

Unilateral Nodular Scleritis Secondary to Latent Syphilis

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A 47-year-old white male was referred to an ophthalmologist for evaluation of a painful lesion on his left eye. On examination, there was a solid, injected, non-mobile 5 mm x 7 mm nodule located on the inferotemporal sclera of the left eye (Figure 1). The best corrected visual acuity was 20/30 and intraocular pressure was normal. The anterior chamber was deep and quiet and fundoscopic examination was unremarkable. Extraocular motility was full. The right eye examination was normal.

His medical history was significant for a penile lesion in the distant past, as well as a full-body rash sometime thereafter. He denied being diagnosed with a sexually transmitted disease. A review of systems at presentation was negative for fever, night sweats, rash, genital lesion, or weight loss.

The differential diagnosis for nodular scleritis includes infectious etiologies such as tuberculosis and syphilis; autoimmune diseases such as rheumatoid arthritis, sarcoidosis, systemic lupus erythematosus, granulomatosis with polyangiitis, and polyarteritis nodosa, as well as masquerades such as lymphoma.

Laboratory tests performed included complete blood count, metabolic panel, quantiFERON, *Treponema Pallidum* antibodies, rheumatoid factor, and angiotensin converting enzyme, antinuclear antibodies, and anti-neutrophil cytoplasmic antibodies. A chest x-ray was also obtained.

Initial treatment with 60 mg oral prednisone provided no clinical improvement in the lesion and one week later his testing revealed a positive *Treponemal pallidum* antibody. He was treated for latent syphilis with 3 doses of IM Penicillin G. Additional recommendations were made for HIV and hepatitis testing which the patient refused.

Rapid and marked improvement in the lesion followed the first penicillin injection (Figure 2). Following three weekly injections of penicillin, the nodule had completely resolved (Figure 3) and his best corrected visual acuity returned to 20/20. The rapid and complete clinical response to antibiotic therapy in the setting of his past medical history and laboratory testing strongly supports the likelihood that his condition was a manifestation of latent syphilitic infection.

Nearly one half of all patients diagnosed with scleritis are found to have an associated illness or underlying condition.¹ Scleritis is a rare finding in ocular syphilis, accounting for only 3% of cases², presenting most commonly in an anterior nodular form.^{1,3} Diagnosis is often difficult because there is no clear history of extra-ocular symptoms. Twenty-five to fifty percent of patients with ocular syphilis have no other clinical signs.⁴ Ocular lesions were the initial manifestations of syphilis in 87% of the confirmed cases in one published review.⁵

Scleritis secondary to latent syphilis responds only minimally to steroids, but demonstrates a dramatic response to penicillin therapy. Previously documented cases report full and rapid resolution of the nodules 1-2 weeks after the first dose of antibiotic.^{1,3}

Emergency room physicians, ophthalmologists, internists and infectious disease specialists should keep a high index of suspicion for syphilis in all patients with scleritis. A thorough history eliciting exposure risks is essential given the close association to HIV and for rapid diagnosis and treatment.

References

1. Wilhelmus KR and Yokoyama CM. Syphilitic episcleritis and scleritis. *Am J Ophthalmol.* 1987 Dec;104(6):595-7.
2. Watson PG, Hayreh SS. Scleritis and episcleritis. *Br J Ophthalmol.* 1976 May;60(3):163-91.
3. Casey R, Flowers CW, Jones DD, Scott L. Anterior nodular scleritis secondary to syphilis. *Arch Ophthalmol.* 1996 Aug;114(8):1015-6.
4. Deschenes J, Seamone CD, baines MG. Acquired ocular syphilis: diagnosis and treatment. *Ann Ophthalmol.* 1992 Apr;24(4):134-8.
5. Puech C, Gennai S, Pavese P, Pelloux I, Maurin M, Romanet JP, Chiquet C. Ocular manifestations of syphilis: recent cases over a 2.5-year period. *Graefes Arch Clin Exp Ophthalmol.* 2010 Nov;248(11):1623-9.

