

IMAGES IN EMERGENCY MEDICINE

Ophthalmology

Female with right eye scotomaRoss Candelore DO¹ | Josh Krieger MD² | Kyle Couperus MD^{1,2} | Maxine Harvey DO³¹ Department of Emergency Medicine, Madigan Army Medical Center, Joint Base Lewis-McChord, Washington, USA² University of Washington, Seattle, Washington, USA³ Department of Ophthalmology, Madigan Army Medical Center, Joint Base Lewis-McChord, Washington, USA**Correspondence**

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1 | PATIENT PRESENTATION

A 27-year-old female with no past medical history presented to an emergency department (ED) with the complaint of progressive central right eye scotoma over the last 3 weeks. The physical examination was notable for loss of optic disc contour on the right, prompting ophthalmology consultation. Ophthalmologists performed dilated funduscopy noting an inflamed right optic disc with macular starring pattern consistent with neuroretinitis, which in this case, was thought secondary to *Bartonella hensale* given reported cat exposure. Please see Figure 1 for imaging findings. Emergency and ophthalmology physicians coordinated ED discharge, treatment with azithromycin and steroid taper, and outpatient follow-up care.

2 | DIAGNOSIS

Neuroretinitis is an inflammatory disorder defined by optic disc edema, noted on funduscopy or imaging modalities, that leads to the pooling of edema behind the retina leading to a classic finding known as a "macular star."¹⁻³ Neuroretinitis presents with impaired visual acuity, commonly cecentral and central scotomas, and possibly relative afferent pupillary defects, which are all findings emergency physicians are trained to identify.¹ Neuroretinitis can be precipitated by a variety of infectious and noninfectious causes. Treatments are aimed at the underlying process.¹ One common infectious cause of neuroretinitis



FIGURE 1 Right eye dilated funduscopy noting loss of optic disc contour with macular starring pattern

is Cat Scratch Disease, a bacterial infection from *Bartonella hensale*.^{1,2} Ocular manifestations of *Bartonella hensale* infection are usually self-limited, yet some literature supports the use of antibiotics, notably a macrolide or tetracycline, to decrease symptom duration.²⁻⁴ Ultimately, emergency physicians should be able to identify the physical examination findings of neuroretinitis and, in conjunction with their ophthalmology colleagues, arrange treatment and follow up care.

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