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ACQUIRED PTOSIS DUE TO OCULAR CYSTICERCOSIS: A CASE REPORT

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ABSTRACT
Cysticercosis is the most common parasitic disease of the nervous system. Most common sites of involvement of cysticercosis are soft tissue, eye and central nervous system. Extra ocular muscle cysticercosis is rare. We are reporting the unusual manifestation of ptosis (levator palpebrae superioris palsy) due to cysticercosis. The patient was successfully treated with systemic steroids and albendazole. A suspicion for levator palpebrae superioris myocysticercosis has to be kept in mind while diagnosing patients from endemic regions with acquired ptosis. As with cysticercosis of other extraocular muscles, orbital imaging is an important tool for diagnosing cases similar to the present one. Pharmacotherapy appears to be favorable in the management of acquired ptosis due to ocular cysticercosis.

INTRODUCTION

Cysticercosis is the most common parasitic disease of the nervous system. The disease occurs when humans become the intermediate host in the life cycle of *Taenia solium* by ingesting its eggs from contaminated food [1,2]. The most common sites of involvement of cysticercosis are soft tissue, eye and central nervous system. Unusual location of the cysts may result in uncommon manifestations mimicking a host of neurological disorders. Ocular cysticercosis can involve both the intraocular structures and extra ocular muscles. extra ocular muscle cysticercosis is rare[3.4]. We are reporting the unusual manifestation of ptosis [Levator palpebrae superioris (LPS) palsy] due to cysticercosis. The patient was successfully treated with systemic steroids and albendazole.

CASE DETAILS

A 8yr old, male child origin from Upper Assam district, Assam presented to pediatric medicine OPD of Assam Medical college with drooping of left eyelid from one month. The drooping of eyelid was not associated with pain and swelling. There was no history of fever, headache, and vomiting. There was no history of any weakness of limbs, deviation of mouth or slurring of speech and any trauma to eye and skull. There is no diurnal variation of the degree of ptosis and was not associateted with weakness of any part of the body. To exclude congenital ptosis childhood photographs were asked for , which revealed ptosis of recent onset (Figure 1).

On examination patient was conscious and oriented with stable vitals. Rest of general examination was normal. On nervous system examination higher functions were normal. Ptosis of left eye was present (Figure 2), with MRD1(Margin reflex distance) - 1mm,MRD2- 6mm and LPS excursion-4mm with intact bells phenomenon , with rest of the movements normal in both eye (Figure 1- 5). There was no conjunctival, redness,proptosis, exophthalmos. Bilateral pupils were normal in size reacting to light and accommodation was normal. Fundus examination was normal. Other cranial

nerves were intact and no neurodeficit was present. No signs of raised intracranial tension was noticed. A provisional diagnosis of acquired ptosis due to mechanical factor was made and evaluated.

EVALUATIONS

Routine investigations were normal. The orbital sonogram revealed a cystic lesion in the superior rectus muscle with an echogenic intramural nodule (Figure-6). So he was planned for an MRI scan of orbit and brain The magnetic resonance imaging of the orbit showed an intra-conal retro-orbital mass involving the LPS muscle of the left eye suggestive of ocular cysticercosis (Figure-7). MRI brain revealed a ring enhancing lesion suggestive of neurocysticercosis in the right cerebellar hemisphere. The enzyme-linked immunosorbent assay for serum antibodies IgG against the cysticercosis was positive(-2.22 IU/ml). The ptosis improved with oral albendazole and oral steroids. As per protocol patient was put on oral carbamazapine 10mg/kg for a period of one year and albendazlole 15mg/kg/day once daily orally to continue for 28days. Child was advised to undergo MRI after 6 months of therapy for complete recovery from infestation.

The orbital sonogram revealed a cystic lesion in the LPS muscle with an echogenic intramural nodule.

