

EXTRAOCULAR MYOCYSTICERCOSIS INVOLVING LEVATOR PALPEBRAE SUPERIORIS-SUPERIOR RECTUS COMPLEX: A RARE CASE REPORT

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ABSTRACT

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The ocular involvement of the cysticercosis is a rare entity involving eyelids, extraocular muscles, orbit, conjunctiva, anterior chamber, uvea, retina, vitreous and optic nerve. All the extraocular muscles are involved in myocysticercosis. Ultrasonography and Computed tomography are the imaging modalities for evaluation of ocular cysticercosis. The patients can be treated with systemic steroids and albendazole; however surgical excision is the treatment of choice. We report a rare case of extraocular myocysticercosis in nine years old boy diagnosed on ultrasonography and computed tomography.

Key words: Extraocular myocysticercosis; Superior rectus; Levator palpebrae superioris; Computed tomography; Ultrasonography.

“Extraocular myocysticercosis of LPS/SR complex is rare and should be kept in the differential diagnoses of extraocular muscle enlargement. Proper radiological evaluation helps in early diagnosis and management.”

INTRODUCTION

Cysticercosis is the commonest parasitic manifestation of the central nervous system and is caused by *Cysticercosis cellulosae* larva of *Taenia solium*^{1,2}. Neurocysticercosis is the involvement of brain parenchyma with this larva. Apart from brain, it can also affect the eyes, skeletal muscle and subcutaneous tissues. Among extraocular muscles, frequently affected muscles are superior rectus (SR), lateral rectus, medial rectus and the superior oblique; involvement of the levator palpebrae superioris/superior rectus (LPS/SR) complex is extremely rare^{3,4}. We report a rare case of extraocular myocysticercosis involving the LPS and SR complex.

CASE REPORT

A nine years old boy presented with complaints of swelling in the region of left upper eyelid associated with pain for 2 months. The pain was aggravated by movement of the eyeball. There was also no evidence of limb weakness, deviation of mouth or slurring of speech. Headache was mild to moderate in intensity and was occasionally associated with nausea and vomiting. There was no history of loss of consciousness or seizure. On examination, there was proptosis and drooping of the left upper eye lid and weakness of the LPS/SR complex. There was restricted movement of the eye ball with upward gaze. Bilateral pupils were normal in size reacting to light. Fundus examination was normal. Visual acuity was 6/6. Hematological investigations were within normal limit. The rest of the neurological and systemic examinations were normal.

Ultrasonography (USG) orbit revealed a hypoechoic lesion with cystic area of size 2x1.8 cm with an echogenic focus within the cyst (suggesting scolex), in the superior aspect of the left globe. Computed tomography (CT) scan of orbits revealed heterogeneously enhancing lesion with central cystic area containing a faint hyperdense focus in the left LPS/SR complex, suggesting cysticercosis

At 3-month follow-up, there was no drooping of eye lid and pain was subsided.

Figure 1: Ultrasonography of the left eye showing a soft tissue lesion with central cystic area containing an echogenic focus within (suggesting scolex) in the superior aspect of the left extraocular muscle.

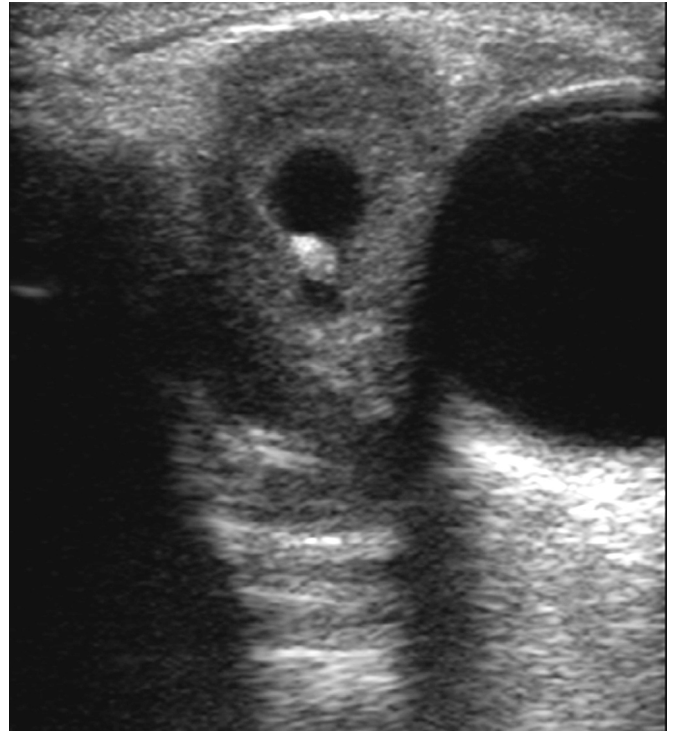


Figure 2a, 2b and 2c: Axial CT (Figure 2a), coronal CT (Figure 2b) and sagittal CT (Figure 2c) images of orbits showing a heterogeneously enhancing lesion in the left LPS/SR muscle with a faint hyperdense focus within it suggesting cysticercosis with scolex.

