

Case Report

Cysticercosis Masquerading as Lipo –Dermoid

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Abstract

Cysticercosis is caused by the larval stage of *Taenia solium* (Pork tape worm). Humans are the definitive hosts where the life cycle is completed and pig is the intermediate host. Incidence in India varies from 2-38% based on the consumption of pork, general hygiene and socio-economic status of the population. The parasite on reaching the small intestine encysts itself in various tissues. Most commonly Brain, Eyes, subcutaneous tissue. Intravitreal cyst is the commonest intra ocular presentation. Death of the parasite and release of the contents of the cyst causes an intense inflammatory reaction that can be devastating. We report the condition in a nine-year-old boy who presented with mild right upper lid swelling wherein cysticercus cellulosae cyst was found within the mass of the right lateral rectus muscle. It becomes important to report this case because of the unusual site of the cyst which masqueraded as a lipo-dermoid.

Key words: Atypical cysticercosis, masquerade

Introduction

Cysticercosis is a parasitic disease caused by the larval stage of *Taenia solium* (Pork tape worm). Presents with systemic and ocular manifestations (Duke Elder, 1978). In the ocular manifestations, 4% occurred in the orbit or eyelids, 20% occurred in the subconjunctival area, 8% occurred in the anterior segment, 68% occurred in the posterior segment of which 41% either subretinally or intraretinally, while 27% occurred in the vitreous. (Duke Elder, 1978). The disease is prevalent in all states of India, although the prevalence varies between the states. The prevalence of taeniasis has been reported to be between

2-38% (VedantamRajshekhar, 2004). In India, prevalence of Ocular taeniasis was found to be in 6% (Rath S et al 2010). We report the condition in a nine-year-old boy who presented with mild right upper lid swelling wherein *Cysticercus cellulosae* cyst was found within the mass of the right lateral rectus muscle. It becomes important to report this case because of the unusual site of the cyst which masqueraded as a lipo-dermoid.

Case Report

A 9 year old boy was brought to the Ophthalmology OPD of our hospital with the complaints of a mild upper lid swelling in the right eye, progressively increasing in size since two months. He also had blepharospasm and redness in the right eye. There was no complaint of diminution of vision or pain during eye movements. Unaided vision was 6/9 in both eyes.

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Figure 1: Right upper lid swelling and redness

On inspection, there was a fleshy mass on the lateral aspect of the right globe (Figure 2). There was no proptosis of the right eye. On palpation with a swab stick, the mass was immobile, firm and painless, mimicking a lipo-dermoid.



Figure 2: Fleshy mass on the lateral aspect of right eye

Extraocular movements were full range and painless. 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 supero-temporal quadrant lipo-dermoid was made. General examination revealed no other abnormality.

Routine blood investigations showed eosinophilia. Stool examination showed cyst of *Taenia solium*. Other laboratory investigations were found to be within normal limits. B-scan ultrasonography (Figure 3). showed a bulky lateral rectus muscle with a well-defined cystic

lesion measuring 0.6*0.4 cm within the muscle bulk.

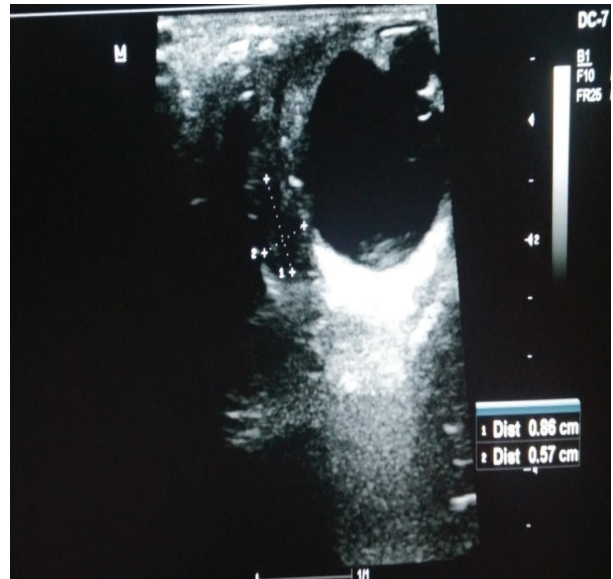


Figure 3: USG B scan Image- Axial scan showing clear fluid filled cystic lesion in the lateral rectus

On clinical suspicion of cysticercosis, MRI brain and orbits was done which confirmed a cystic lesion in the anterior aspect of right lateral rectus muscle with surrounding inflammation (Figure 4). However there was no evidence of neurocysticercosis, and the involvement of brain was ruled out. A diagnosis of Isolated Right lateral rectus cysticercosis was made.

