Teaching Video NeuroImages: Disorder of sweat, tonic pupil, and areflexia

Ross syndrome

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Figure Starch iodine test

The chest and shoulders were covered with a 0.02% alcoholic solution of iodine and with rice starch powder, which changes from white to black in the presence of sweat (black arrow). The iodine test showed absence of sweating over the anterior part of the right side (white arrow).

A 40-year-old man presented with a 10-year history of excessive sweating on the right side, progressing to absence of sweat, rough skin, heat intolerance, and blurred vision. Examination showed anhidrosis (right side), diffuse areflexia, and Adie tonic pupils. Starch iodine test showed absence of sweating (figure). Pupillary reflex was poor (video 1). Skin biopsy was unremarkable. Ross syndrome was diagnosed.

Ross syndrome is an autonomic disorder characterized by impairment of sweat, tonic pupil, and areflexia. The disease has a progressive cutaneous sensory and autonomic involvement, with impairment in heat production.¹ Pathophysiologic mechanisms include damage in peripheral autonomic system and dorsal root ganglia.²

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

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Appendix Authors

Name	Location	Contribution
Igor de Assis Franco, MD, MSc	Universidade Federal de São Paulo, Brazil	Case report project: conception, organization, execution; imaging: conception, organization, execution; manuscript: writing of the first draft, review and critique
Rodrigo Andrade da Silva, MD	Universidade Federal de São Paulo, Brazil	Case report project: conception, organization, execution; imaging: conception, organization, execution; manuscript: writing of the first draft
Rafael Pereira Pinto, MD	Universidade Federal de São Paulo, Brazil	Imaging: conception, organization, execution
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Appendix (continued)

Name	Location	Contribution
José Luiz Pedroso, MD, PhD	Universidade Federal de São Paulo, Brazil	Case report project: conception, organization, execution; imaging: conception, organization, execution; manuscript: writing of the first draft, review and critique
Orlando G. Barsottini, MD, PhD	Universidade Federal de São Paulo, São Brazil	Case report project: conception, organization, execution; imaging: conception, organization, execution; manuscript: writing of the first draft, review and critique

References

1. Nolano M, Provitera V, Perretti A, Stancanelli A. Ross syndrome: a rare or a mis-known disorder of thermoregulation? A skin innervation study on 12 subjects. *Brain* 2006;129:2119–2131.
2. Yaşar S, Aslan C, Serdar ZA, Demirci GT, Tutkavul K, Babalik D. Ross syndrome: unilateral hyperhidrosis, Adie's tonic pupils and diffuse areflexia. *J Dtsch Dermatol Ges* 2010;8:1004–1006.

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