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Case Report

Neglected parasitic infection: Ocular toxocariasis case report

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ABSTRACT

Ocular toxocariasis is an uncommon worldwide parasitic infection that affects mostly children and is found in both rural and metropolitan areas. In many parts of the world, parasitic infections of the eye are a major cause of blindness. The diagnosis of toxocariasis is essentially clinical, based on the lesion morphology and supportive laboratory data such as serum enzyme-linked immunosorbent assay (ELISA) titers and ELISA Toxocara titers on aqueous humor; other diagnostic methods are imaging studies including optical coherence tomography, fluorescein angiography, computed tomography, and ocular ultrasound. Treatment is directed at complications arising from intraocular inflammation and vitreous membrane traction. Early vitrectomy may be of value both diagnostically and therapeutically.

1. Introduction

Ocular toxocariasis is a rare infection caused by roundworms, Toxocara canis and Toxocara cati. It typically affects children and can lead to profound monocular loss of vision despite known medical and surgical therapies. Its prevalence has been estimated in certain populations and found to be rare. In many parts of the world, parasitic infections of the eye are a major cause of blindness. Presentations typically include posterior uveitis with symptoms and signs such as reduced vision, photophobia, floaters, and leukocoria. Management includes quieting inflammation, eliminating the offending organism, and repairing vitreoretinal sequelae. Prognosis is often correlated to presentation and the degree to which sequelae are present.[1,2]

2. Case History

A 10 year old female presented in the OPD of tertiary eye care centre with complaint of marked diminution of vision in her left eye for 1 year. Her vision progressively worsened. She also had complain of redness and pain in her left eye in the past. However there is no history of discharge, any trauma, no previous history of eye disease.

Clinically, the patient was alert and conscious. Vital signs were stable and was afebrile. Other systemic examination was within normal limits.

On examination, her vision was hand movement in left eye and 6/6 in her right eye. Gross examination of eye reveals left exotropia. On slit lamp examination anterior segment was found to be quiet with luecokoria reflex seen in her left eye. However her right eye findings were unremarkable.

In fundus examination, a large peripheral granuloma/mass superotemporal to disc with dense connective tissue bands in the vitreous that extend from the lesion to the disc margin was present.

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In B-Scan ultrasonography, a chorio-retinal focal lesion measuring 6*.8 mm in diameter with "V" shaped vitreous membrane is seen.

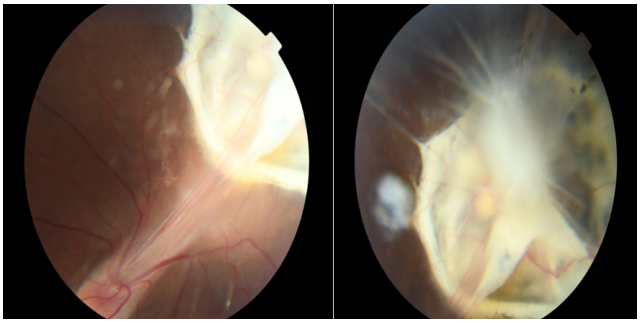

Fig. 1:

3. Discussion

Ocular toxocariasis usually affects children within mean age of onset of 7.5 year and about 80% cases less than 16 year of age. Infection by roundworms, toxocara canis or toxocara cati. These nematodes live and mature in dog and cat intestine. As a mature adult the organism release eggs which are passed in stool. Contact with infected material leads to human infection.[3]

Three different manifestations of ocular involvement: chronic endophthalmitis, posterior granuloma and peripheral granuloma. The major cause of visual loss were severe vitritis, cystoids macular edema and tractional retinal detachment.

Diagnosis is based on clinical features and it is particularly important to distinguish it from other causes of leukocoria. In full blood count eosinophilia may be present. Antibodies to toxocara canis are detectable in 50% of ocular cases. Aqueous and vitreous sampling for eosinophilia, antibody detection and PCR.

The most useful test for ocular toxocariasis is an ELISA. ELISA for toxocara secretory antigen has a 90% sensitivity and specificity.[4]

Medical therapy involves first line treatment of 5 day course of albendazole (10mg/kg/day) along with systemic or periocular corticosteroids to suppress the immune response. Surgical options are pars plana vitrectomy with cryotherapy applied at the areas of exudation at pars plana or endolaser indicated for treatment of ocular granulomas. In this case pars plana vitrectomy was done to remove vitreous band so as to relieve the traction and peripheral laser photocoagulation was performed.[5]

To conclude, ocular toxocariasis is common in developing countries but the incidence is under reported. The diagnosis requires fundoscopic findings, serology, IgG positivity of vitreous. Ocular toxocariasis may cause morbidity if diagnosis is not established, leading to delay or failure to initiate prompt treatment.

4. Conflict of Interest

The authors declare that there are no conflicts of interest in this paper.

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