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Choroidal granuloma resolution with tuberculosis treatment

LeAnne Young, Mehmet Yakin, H. Nida Sen *

National Eye Institute, National Institutes of Health, 10 Center Dr., 10/10N248, Bethesda, MD, 20892, USA

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ABSTRACT

Purpose: To report a case of presumed ocular tuberculosis, successfully treated with anti-tubercular therapy alone.

Observations: Resolution of a presumed tubercular choroidal granuloma occurred after initiation of 4-drug anti-tubercular therapy, without any adjunct corticosteroid treatment.

Conclusions: Though corticosteroids are commonly used as adjunctive treatment for ocular tuberculosis, treatment with anti-tubercular therapy alone is possible in select patients with close follow-up.

1. Introduction

Ocular tuberculosis (TB) is an uncommon cause of uveitis in North America[1] and can be challenging to definitively diagnose. Frequently, diagnoses of presumed ocular TB are made on the basis of positive tubercular testing, rule-out of other causes of uveitis, and careful consideration of a patient's medical history and fundoscopic exam.[2]

2. Case report

A 31-year-old woman was referred from an outside ophthalmologist with 2 weeks of vision loss in her right eye. Medical history was noncontributory and ocular history was significant for myopia and dry eye. She reported no constitutional symptoms, no family history of autoimmune diseases, and was originally from Sierra Leone. Vision was 20/160 in the right and 20/100 in the left eye with intraocular pressures of 20 and 21 mmHg, respectively. There were 1+ cells and trace cells in the vitreous of the right and left eyes, respectively. Examination of the right eye revealed optic disc edema, an elevated choroidal lesion superior to the macula (Figs. 1 and 2), and an exudative retinal detachment. Left eye examination revealed several subtle yellow choroidal lesions in the posterior pole.

Chest CT and brain MRI performed at the referring institution were unremarkable. Extensive uveitis laboratory testing (Lyme antibody, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), rapid plasma reagin (RPR), syphilis IgG, human immunodeficiency virus (HIV), serum angiotensin-converting enzyme (ACE), lysozyme, anti-nuclear antibody (ANA), anti-double-stranded DNA antibody (anti-dsDNA), anti-extractable nuclear antibodies panel (anti-ENA), rheumatoid factor (RF), anti-cyclic citrullinated peptide antibody (anti-CCP)) were nonreactive or within normal limits. However, QuantiFERON-TB Gold test was positive. A diagnosis of presumed ocular TB was made, and she started a 6-month course of rifampin, isoniazid, pyrazinamide, ethambutol and Vitamin B6. 7 weeks later, on anti-tubercular therapy and without any type of corticosteroid treatment, the patient's vision improved to 20/32 (right eye) and 20/40 (left eye), and the choroidal granuloma in the right eye became atrophic (Fig. 3). By 10 weeks, the right eye choroidal granuloma resolved on OCT (Fig. 4).

3. Discussion and conclusion

Management of ocular tuberculosis typically includes anti-tubercular therapy and corticosteroids.[3] However, the adjunctive corticosteroid therapy can make it difficult to assess the effect of anti-tubercular medications alone on the treatment response. In this case, the patient's choroidal lesions (presumed tubercular granulomas) dramatically resolved on anti-tubercular therapy alone, supporting the initial diagnosis. Previous reports have also discussed treatment of presumed tubercular tuberculosis without corticosteroids.[4] We conclude that when possible, treatment of presumed ocular TB with only anti-tubercular therapy may help confirm a diagnosis.

Patient consent

Written consent to publish potentially identifying information, such as details or the case and photographs, was obtained from the patient.

* Corresponding author.
E-mail address: senh@nei.nih.gov (H.N. Sen).

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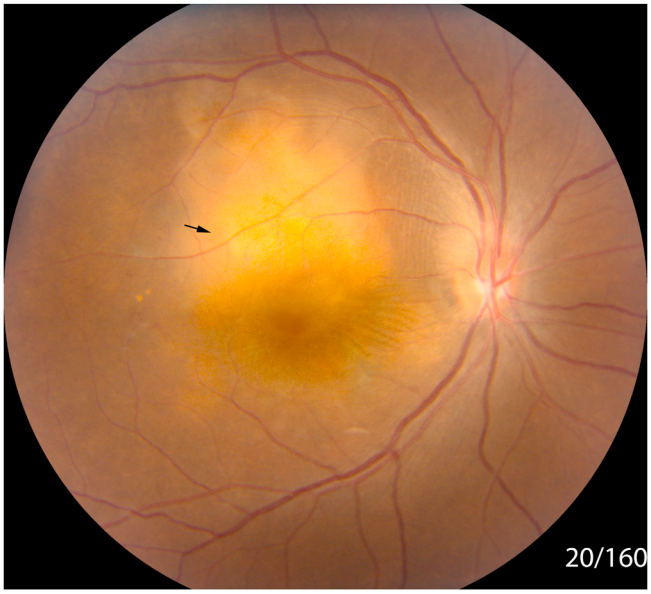

Fig. 1. Right eye color fundus photo at initial visit with a large posterior pole choroidal granuloma (arrow). (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

Authorship

All authors attest that they meet the current ICMJE criteria for Authorship.

