E-ISSN 0976-2892

Simultaneous Presentation of Orbital and Intracranial Cysticercosis: A Case Report

Delhi J Ophthalmol 2014; 25 (1): 61-62
DOI: http://dx.doi.org/10.7869/djo.77

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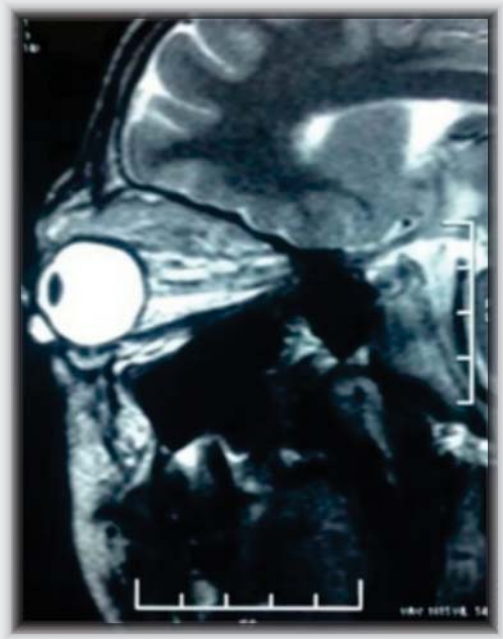
Dear Editor

Cysticercosis is a disease caused by the larval form of Taenia solium. In India the prevalence of infection is about 18.6%[1]; involvement of ocular and adnexal tissue occurs in about 13% to 46 % of cases.[2] Orbital cysticercosis presenting as orbital cellulitis[3] is rare; orbital co-existing with intracranial disease is also a rare clinical presentation.[4] We report a case of simultaneous intracranial and orbital involvement, the latter in the form of orbital cellulitis. A 22-year old, non-vegetarian male presented with progressively increasing, painful protrusion of the right eye, swelling of both eyelids, and blurring of vision for one week. There were no systemic complaints. On examination, the vital signs were within normal range, in the right eye, the best corrected visual acuity was 20/60. There was a tender swelling of the upper and lower eyelids and severe ptosis. Extra ocular movements were markedly restricted in all directions of gaze, there was proptosis (Hertels: 28mm, bar reading 108mm) and downward displacement of globe; sero-sanguinous discharge could be seen oozing out of a sinus in the lateral part of the upper eyelid (Figure 1). There was conjunctival chemosis and congestion, and inferior exposure keratopathy. The left eye showed no abnormality. Bilateral pupillary reactions and fundus oculi were normal. Laboratory investigations revealed eosinophilia (700/mm3). Hemogram, X-ray skull PA view, and stool microscopy was normal. Culture of the serosanguinous discharge and blood showed no growth. B-scan ultrasonography revealed a thin walled cystic lesion in the right superotemporal orbit; however this was not seen on MRI. Additionally, on MRI of the orbit, there was proptosis, and the superior rectus muscle was found to be bulky and oedematous; there was surrounding periorbital thickening and inflammation. No focal lesion was seen in the muscle (Figure 2). MRI brain revealed a solitary, small, cystic lesion with central nodule and peri-lesional oedema in the left occipital lobe.

In view of the clinical presentation and radiological findings, a diagnosis of leaking cysticercosis, right orbit, with resulting orbital inflammation and sinus, and intracranial active lesion of cysticercosis was made. The patient was prescribed oral Albendazole 800mg/day, prednisolone 80mg/day, phenytoin 100mg/day, along with topical antibiotics, cycloplegic and lubricants. After two weeks of

Figure 1: *clinical photograph at presentation; clinical photograph after treatment.*



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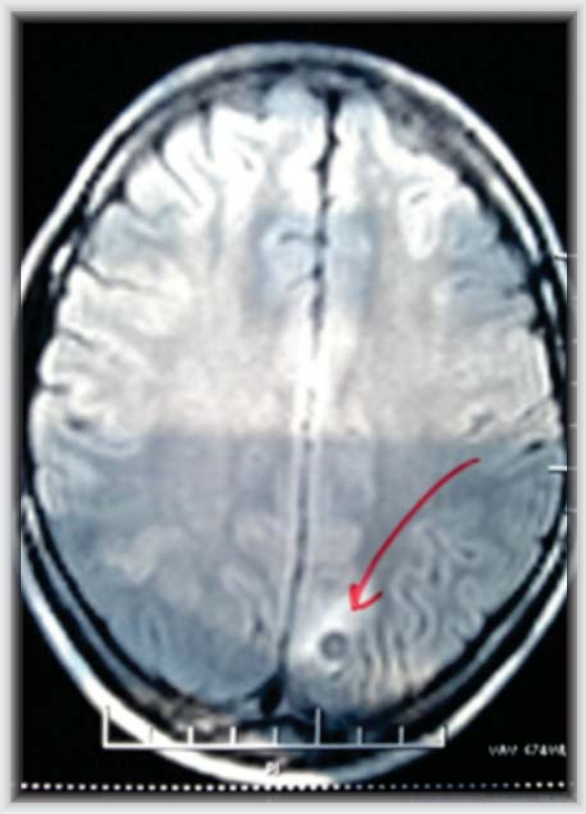

Figure 2: *MRI Orbit showing thickened superior rectus with surrounding inflammation; MRI Brain cysticercus lesion in left occipital lobe.*

treatment, vision was 20/20, proptosis resolved completely (Hertels 18mm), the extra ocular movements were full and free and the sinus closed completely. Oral albendazole was continued for 4 weeks; the other drugs were gradually tapered over the next few weeks. At the end of 5 weeks, ptosis completely resolved (Figure 1). Subsequently the patient remained under the care of a neurologist.

A cyst can get lodged in any of the orbital (muscles commonly) or ocular structures (vitreous, sub retinal space). The treatment of cysticercosis depends upon the location of the lesion. The intraocular cyst is best managed by surgery to prevent sight threatening sequelae, whereas the extraocular form can be managed by medical therapy. The better vascularity of extra ocular muscles and orbital tissues lead to increased bioavailability of drugs and good clinical outcome.[5] Our patient presented with proptosis, restricted ocular movements, and discharging sinus near right temporal upper lid (duration -one week). He was diagnosed as a case of orbital cellulitis. MRI report of the patient revealed an active lesion of neurocysticercosis and similar lesion in right orbit with surrounding inflammation. Absolute eosinophil count was raised. The patient was prescribed oral tablet albendazole 800mg/day, prednisolone 80mg/day, phenytoin 100mg/day. Two week after therapy the patient improved significantly, proptosis disappeared, extraocular movement full and free, visual acuity 20/20. Although there are reports of intraorbital cysticercosis being the commonest form, its presentation along with simultaneous intracranial lesion is rare.[3] There are very few reports of orbital cysticercosis presenting as orbital inflammation.[4] We report a case of simultaneous intracranial and orbital involvement, the latter in the form of orbital cellulitis. Thus with timely diagnosis and management the potential for visual recovery and rehabilitation is good.

Financial & competing interest disclosure

The authors do not have any competing interests in any product/ procedure mentioned in this study. The authors do not have any financial interests in any product / procedure mentioned in this study

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