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Case Report

Inferior rectus muscle ocular cysticercosis A case report

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Abstract

Cysticercosis is a systemic parasitic disease caused by the larval form of cestode *Taenia solium*. It has a worldwide distribution and is potentially harmful with variable clinical manifestations. The most commonly involved sites include eye, brain, bladder wall, and heart. Ocular cysticercosis can be extraocular or intraocular and may present with varied clinical symptoms. We report the condition in a thirteen year old female child who presented with mild lower lid swelling and diplopia in upgaze, wherein cysticercus cellulosae cyst was found within the mass of the right inferior rectus muscle. It becomes important to report this case because of the relative rarity of the condition these days, unusual site of the cyst and the young age of the patient.

Keywords: Ocular cysticercosis, Inferior rectus muscle mass, Diplopia, *Taenia solium*

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Introduction

Cysticercosis is one of the most serious parasitic infections spreading almost all over the world, and listed as one of the neglected tropical diseases.[1,2] Cysticercus cellulosae, the larval form of the pork tapeworm *Taenia solium (T. solium)* is the causative organism of cysticercosis, in which humans are the intermediate hosts in the life cycle. Human cysticercosis occurs by ingesting the eggs of *T. solium* from contaminated food and water. The human then becomes an accidental intermediate host. Cysticercosis is endemic to regions with poor sanitation. With the improved living and hygienic conditions, the incidence of human cysticercosis is decreasing these days. However, such cases are still occasionally seen, the main sites of such cysts being skeletal muscles and sub cutaneous tissues. The involvement of the eye ball and orbit is uncommon. Ocular cysticercosis may be extraocular (in the subconjunctival or orbital tissues) or intraocular (in the vitreous, subretinal space or anterior chamber).[3–5]

Case report

A 13 year old female child was brought to the eye out patient department (OPD) of Guru Gobind Singh Medical College and Hospital, Faridkot, Punjab, India with the complaints of a mild lower lid swelling in the right eye, progressively increasing in size since one month. She also complained of double vision in upgaze since fifteen days. There was no complaint of any diminution of vision or pain during eye movements. On inspection, the upward displacement of the right eye was present (Fig. 1A). There was no axial proptosis but the right eye was slightly displaced upwards. On palpation, the mass was immobile, hard and painless. Extraocular movements were restricted in upward direction. Slit lamp examination for anterior segment was normal. Fundus seen under full mydriasis was normal. Regional lymph nodes were not enlarged. Intraocular pressure was within normal range. Left eye was normal on examination. A provisional diagnosis of inferior quadrant orbital tumor was made. General examination revealed no other abnormality.

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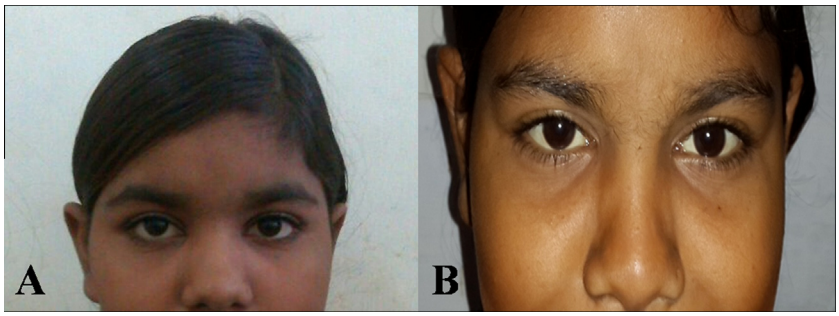

Figure 1. (A) Slightly upward displacement of the right eye. (B) After two months there was a significant resolution in the condition.

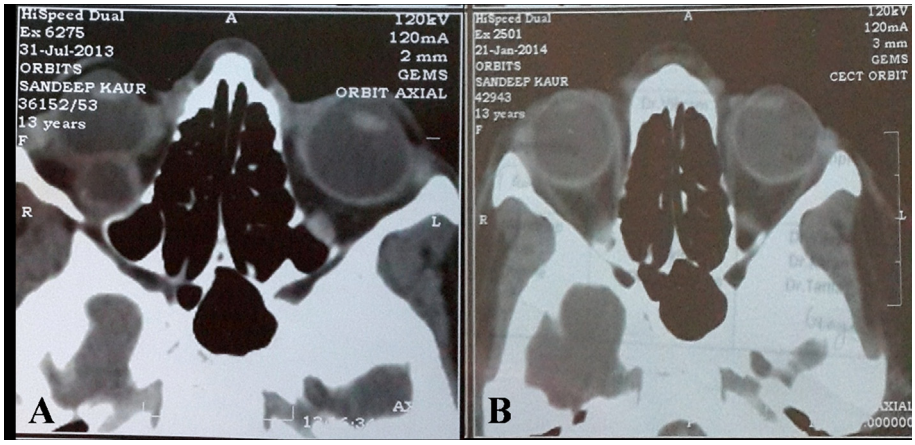

Figure 2. (A) CT scan shows bulky inferior rectus muscle with well defined cystic lesion with eccentric enhancing nodule. (B) CT scan done 6 months after treatment shows no cystic lesion or nodule or any new lesion.

Investigations

Routine investigations showed eosinophilia. Enzyme-linked immunosorbent assay (ELISA) done for anticysticercal antibodies in serum was positive. The stool was also positive for cysts. Other laboratory investigations were non contributory. Both B-scan ultrasonography and computed tomography (CT) scan were done which showed bulky inferior rectus muscle with well defined cystic lesion with eccentric enhancing nodule on CT scan (Fig. 2A). There was no evidence of neurocysticercosis (NCC), and the involvement of brain was ruled out with CT scan. A diagnosis of inferior rectus ocular cysticercosis of right eye was made.

Treatment

Patient was put on oral albendazole (15 mg/kg/day) and oral prednisolone (1 mg/kg/day) for 4 weeks. After 4 weeks, oral albendazole was stopped and oral prednisolone was slowly tapered over the next one month. Within a few days of starting the above treatment, patient started showing signs of improvement and swelling started regressing.

Follow up

Patient was regularly followed up in the OPD. After two months there was significant resolution in the condition (Fig. 1B). Diplopia had resolved. CT scan done 6 months after treatment shows no cystic lesion or nodule or any new lesion (Fig. 2B).

Discussion

Orbital cysticercosis can present with a varied signs and symptoms like acquired strabismus, diplopia, recurrent redness, and proptosis. It has to be differentiated from other benign and malignant conditions presenting as ocular mass. One or more extraocular muscles may be simultaneously involved, although a propensity for involvement of the superior muscle complex and the lateral rectus muscles has been reported.[5,6] In another report of an unusual association of multiple brain NCC with ocular cysticercosis involving levator palpebral superioris and superior rectus muscle has been reported.[7] Another study has reported an unusual case of ocular cysticercosis involving the levator palpebrae superioris and superior rectus muscle of the right eye.[8] In our case the cyst was present within the inferior rectus muscle. From that point of view the case under report is interesting and unusual. It becomes essential to diagnose and treat such cases before any severe damage results. Prompt diagnosis and treatment in this case led to an early improvement. Public health measures on a large scale are required for eradication of this disease from the area.

Conflict of interest

Authors declared that there is no conflict of interest.

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