

IMAGES IN EMERGENCY MEDICINE**Ultrasound**

A woman with a headache and vision changes

Timothy J. Batchelor MD  | Kenton L. Anderson MD

Department of Emergency Medicine, Division of Emergency Ultrasound, Stanford University, Stanford, California, USA

Correspondence

Timothy J. Batchelor, MD, 900 Welch Road, Suite 350, Stanford, CA 94305, USA.

Email: tbatch@stanford.edu

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1 | PATIENT PRESENTATION

An 86-year-old woman presented to the emergency department for the evaluation of atraumatic, progressive right eye vision loss over 2 weeks preceded by flashes and floaters. Symptoms were associated with eye pain and temporal headache exacerbated by mastication. The right temporal artery was prominent and tender to palpation, visual acuity was 20/400 bilaterally, intraocular pressures were normal, and laboratory workup revealed elevated inflammatory markers. Point-of-care ultrasound of her temporal arteries was performed, and the affected right side appeared grossly abnormal (Figure 1 and Video S1). The patient denied any rheumatologic history.

2 | DIAGNOSIS: GIANT CELL ARTERITIS

Giant cell arteritis (GCA) is a vasculitis that affects large- and medium-sized vessels and is the most common primary systemic vasculitis in people over the age of 50 years.¹⁻² Temporal artery ultrasound findings include a characteristic periluminal dark halo (“Halo Sign”) representing arterial wall thickening and inflammation. European studies evaluating intima-media thickness (IMT) of known GCA patients suggest that IMT >0.42 mm thick is indicative of GCA.³ Initial presentation frequently includes headache, visual symptoms, jaw claudication, and the syndrome is tightly coupled with age (mean onset at 70 years). Visual disturbances occur due to occlusive arteritis of the posterior ciliary or retinal arteries, and are often profound.¹ Gold standard diagnostic testing for GCA is temporal biopsy; however, bedside ultrasound is often more readily available, provides satisfactory sensitivity and specificity, and high negative predictive value.⁴ Patients with a suspected diagnosis of GCA should be treated with high dose

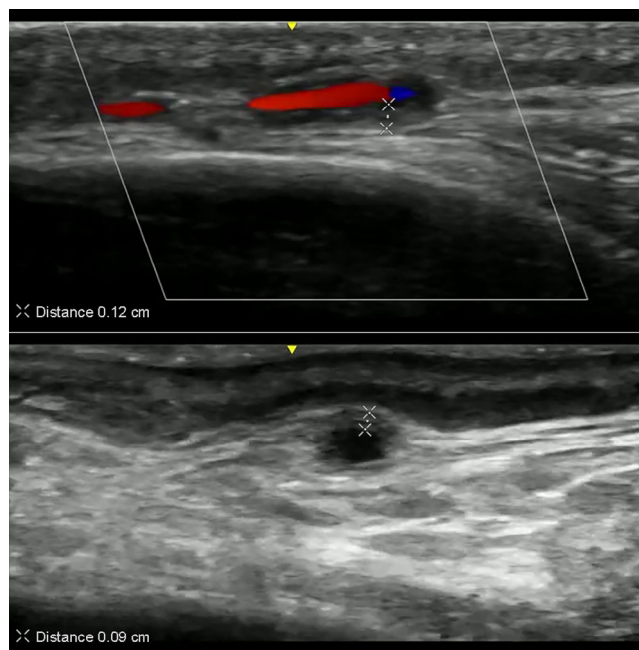


FIGURE 1 Point of care ultrasound examination of the right temporal artery.

corticosteroids, as vision loss is irreversible in up to one-third of patients.

CONFLICT OF INTEREST STATEMENT

No authors have any conflict of interest, financial or other, to report.

ORCID

Timothy J. Batchelor MD  <https://orcid.org/0000-0002-8594-3547>

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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