Optic Perineuritis as the Initial Presentation of Syphilis in a Patient on Biologics

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Syphilis is a sexually transmitted disease caused by the spirochete Treponema pallidum and can affect any organ in the body including the eye or central nervous system. Ocular involvement of neurosyphilis most frequently involves panuveitis but can also include retinal vasculitis, interstitial keratitis, or optic neuropathy.

Immunosuppression is a significant risk factor for the development of neurosyphilis, with human immunodeficiency virus–positive patients being significantly at risk. Biologics are immunosuppressants and have been implicated in cases of syphilis.4,5

We present an unusual case of neurosyphilis presenting with ocular symptoms in a patient with a history of biologic use. The patient is a 30-year-old female with ankylosing spondylitis (AS) who had been taking adalimumab for a year. She presented with a 2-week history of right eye floaters. Visual acuity was 20/20 bilaterally, with no evidence of anterior or vitreous chamber inflammatory reaction. Fundus photography (Figure) revealed right-sided edematous optic nerve head and normal left-sided optic nerve. The remainder of the patient's ocular and neurological exams with a neurologist was normal. Magnetic resonance imaging/computed tomography of the head and orbits were both reported with no intercranial findings; however, there was evidence of bilateral lymph node involvement, most prominently in the posterior cervical chains. The syphilis rapid plasma reagin was elevated at 1:64, and the lumbar puncture cerebrospinal fluid was reactive with Venereal Disease Research Laboratory ratio of 1:2 and elevated white cells. The patient was diagnosed with neurosyphilis and was treated with intravenous penicillin G for 14 days. Upon completion, the patient confirmed that visual symptoms had improved; fundus photography was normal at 4 months’ follow-up.

This case highlights the importance of considering syphilis in the differential diagnosis in an immunocompromised patient presenting with unusual ocular symptoms, including those patients taking immunosuppressant drugs.

REFERENCES

Figure. Bilateral fundus photos demonstrating right (left panel) edematous optic nerve and normal left (right panel) optic nerve in a patient with neurosyphilis with a history of biologic use.