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

Author(s):
Govert Dwarshuis, BSc¹; Bastiaan Ter Meulen, MD¹; Cyra Leurs, MD, PhD¹; Harold Suliman, MD²

Corresponding Author:
Govert Dwarshuis
g.dwarshuis@student.vu.nl

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Affiliation Information for All Authors: 1. Department of Neurology, OLVG, Amsterdam, Netherlands; 2. Department of Radiology, OLVG, Amsterdam, Netherlands

Contributions:
Govert Dwarshuis: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Bastiaan Ter Meulen: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data; Study concept or design; Analysis or interpretation of data
Cyra Leurs: Drafting/revision of the manuscript for content, including medical writing for content; Major role in the acquisition of data
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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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<tr>
<th>Name</th>
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</tr>
</thead>
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<tr>
<td>Govert Dwarshuis, BSc</td>
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[Teaching Slides](http://links.lww.com/WNL/B484)
References


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