Figure 2a:

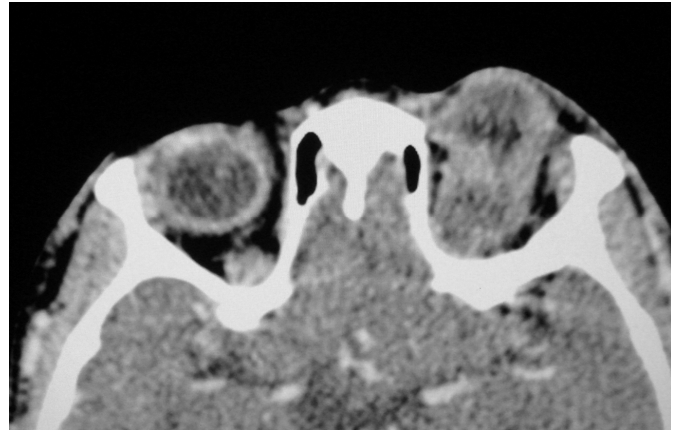


Figure 2b:

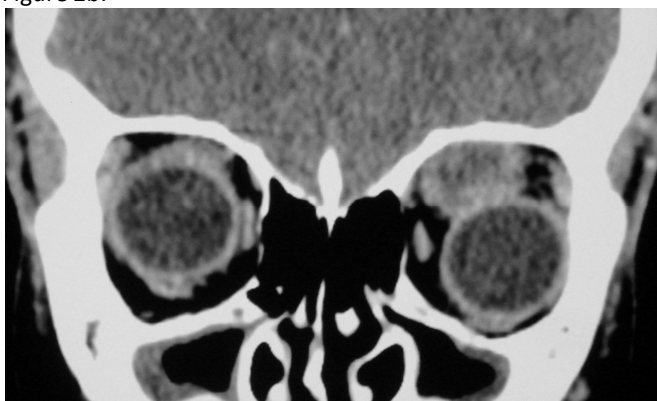
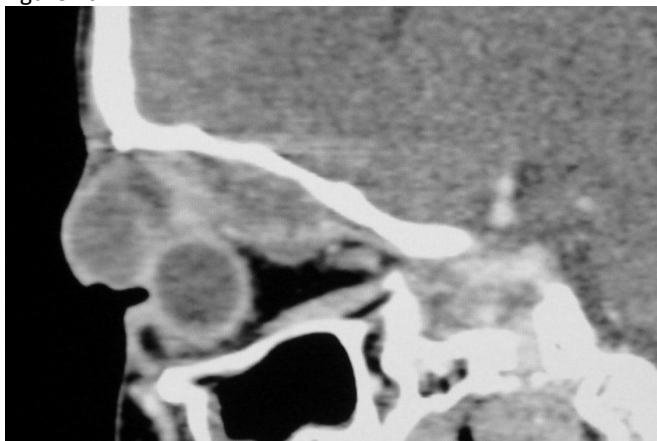


Figure 2c:



DISCUSSION

Cysticercosis is caused by larval form of the tapeworm *Taenia solium* and spreads through haematogenous route in various parts of the body. Man is the intermediate host in the life cycle of *Taenia solium* by consuming contaminated food infected by eggs. In humans, the cysticercus cellulosae cysts lodge itself in muscles, central nervous system and in the eye⁵. Common clinical manifestations of ocular cysticercosis are restricted ocular movement with pain, proptosis, ptosis, diplopia, redness and diminution of vision⁶. Medial rectus muscle is the most frequently involved extraocular muscle in cysticercosis. The ocular involvement by cysticercus larvae is seen in

eyelids, extraocular muscles, orbit, conjunctiva, anterior chamber, uvea, retina, vitreous and optic nerve¹. Most common site of involvement is subconjunctival space, followed by eyelids, optic nerve, retro-orbital space and lacrimal gland. In the eye cysticerci may be situated intraocular or extraocular.

In 1830, Soemmering was the first person to report the case of ocular cysticercosis⁷. The most devastating intraocular location is intravitreous and subretina which leads to blindness in 3 to 5 years unless the parasite is surgically removed. Left eye is more commonly involved.

USG, CT and Magnetic resonance imaging (MRI) are the various imaging modalities for diagnosing cysticercosis. On USG, the cyst appears as hypoechoic lesion with echogenic pinhead focus within it representing the scolex. On CT scan it appears as ring enhancing cystic lesion with hyperdense scolex within it. Ultrasound and CT have equal ability to detect the scolex⁸. T2-weighted MRI shows hyperintense lesion with well-defined edges, showing a hypointense eccentric nodule within it (representing the scolex). Cystic lesion with scolex usually suggests the diagnosis^{6,9}. CT and MRI helps in confirming the diagnosis; however it is also useful to rule out neurocysticercosis.

Patients presenting with restricted ocular movement and inflammatory signs, extraocular muscle cysticercosis should be considered. Simultaneous involvement of extraocular muscles and brain is reported in 16% of cases¹⁰. In our case, there was no evidence of neurocysticercosis. Hydatid cyst and orbital pseudotumor are the important differential diagnosis of ocular cysticercosis. Hydatid cysts of the eye are larger and mostly require surgical excision. There will be absence of scolex in orbital pseudotumor and it shows prompt response to steroid therapy. Ocular cysticercosis can be treated by medical

therapy and surgery. Oral albendazole and systemic steroids had marked clinical response in extraocular cysticercosis.¹¹ However, medical management can cause severe ocular complications which may lead to blindness.¹² Early surgical removal of the parasite is the treatment of choice. Postoperative restrictive myopathy may be a complication of surgical excision due to fibrotic response¹³. Histopathological examination of the parasite reveals scolex and suckers.

CONCLUSION

This case has been reported to emphasize that extraocular myocysticercosis is a rare entity and it should be included in the differential diagnosis of extraocular muscle enlargement to attain an early recognition and adequate treatment. USG and CT are the important imaging tools for proper evaluation of extraocular myocysticercosis.

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