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

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A 27-year-old obese and smoker woman 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, however 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.\textsuperscript{1,2}

\textbf{Appendix 1. Authors}

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<thead>
<tr>
<th>Name</th>
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Teaching Slides  ---http://links.lww.com/WNL/B422

Video 1  --- http://links.lww.com/WNL/B423

References


Figure 1. Photograph of the patient and brain MRI

Left eye ptosis and pupil-sparing pattern (A-B). Nine cardinal positions of gaze showed impairment of adduction, supraduction, and infraduction of the left eye (C). Brain MRI revealed a lesion in the left midbrain in FLAIR, Diffusion-weighted and Apparent diffusion coefficient sequences (D-F).

Video 1. Pupil-sparing third nerve palsy

Nine cardinal positions of gaze showed impairment of adduction, supraduction, and infraduction of the left eye with preserved pupillary function.
Caused by a Mesencephalic Stroke


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