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No funding was received for this work.

Intellectual property

We confirm that we have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication, including the timing of publication, with respect to intellectual property. In so doing we confirm that we have followed the regulations of our institutions concerning intellectual property.

Research ethics

We further confirm that any aspect of the work covered in this manuscript that has involved human patients has been conducted with the ethical approval of all relevant bodies and that such approvals are acknowledged within the manuscript.

IRB approval was obtained (required for studies and series of 3 or more cases).

Written consent to publish potentially identifying information, such as details or the case and photographs, was obtained from the patient(s) or their legal guardian(s). – n/a.

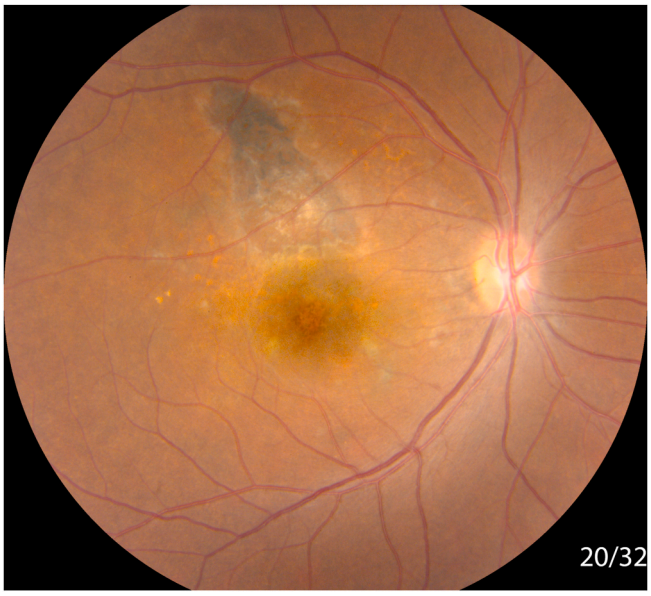

Fig. 3. Right eye color fundus photo at 7-week follow-up, showing the atrophic choroidal granuloma. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

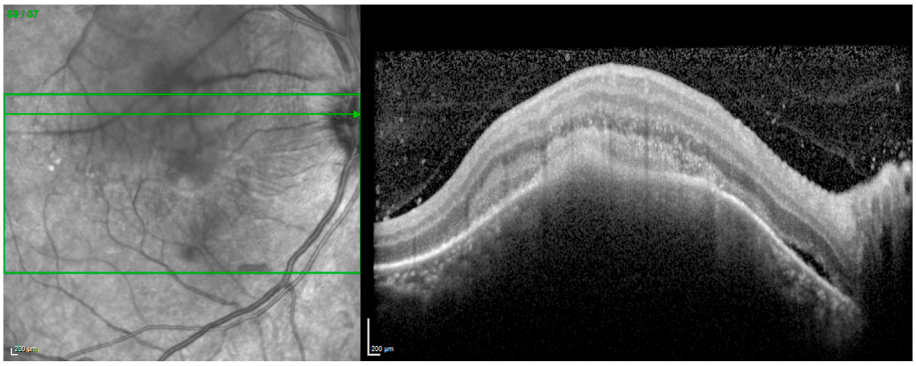

Fig. 2. Right eye OCT at initial visit, showing the choroidal granuloma.

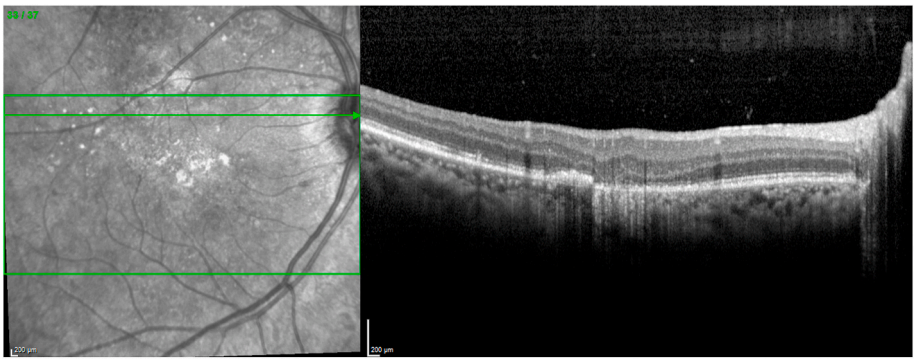

Fig. 4. Right eye optical coherence tomography at 10-week follow up, showing resolution of the choroidal granuloma and reconstitution of outer retinal layers.

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For a complete list, please visit the Foundation website at: http://fnih.org/what-we-do/current-education-and-training-programs/mrsp.

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