Teaching NeuroImage: Starch-Iodine Test

A Colorful Tool for Objectifying Anhidrosis in Horner Syndrome

Govert Dwarshuis, BSc, Bastiaan Ter Meulen, MD, Cyra Leurs, MD, PhD, and Harold Suliman, MD

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Correspondence

Dwarshuis
g.dwarshuis@student.vu.nl

Figure 1 Clinical Observation of Horner Syndrome

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

A 46-year-old man 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 objectively evaluate this, Minor's starch-iodine test was performed.¹ Anhidrosis was confirmed by observing color difference respecting the midline that resulted from the reaction of starch and iodine in water. (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

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Disclosure

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From the Departments of Neurology (G.D., B.T.M., C.L.) and Radiology (H.S.), OLVG, Amsterdam, Netherlands.

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Figure 2 Axial Diffusion-Weighted Brain MRI Showing Left Lateral Medullary Infarction

Appendix Authors

Name	Location	Contribution
Govert Dwarshuis, BSc	OLVG, Amsterdam	Drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data
Bastiaan Ter Meulen, MD	OLVG, Amsterdam	Drafting/revision of the article for content, including medical writing for content; major role in the acquisition of data; study concept or design; and analysis or interpretation of data
Cyra Leurs, MD, PhD	OLVG, Amsterdam	Drafting/revision of the article for content, including medical writing for content, and major role in the acquisition of data
Harold Suliman, MD	OLVG, Amsterdam	Major role in the acquisition of data and analysis or interpretation of data

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