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LETTER TO EDITOR

Isolated presumed tuberculomas of choroids

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Key words: Choroidal granuloma; ocular tuberculosis; Tuberculoma.

Introduction

Incidence and prevalence of tuberculosis is still high in developing countries. Choroidal granuloma is an atypical manifestation for ocular tuberculosis and is less frequently reported.[1],[2],[3],[4]. The more frequent manifestation is chronic granulomatous iridocyclitis with multifocal posterior choroiditis.

Diagnosis of ocular tuberculosis is based on clinical findings such as chronic granulomatous uveitis, biopsy of the lesion or polymerase chain reaction of vitreous or aqueous aspirate and presence of systemic disease[2][3]. Solitary choroidal tuberculoma without any systemic manifestations of tuberculosis presents a diagnostic challenge[4],[5].

We report here two cases of immunocompetent males with isolated choroidal granulomas.

Case 1: A 31 year old male visited our Vitreo-retina clinic with blurred vision OS for past 15 days. Best Corrected Visual Acuity (BCVA) OS was 20/200 and fundus, examination revealed a choroidal raised lesion, 2 disc diameter (D.D) in size and located at 2 disc diameter (D.D) away from the optic disc located in superionasal quadrant [Table/Fig 1-A]. There was retinal edema overlying the nodular lesion and a serous retinal detachment inferiorly [Table/Fig 1-A]. Fluorescein angiography revealed early blocked fluorescence and late hyperfluorescence.

Case 2: We examined a 24 year old male presenting with decreased vision OS for 3 weeks. BCVA OS was reduced to 20/200 and fundus examination examination revealed multiple choroidal raised nodular lesions with retinal edema [Table/Fig 2-A]. Fluorescein angiography revealed initial hypofluorescence followed by hyperfluorescence in the late phase.

Both patients had unremarkable anterior segment examination and had already received oral steroids, Prednisolone 1 mg/kg, for 2 weeks. The patients underwent chest radiography, Mantoux skin test, erythrocyte sedimentation rate, serological investigations for toxocariasis and toxoplasmosis, ELISA for HIV and thorough examination by chest physician followed by sputum culture for acid fast bacilli. All serological and radiological tests were negative except a strongly positive Mantoux (>15mm) test and increased ESR, > 48 mm (normal-9mm), in both cases. Patients refused diagnostic vitreous or aqueous tap for polymerase chain reaction.

A presumptive diagnosis of isolated choroidal tuberculomas with no systemic tuberculosis was made. Patients were explained the clinical and prognostic implications and after obtaining informed consent, systemic Anti tubercular chemotherapy comprising of four drugs (isoniazid, rifampicin, ethambutol and pyrazinamide) along with pyridoxine was instituted. Patients were monitored for any systemic or ocular side effects of the therapy. Serial visual evoked responses and perimetry

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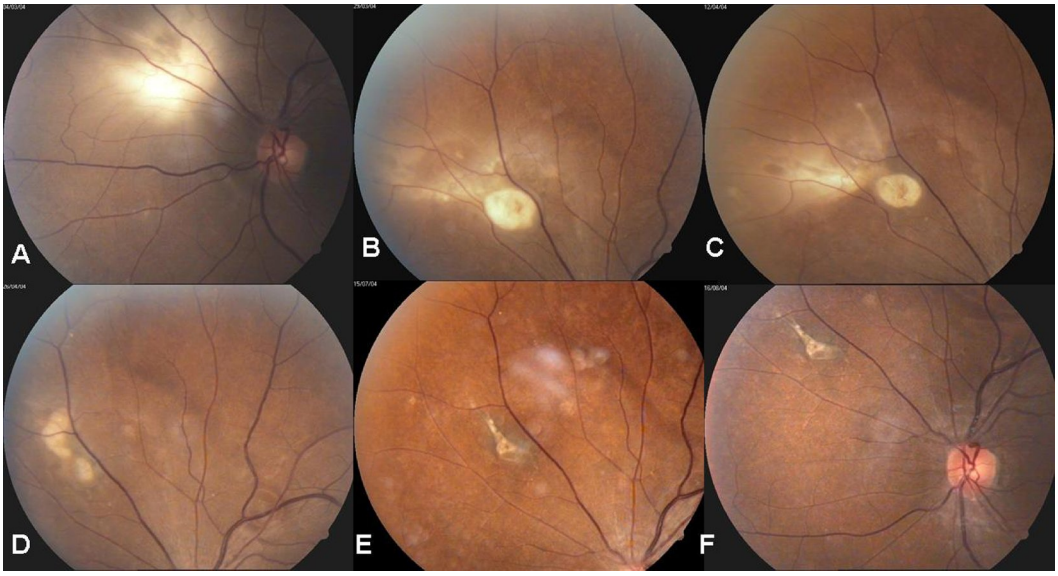
were recorded to detect ethambutol related optic neuritis. In the first patient, case 1, retinal edema subsided and choroidal nodular lesion decreased remarkably at 4 weeks. The choroidal lesion further regressed at subsequent visits and had significantly regressed at 8 weeks [Table/Fig 1-C-D). Similarly , choroidal nodular lesion in case 2 also resolved completely after 8 weeks of starting Anti-tubercular chemotherapy with BCVA improving in both the cases to 20/20 [Table/Fig 1-B],[Table/Fig 2-B]. Both patients received ATT for total 6 months duration, four drugs for 2 months and two drugs (isoniazid and rifampicin) for 4 months. There was no adverse effect of Anti-tubercular chemotherapy noticed in either patient. Both patients were followed till six months after stopping antitubercular chemotherapy with none showing any recurrence of the lesions.

