Teaching Video *NeuroImages*: Movement of a paralyzed arm with yawning

Peter Kang, MD
Amar Dhand, MD, DPhil

Correspondence to
Dr. Kang:
kangp@neuro.wustl.edu

Figure MRI

Diffusion-weighted imaging (A) and apparent diffusion coefficient (B) sequences confirm acute ischemic infarct. These images show involvement of cortical and subcortical structures in the distribution of the left middle cerebral artery vascular territory.

A 63-year-old man presented with aphasia and right arm paralysis (Medical Research Council [MRC] grade 0), sparing the leg (video 1 on the *Neurology*® Web site at Neurology.org). With yawning, his right arm consistently rose to his chest (video 2). Paralysis resumed after yawning. MRI confirmed an acute ischemic stroke in the left middle cerebral artery distribution (figure). This movement ceased after 2 weeks following partial recovery of arm strength (MRC grade 4). This phenomenon, first described in the 1844, was recently coined parakinesia brachialis oscitans. It is speculated to be a release event in which damaged cortical pathways no longer inhibit phylogenetically older brainstem pathways stimulated by yawning.^{1,2}

AUTHOR CONTRIBUTIONS

Dr. Kang: design and conceptualization, obtaining data and multimedia presented, creation of final video, drafting, revising, and final submission. Dr. Dhand: design and conceptualization, obtaining data and multimedia presented, revising.

STUDY FUNDING

No targeted funding reported.

DISCLOSURE

P. Kang reports no disclosures relevant to the manuscript. A. Dhand is a co-owner of DoctorBoard LLC and receives research support from the American Heart Association. Go to Neurology.org for full disclosures.

REFERENCES

1. Walusinski O, Quoirin E, Neau JP. Parakinesia brachialis oscitans [in French]. *Rev Neurol* 2005;151:193–200.
2. Walusinski O, Neau JP, Bogousslavsky J. Hand up! Yawn and raise your arm. *Int J Stroke* 2010;5:21–27.

Supplemental data
at Neurology.org

Download teaching slides:
Neurology.org

From the Department of Neurology, Washington University School of Medicine, St. Louis, MO.

Neurology®

Teaching Video *NeuroImages*: Movement of a paralyzed arm with yawning

Peter Kang and Amar Dhand

Neurology 2015;84:e118

DOI 10.1212/WNL.0000000000001489

This information is current as of April 20, 2015

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/84/16/e118.full
Supplementary Material	Supplementary material can be found at: http://n.neurology.org/content/suppl/2015/04/19/WNL.0000000000001489.DC1 http://n.neurology.org/content/suppl/2015/04/19/WNL.0000000000001489.DC2
References	This article cites 2 articles, 0 of which you can access for free at: http://n.neurology.org/content/84/16/e118.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): All Education http://n.neurology.org/cgi/collection/all_education All Movement Disorders http://n.neurology.org/cgi/collection/all_movement_disorders Clinical neurology examination http://n.neurology.org/cgi/collection/clinical_neurology_examination Infarction http://n.neurology.org/cgi/collection/infarction
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 © 2015 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.