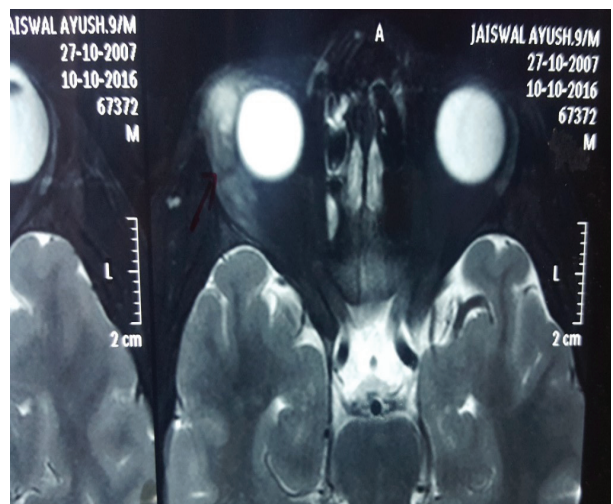


Figure 4: Hyper reflective dense lesion in the right lateral rectus muscle in MRI Orbit

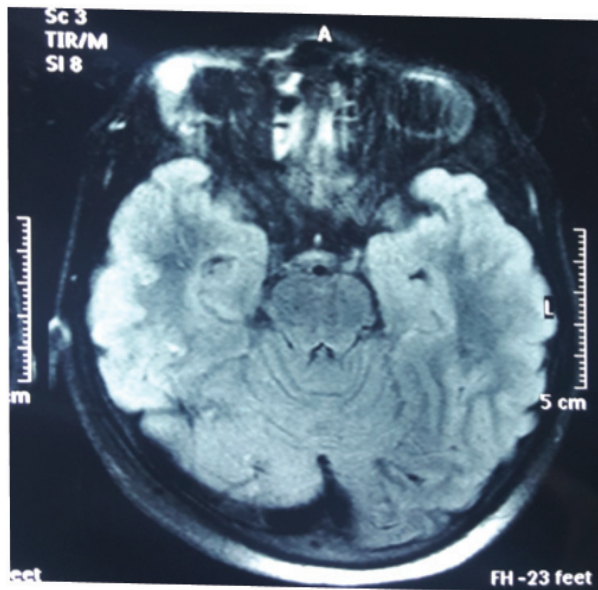


Figure 5: No lesions seen in the brain parenchyma.

Patient was put on oral albendazole (15 mg/kg/day) and oral prednisolone (1 mg/kg/day) slowly tapered off for 3 weeks (Dinesh Patel et al 2011)

There was no reduction in the size of the lesion probably because of fibrosis. However, signs of inflammation reduced.

Considering the long duration of the swelling, showing calcification on MRI a plan for cyst excision was done.

Patient was taken up for cyst en-masse excision under GA (Figure 6). Few fibres of the lateral rectus muscle was disinserted and the cyst was isolated within the lateral rectus muscle mass after meticulous dissection and removed in whole and sent for Histopathological examination.

Patient was put on tapering dose of oral steroids with topical broad spectrum antibiotic and topical steroids as for any post-surgical intervention (Figure 7). There was no deterioration in vision which was recorded to be 6/9 on presentation and after the surgery.

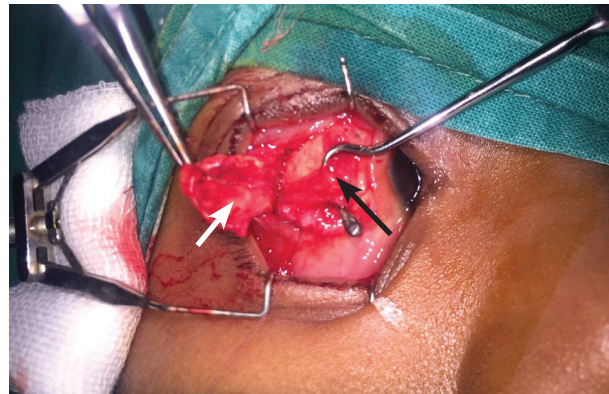


Figure 6: White arrow shows cyst isolated from the lateral rectus muscle shown by black arrow



Figure 7: Post op day 1 shows Lateral rectus fibres were sutured 7mm from the limbus

Discussion

Orbital cysticercosis can present with signs and symptoms as acquired strabismus, diplopia, recurrent redness, and proptosis (Sanjiv Goyal et al, 2015). It has to be differentiated from other benign and malignant conditions presenting as ocular mass. All extraocular muscles were noted to be involved in myocysticercosis. However, the lateral rectus, medial rectus and the superior oblique were affected to a greater extent (Agarwal S et al, 2013). There have also been cases of multiple brain neurocysticercosis lesions with ocular cysticercosis involving levator palpebral superioris and superior rectus

muscle (Sundaram P et al, 2004). In our case the cyst was present within the lateral rectus muscle. It becomes essential to diagnose and treat such cases before any severe damage results. The most encountered symptoms are restricted ocular motility with diplopia, recurrent pain and redness (Sanjiv Goyal et al 2015). Although traditionally thought to be only prevalent in endemic regions with poor sanitation, now is seen even in industrialized countries.

Prompt diagnosis and treatment in this case would have led to an early improvement without surgical intervention. Public health measures on a large scale are required for eradication of this disease from the area (Schantz PM et al, 1994).

Some amount of fibrosis had taken place, but the extra ocular movements were full range and painless. Patient was symptomatically better. Redness had reduced and the palpebral aperture had almost become normal on anti-helminthics and oral steroids. If for any reason steroids are contraindicated, patient can be put on 10 mg/day of ivermectin for 15 consecutive days or 10 mg/day as an average for 30 days (Diazgranados-Sánchez et al, 2008).

Despite resolution of cysticercosis with medical management, a significant proportion of patients may have residual functional deficits.

Medical line of management is essential to treat extraocular sites which are clinically not seen (S Kaliaperumal et al, 2005). Also, the scolex has to be eradicated as the accidental rupture of the cyst can spread the disease with severe inflammatory reaction.

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