Ipsilateral eye closure and hemifacial weakness

Useful clinical clue to diagnose pseudostroke

Natalie Gillson, MD; Abdul L. Khuhro, MD; Debabrata Ghosh, MD

Video

Neurology.org/cp

A 16-year-old boy with anxiety was admitted for evaluation of acute-onset left face/hemibody numbness and weakness. Because of the possibility of an acute stroke, he was admitted to an outside hospital and underwent extensive investigations before transfer to our center. On examination, left hemifacial weakness was seen with pulling of the angle of the mouth to the right and left eye closure (video at Neurology.org/cp). CT head, CT perfusion, MRI, and magnetic resonance angiography of the brain did not show any evidence of ischemia or vasculopathy. EEG was normal. Symptoms resolved completely within several weeks with physical therapy aided by psychological counseling and management of anxiety.

The findings presented are neither a supranuclear nor an intranuclear lesion due to active complete closure of the left eyelid without drooping of the brow or ptosis of the lower lid (figure). In contrast to the Babinski 2 sign (ipsilateral elevation of the eyebrow with contraction of the ipsilateral orbicularis oculi muscle), which is used to distinguish a peripheral focal dystonia (hemifacial spasm) from a central focal dystonia (blepharospasm), this patient displayed ipsilateral eye closure with contralateral eyebrow elevation, or a reverse Babinski 2 sign, indicating a psychogenic etiology.¹ Findings of ipsilateral hemifacial weakness with the reverse Babinski 2 sign may be helpful clinical signs for pseudostroke.²

REFERENCES

1. Stamey W, Jankovic J. The other Babinski sign in hemifacial spasm. *Neurology* 2007;69:402–404.
2. Behrouz R, Benbadis SR. Psychogenic pseudostroke. *J Stroke Cerebrovasc Dis* 2014;23:e243–e248.

Received July 21, 2015. Accepted in final form August 28, 2015.

AUTHOR CONTRIBUTIONS

N. Gillson conducted background research and was primary author for the manuscript. A. Khuhro diagnosed and treated the patient and revised the manuscript. D. Ghosh assisted with conceptualization and editing of the manuscript.

STUDY FUNDING

No targeted funding reported.

DISCLOSURES

The authors report no disclosures. Full disclosure form information provided by the authors is available with the **full text of this article at Neurology.org/cp**.

Nationwide Children's Hospital, Columbus, OH.

Correspondence to: Natalie.Gillson@nationwidechildrens.org

Figure Patient photo

Left hemifacial weakness with asymmetric smile, angle of mouth deviated to the right, and left lower hemifacial droop. Instead of wide opening, there is closure of the ipsilateral (left) eye due to contraction of the orbicularis oculi muscle, which defies anatomy of the facial nerve or its nucleus. This observation points to a psychogenic etiology. An additional sign of contralateral elevation of the right eyebrow in the setting of left eye closure is the reverse of the Babinski 2 sign, also implying a psychogenic etiology.