Teaching NeuroImages:

Ultrasound findings in giant-cell arteritis

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Figure Sonography

Extracranial duplex of left superficial temporal artery (STA) showing reduced color-filling and vessel-wall thickening in form of a dark halo in axial (A) and longitudinal (C) plane. Note the normal color-filling in right STA in axial (B) and longitudinal (D) plane. Blood flow velocity spectra have been included as inserts in C and D. Left STA biopsy ($\times 100$) showing inflammatory infiltrates involving the entire vessel wall, marked intimal thickening, and fragmentation of the internal elastic lamina (E). Presence of giant cells is shown at a higher magnification ($\times 400$) (F).

A 67-year-old man presented with a throbbing left temporal headache of worsening intensity over 10 days without visual disturbance. Physical examina-

tion disclosed left temporal scalp tenderness and a decreased temporal artery pulse. Neurologic and fundoscopic examinations had normal results. Erythro-

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cyte sedimentation rate was 3 mm/hour, and the C-reactive protein 1.5 mg/dL. Emergent duplex ultrasound disclosed a hypoechoic circumferential thickening (halo sign) around the left superficial temporal artery (STA) lumen (figure, A and C), indicating wall edema. The patient was immediately started on corticosteroids with complete resolution of his symptoms. STA biopsy confirmed giant-cell arteritis (GCA) (figure, E and F).

Ultrasound may contribute to GCA diagnosis by visualizing characteristic findings in the STA wall.¹ A

recent meta-analysis reported that the unilateral halo sign achieved an overall sensitivity of 68% and specificity of 91% in biopsy-proven GCA.²

REFERENCES

1. Schmidt WA, Kraft HE, Vorpahl K, et al. Color duplex ultrasonography in the diagnosis of temporal arteritis. *N Engl J Med* 1997;337:1336–1342.
2. Arida A, Kyprianou M, Kanakis M, Sfikakis PP. The diagnostic value of ultrasonography-derived edema of the temporal artery wall in giant cell arteritis: a second meta-analysis. *BMC Musculoskelet Disord* 2010;11:44.

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