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Figure legends

Figure 1. A large elevated erythematous sclera nodule at the inferotemporal limbus with a nearby feeder vessel.

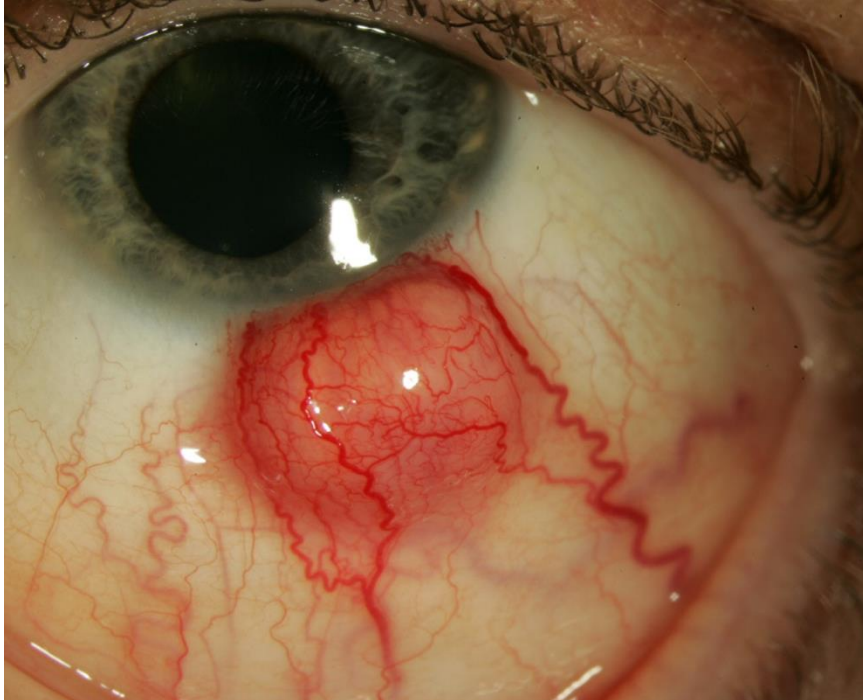


Figure 2. Following one dose of intramuscular penicillin. There is flattening of the nodule and marked improvement in the degree of erythema.

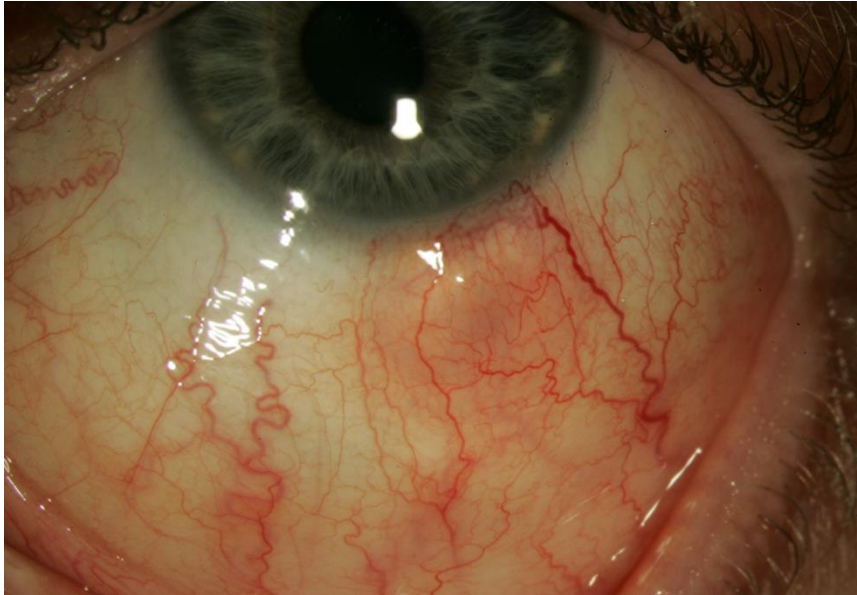


Figure 3. Resolution of the scleral nodule following three doses of intramuscular penicillin.

The sclera is flat with minimal residual erythema.

