution
Paulo Eduardo Lahoz Fernandez, MD	Syrian Lebanese Hospital, São Paulo, Brazil	Designed and conceptualized the study, drafted the manuscript for intellectual content
Vanessa de Sousa Brito, MD	Syrian Lebanese Hospital, São Paulo, Brazil	Designed and conceptualized the study
Coralia Gabrielle Vieira Silveira, MD	Syrian Lebanese Hospital, São Paulo, Brazil	Revised the manuscript for intellectual content
Guilherme Diogo Silva, MD	Syrian Lebanese Hospital, São Paulo, Brazil	Revised the manuscript for intellectual content
Eduardo Genaro Mutarelli, MD, PhD, FAAN	Syrian Lebanese Hospital, São Paulo, Brazil	Major revision and supervision of the manuscript for intellectual content

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Neurology 2021;97;e1166-e1167 Published Online before print May 13, 2021
DOI 10.1212/WNL.0000000000012189