

Isolated pseudoabducens palsy in acute thalamic stroke

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Objective: To describe, for the first time, an isolated right pseudoabducens palsy in a young patient with acute left thalamic infarction revealed by diffusion-weighted magnetic resonance imaging (DWI MRI).

Background: Ocular abnormalities are rarely reported in thalamic strokes. When present, impairment of vertical gaze is usually noted, sometimes accompanied by vertical diplopia. Other oculomotor deficits such as skew deviation or third nerve palsy have also been reported in pure thalamic infarctions. The presentation of thalamic stroke with pseudoabducens palsy is extremely rare and are associated with impairment in vertical eye movements.

Design/Methods: Case report.

Results: A 31-year-old right-handed smoker, otherwise healthy, man presented with a 12-hour history of progressively worsening horizontal diplopia and related feeling unsteady on his feet, and mild left-occipital headache. He reported feeling unsteady on his feet because of his double vision. Cranial nerve examination showed horizontal diplopia in all directions of gaze and was most prominent when focusing on distant objects especially and more on the right gaze. Eye movements were disconjugate when looking to the right; there was no abduction of the right eye. DWI MRI revealed a focus of restricted diffusion in the left thalamus, consistent with acute ischemic infarct, with no lesions in the brainstem or the cerebellum; however, the subthalamic area above the midbrain was possibly involved.

Conclusions: This case supports the hypothesis that a lesion can cause isolated esotropia by interrupting descending inhibitory convergence pathways that

traverse the paramedian thalamus and decussate in the subthalamic region to innervate the contralateral third oculomotor nucleus.