Differential diagnosis of posterior pole inflammatory granuloma includes toxocariasis[6], toxoplasmosis, posterior focal endogenous endophthalmitis, choroidal tumors and tuberculoma.[1],[2],[4]. Absence of vitritis and negative results of ELISA test for IgG antibodies ruled out toxocariasis and toxoplasmosis. Unilaterality, absence of any systemic focus of infection and lack of inflammatory cells in aqueous and vitreous and flare were against endogenous endophthalmitis. The flat appearance, overlying retinal edema and unremarkable ultrasonography made choroidal tumor as unlikely diagnosis. The Mantoux test is widely used to know the previous exposure to the mycobacterium tuberculosis. Although a large variation exists in the average for Mantoux test, most Indian studies have used reaction > 15 mm as positive test[7]. Since the patients were exposed to infection and Mantoux skin test was strongly positive we made a presumptive diagnosis of choroidal tuberculoma which could only be confirmed by the clinical response to Anti-tubercular chemotherapy.

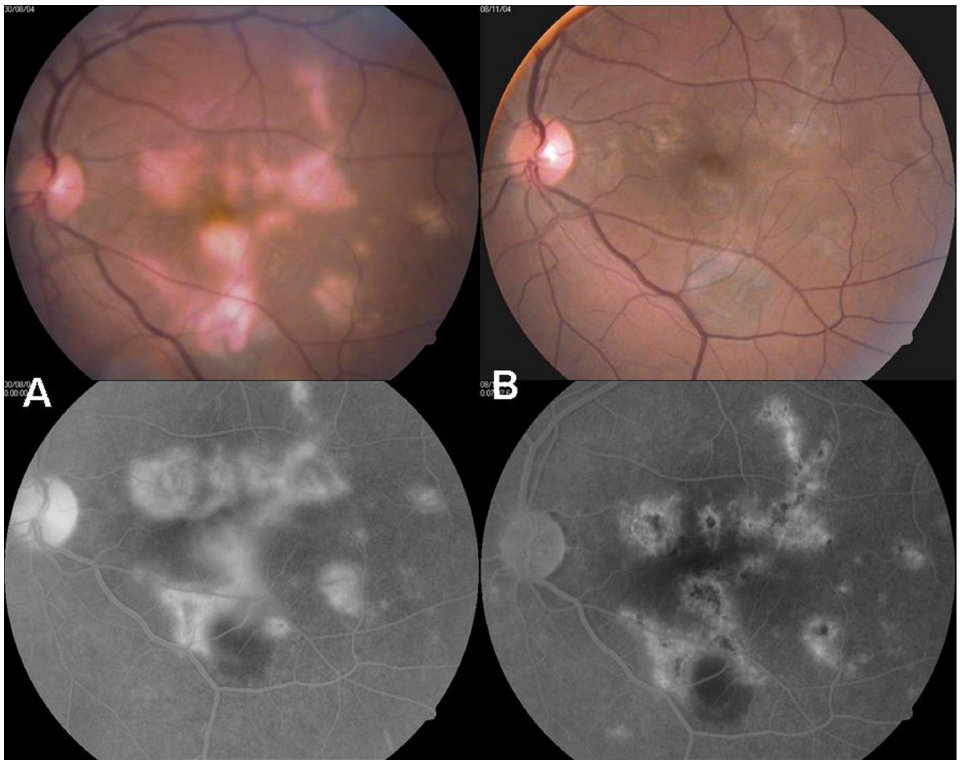
Systemic steroids are also prescribed along with Anti-tubercular chemotherapy to curb the associated inflammation. We didn't advise steroids for 2 reasons, first there were no signs of inflammation and second, we also intended to therapeutically confirm the diagnosis of tuberculoma. Isoniazid therapeutic trial test has been advocated to develop evidence of ocular tuberculosis in such patients, where patient is given isoniazid for 3 weeks and if patient did not improve, it is concluded that the disease is not related to tuberculosis[8][9]. In view of high prevalence of tuberculosis and especially multi-drug resistance strains in developing countries, single drug therapy may not be advisable.

Anti-tubercular chemotherapy is known to cause adverse effects like hepatotoxicity, peripheral neuropathy, toxic optic neuropathy, hyperuricemia and other toxicities besides adding extra cost to the medical treatment. Although untreated ocular tuberculosis can lead to blindness[2] we don't recommend Anti-tubercular chemotherapy for all choroidal granulomas. We conclude that in a patient with isolated solitary choroidal granuloma, if serological investigations for other infective causes are negative, the patient is exposed to mycobacterium infection or resides in developing countries where incidence of tuberculosis is high, Mantoux test is strongly positive and a short course, 2 to 3 weeks, of systemic steroids then Anti-tubercular chemotherapy can be instituted as a therapeutic trial. Patient should be carefully monitored for any adverse effects such as hepatotoxicity, hyperuricemia and toxic optic neuropathy. Since complete resolution of the lesions was achieved in our cases with Anti-tubercular chemotherapy only, the adjunctive role of systemic steroids for such cases should be further explored. Future studies need to address the minimum duration for which Anti-tubercular chemotherapy should be continued before considering it ineffective in such cases.

Table/Fig 1 (Figures A to F)



Table/Fig 2 (Figures A and B)



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