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Inferior Rectus Muscle Ocular Cysticercosis Double Cyst: A Case Report

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Abstract: ***Cysticercosis is a systemic parasitic disease caused by the larval form of cestode* Taenia solium*. In which humans are the intermediate hosts in the life cycle. Cysticercus cellulosae may become encysted in various bodily tissues, usually the eyes, central nervous system, and subcutaneous tissues, 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 which a 7 year old male child having left lower eye lid swelling and diplopia in upward gaze, wherein two cysticercus cellulosae cysts were found within the mass of the left inferior rectus muscle. It becomes important to report this case because of the relative rarity of the condition these days, unusual site, number of the cysts and the young age of the patient.***

Keywords: Inferior rectus, muscle ocular cysticercosis, double cyst

1. 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). Cysticercosis, the most common ocular platyhelminth infestation in humans, is caused by encystment of the larvae (cysticercus cellulosae) of the tapeworm Taenia solium, in which humans are the intermediate hosts in the life cycle. Taeniasis and Cysticercosis occur where sanitary conditions are poor and where raw and undercooked contaminated pork and beef are routinely consumed. Endemic foci of the diseases are South and Central America and Africa. Humans develop cysticercosis via ingestion of T. Solium eggs, either from exogenous source or from their own stool. Cysticercus cellulosae may become encysted in various bodily tissues, usually the eyes, central nervous system (CNS) and subcutaneous tissues. The ocular manifestations can be devastating as the cysticercus increases in size, leading to blindness in 3 to 5 years (3). Death of the parasite causes marked release of toxic products, leading to a profound inflammatory reaction and destruction of the eye (4).

2. Case Report

A 7 year old male child was brought to the eye out patient department of Subharti medical college and hospital Meerut, Uttar Pradesh, India with the complaint of swelling in the left lower lid from the last one month which was progressively increasing in size.

Examination of the eye revealed a round cystic swelling of about 8 x 10 mm towards the medial side of the lid which was pinkish white in colour[fig 1a]. The wall of the cyst was tense, diffuse, it was immobile and the posterior margin could not be felt. It was non tender, irreducible and fixed to the globe. The overlying conjunctiva showed diffuse congestion.

Extra ocular movements were restricted in upward direction in the left eye[fig 1b] and the patient complained of diplopia in the upward gaze. Slit lamp examination for anterior segment was normal. Fundus seen under full mydriasis was normal. Intraocular pressure was within normal range. Regional lymph nodes were not enlarged. Right eye examination was was normal. General examination revealed no other abnormality. A provisional diagnosis of left eye parasitic cyst was made

Figure 1 (a)

Figure 1 (b): Restricted ocular movement in upward gaze

3. Investigation

Routine investigation showed eosinophilia. B-scan ultrasonography showed a well defined cyst with a hyper-echoic scolex in the inferior rectus muscle. A-scan high amplitude spikes corresponding to the cyst wall and scolex

were appreciated. MRI left eye showed fusiform enlargement of the inferior rectus muscle with evidence of two cystic lesions, one in the mid muscle belly (5.3x5.2x3.4 mm) and another at the insert site of muscle at eye globe(7.3x9.8x3.9 mm). There was no evidence of neurocysticercosis. A diagnosis of inferior rectus ocular cysticercosis with two cysts was made.

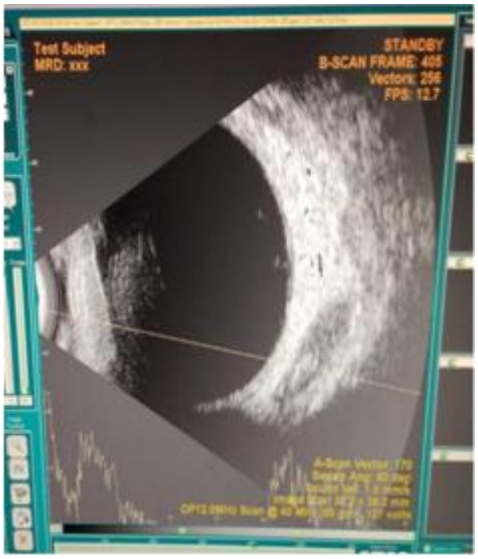

Figure 2 (a): B scan showing cyst with scolex

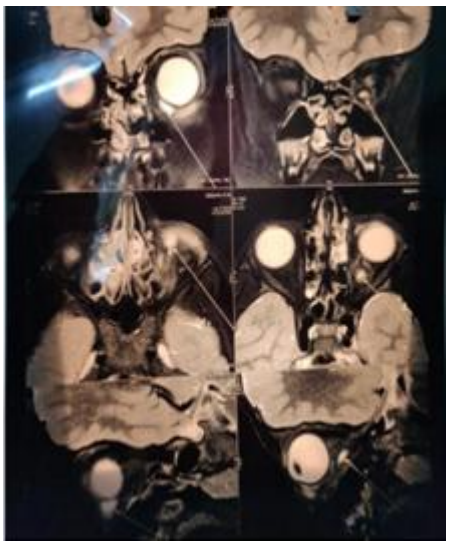

Figure 2 (b): MRI showing cysts in the left inferior rectus muscle.

4. 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.

5. Follow up

Patient was regularly followed up in the OPD. After two months there was significant resolution in the condition. Diplopia had resolved.

6. Discussion

Cysticercosis infestation in the indigenous Indian population is rather rare due largely to the vegetarian habit and insignificant use of pork amongst the non-vegetarian population. It is not surprising thus, that there have been few reports of ocular cysticercosis from India(5). 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(6,7). 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(8). Another study has reported an unusual case of ocular cysticercosis involving the levator palpebrae superioris and superior rectus muscle of the right eye(9). In our case the cyst was present within the inferior rectus muscle and there were two cysts present in the same 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

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