MRI shows parenchymal neurocysticercosis in colloidal vesicular stage involving right cerebellar hemisphere with orbital myocysticercosis invoving left superior rectus muscle near its insertion site inciting moderate inflammation.

Figure 1.

Figure 2. Ptosis of left eye

Figure 3. Margin reflex distance 1

Figure 4. Levator palpebrae superioris(LPS) excursion

Figure 5. Normal extra ocular movements

Figure 6.

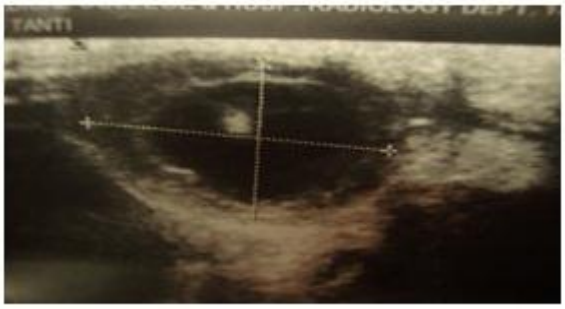

Figure 7.

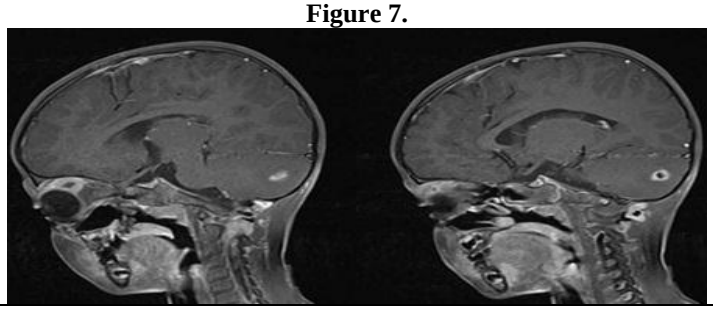

Figure 8.

After 6wks of Albendazole treatment	**Patient after 6 week MRD 1 (3mm)**
	

DISCUSSION

Cysticercosis is caused by haematogenous spread and encystment of the larval form of the swine tapeworm *Taenia solium*, in various body tissues. It is the most common parasitic disease of the central nervous system and also affects the eye, skeletal muscle, and subcutaneous tissue.

Soemmering et al. reported the first case of ocular cysticercosis in 1830 [5]. Ocular manifestations may be devastating as the cysticercus enlarges. In the eye cysticerci may be situated intraocular or extra ocular. In India most common site of localization is orbit, whereas posterior segment involvement is more common in western people [6]. Cysticercosis can occur in vitreous body and sub retinal area but some may be found in the anterior chamber and subconjunctival parts. The most damaging location is intravitreal and subretinal location which leads to blindness in 3 to 5 years unless the parasite is removed.

It has been pointed out by Malik et al that the left eye is more commonly involved [3]. Kundra et al has reported an unilateral ptosis due to cysticercosis in a 11 year old girl [4]. Therefore, extraocular muscle cysticercosis should be considered in patients who present with restricted ocular motility and inflammatory signs or an acquired mechanical Ptosis [7]**.** The association of brain tissue cysticercosis is very rare with eye cysticercosis.

The treatment of ocular cysticercosis is conflicting. Where the intraocular cyst responds best by surgery, surgical removal of extraocular cysticercosis is fraught with complications. R Sihota et al evaluated the efficacy of oral albendazole in extraocular cysticercosis in the randomized clinical trial and reported a marked clinical respond in the patients [8,9]. In our case patient was treated with systemic steroids and cysticidal therapy and the response was dramatic.

CONCLUSION

A suspicion for levator palpebrae superioris myocysticercosis has to be kept in mind while diagnosing patients from endemic regions with acquired ptosis. As with cysticercosis of other extraocular muscles, orbital imaging is an important tool for diagnosing cases similar to the present one. Pharmacotherapy appears to be favorable in the management of acquired ptosis due to ocular cysticercosis.

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