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Teaching NeuroImages: A 41-Year-Old Woman Presented With Excessive Sweating of Contralateral Face and Extremity

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A 41-year-old woman presented to our hospital with a 12-year history of recurrent episodes of excessive sweating on her right face, neck, shoulder, and left calf after exercise (Fig. 1). Cranial nerve examination was normal. Routine tests, thyroid function, ultrasound of carotid artery, MRI of the head, mediastinum, cervical and lumbar spine, and whole-body 18F-FDG PET/MRI were all negative. At her 3-year follow-up, her entire left leg was affected. She was finally diagnosed with Harlequin syndrome. Harlequin syndrome is attributed to sympathetic dysfunction (1). Contralateral involvement of autonomic nerves is relatively rare. Causes include syringomyelia, carotid artery dissection, tumors, or brainstem infarction, but many cases are idiopathic (1,2). Usually, Harlequin syndrome requires no treatment, but botulinum toxin can be tried in patients with severe symptoms (1).

Appendix 1 Authors

Name	Location	Contribution
Anjiao Peng, MD	West China Hospital, Sichuan University	Drafting/revision of the manuscript for content, including medical writing for content; Study concept or design
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Figure legend:

Figure 1. Excessive sweating of the contralateral face and leg.

Excessive sweating of the right face after exercise 3 years prior (A). Excessive sweating and flushing of the right face (B), shoulder (C) and left leg (D) after exercise at her 3-year follow-up.

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