Teaching NeuroImages: Starch-Iodine Test: A Colorful Tool for Objectifying Anhidrosis in Horner Syndrome

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Neurology® Published Ahead of Print articles have been peer reviewed and accepted for publication. This manuscript will be published in its final form after copyediting, page composition, and review of proofs. Errors that could affect the content may be corrected during these processes.
A 46-year-old male presented in the emergency department with nausea, vertigo, dysphagia, and hiccups. Vascular risk factors included hypertension, hypercholesterolemia, and smoking. Ptosis and subtle miosis of the left eye, torsional nystagmus and left-sided hemiataxia were found. The patient was sweating heavily, however not on the left side of his face. To objectify this, Minor’s starch-iodine test was performed\(^1\). The midline-respecting color difference, resulting from the reaction of starch and iodine in water, confirmed anhidrosis (Figure 1). MRI showed left lateral medullary infarction (Figure 2), due to acute thrombotic occlusion of the vertebral artery (not shown). Consequently, the patient was diagnosed with Wallenberg syndrome\(^2\).
Figure 1. Clinical observation of Horner’s syndrome.

1A: A one-gram layer of starch on thinly applied and subsequently dried 2% iodine tincture turns spectacularly blue in the presence of sweat. 1B: Ptosis and subtle miosis of the left eye.

Figure 2. Axial diffusion-weighted brain MRI showing left lateral medullary infarction.
### Appendix 1: Authors

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Teaching Slides-http://links.lww.com/WNL/B484
References


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Govert Dwarshuis, Bastiaan Ter Meulen, Cyra Leurs, et al.
Neurology published online August 10, 2021
DOI 10.1212/WNL.000000000012597

This information is current as of August 10, 2021

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