Teaching NeuroImages: Thermal imaging in Horner syndrome

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A 50-year-old woman with a history of fibromuscular dysplasia presented to the emergency department with 1 day of right ear pain. Examination demonstrated 2 mm anisocoria, left pupil larger than right, with brisk pupillary light reactions bilaterally; 2.5 mm right ptosis; and anhidrosis of the right forehead, as determined by the spoon test. Thermal imaging was consistent with this finding (figure). She was diagnosed with acute, painful Horner syndrome. MRI/magnetic resonance angiography demonstrated right internal carotid artery dissection. Due to the risk of stroke immediately following internal carotid dissection,¹ she was treated with heparin drip, then later transitioned to aspirin and clopidogrel therapy.²

Figure Thermal imaging photograph of right Horner syndrome

Thermal imaging photograph, obtained with the FLIROne camera 2 months after symptom onset, demonstrates decreased temperature on the right forehead. This depiction is consistent with the right-sided third-order Horner syndrome and attributable to vasoconstriction in the involved area due to delayed development of adrenergic hypersensitivity secondary to sympathetic denervation.

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References

1. Bioussé V, D'Anglejan-Chatillon J, Touboul PJ, Amarenco P, Boussier MG. Time course of symptoms in extracranial carotid artery dissections: a series of 80 patients. *Stroke* 1995;26:235–239.
2. Markus HS, Levi C, King A, Madigan J, Norris J; Cervical Artery Dissection in Stroke Study Investigators. Antiplatelet therapy vs anticoagulation therapy in cervical artery dissection: the Cervical Artery Dissection in Stroke Study (CADISS) randomized clinical trial final results. *JAMA Neurol* Epub 2019 Feb 25.

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Name	Location	Role	Contribution
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Pradeep Y. Ramulu, MD, PhD	Wilmer Eye Institute, Johns Hopkins University School of Medicine, Baltimore, MD	Author	Interpreted the data, revised the manuscript for intellectual content
Joseph F. Lawler, MD, PhD	JFL Capital Management, Austin, TX	Author	Designed and conceptualized study, revised the manuscript for intellectual content

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