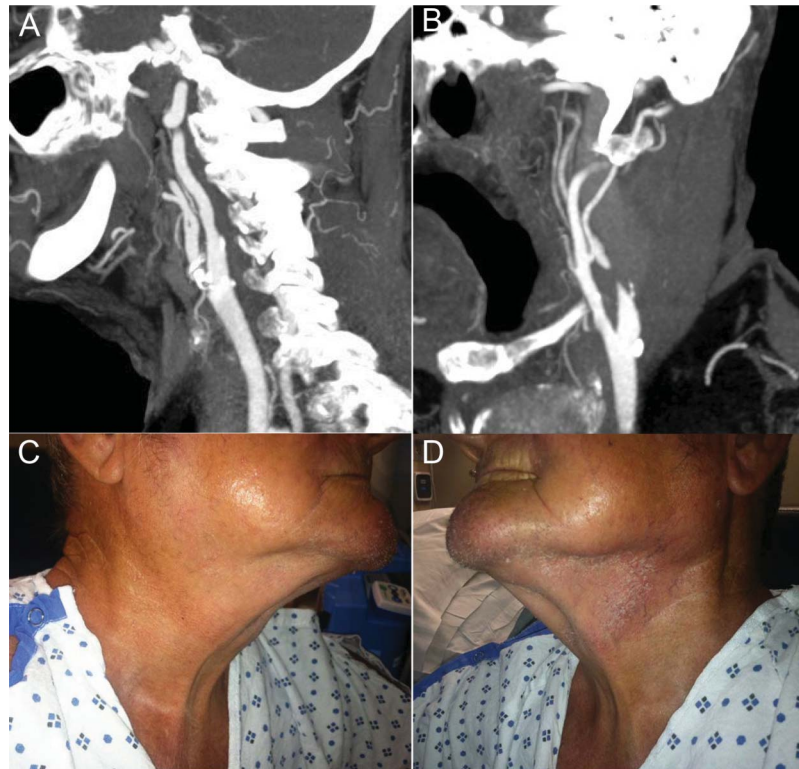


Teaching NeuroImages: Radiation-associated symptomatic carotid artery disease with ipsilateral radiodermatitis

Matthew E. Ehrlich, MD,
MPH
Thomas Gulvezan, BSc
Andrew M. Southerland,
MD, MSc

Correspondence to
Dr. Ehrlich:
me7z@hscmail.mcc.virginia.edu

Figure Unilateral carotid artery disease with ipsilateral radiodermatitis



Neck CT angiography maximum intensity projection images show patent right internal carotid artery (A) and left internal carotid artery (B) with focal tapered occlusion vs critical stenosis distal to the bifurcation. Clinical pictures of the patient's neck show (C) normal skin on the right and (D) radiodermatitis on the left.

A 68-year-old man with a history of squamous cell carcinoma of the tongue treated with external beam radiation therapy in 2007 presented in 2013 with acute onset expressive aphasia and right lower facial weakness. MRI confirmed an acute infarct in the left frontal cortex. CT angiography revealed occlusion vs critical stenosis of the left internal carotid artery, new from 2007. Examination of the patient's neck revealed ipsilateral radiodermatitis (figure). Therapeutic neck irradiation has been associated with accelerated atheromatous disease, carotid artery stenosis, and increased risk of stroke.^{1,2} Ipsilateral radiodermatitis may be a sign of underlying carotid artery stenosis.

AUTHOR CONTRIBUTIONS

Dr. Matthew Ehrlich: manuscript preparation, figure editing, and review. Thomas Gulvezan: manuscript preparation, data acquisition, figure production. Dr. Andrew Southerland: critical review and editing of the manuscript.

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REFERENCES

1. Cheng SW, Ting AC, Ho P, Wu LL. Accelerated progression of carotid stenosis in patients with previous external neck irradiation. *J Vasc Surg* 2004;39:409–415.
2. Gujral DM, Chahal N, Senior R, Harrington KJ, Nutting CM. Radiation-induced carotid artery atherosclerosis. *Radiother Oncol* 2014;110:31–38. doi: 10.1016/j.radonc.2013.08.009.

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