wjpmr, 2020,6(1), 134-136

SJIF Impact Factor: 5.922

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Case Report

ISSN 2455-3301

WJPMR

SUPERIOR RECTUS MUSCLE OCULAR CYSTICERCOSIS: A CASE REPORT

Saurabh Singh Jareda*, Tanmay Srivastav, Madhvendra Singh Ahirwar and Kirti Verma

India.

***Corresponding Author: Saurabh Singh Jareda**

India.

Article Received on 26/10/2019 **Article Revised on 16/11/2019** **Article Accepted on 06/12/2019**

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 24 year young male who presented with drooping of right upper lid since 1 year, wherein cysticercus cellulosae cyst was found within the mass of the right superior 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: Cysticercosis is a systemic parasitic disease caused by the larval form of cestode Taenia solium.

INTRODUCTION

Cysticercosis is one of the most serious parasitic infection worldwide and is one of the neglected tropical disease.[1,2] Cysticercosis is endemic to regions like Latin America, Asia and Africa especially in area with poor hygiene.[3] Ocular cysticercosis is common in the Indian subcontinent.[4] Cysticercus cellulosae, the larval form of pork tapeworm Taenia solium (T. solium) is the causative organism of cysticercosis. Human cysticercosis occurs by ingesting the eggs of T. solium from contaminated food and water or rarely by autoinfection. About 40% of population harboring the parasite has ocular cysticercosis.[5,6] The involvement of the eye ball and orbit is uncommon. The orbital involvement by cysticercus larvae is seen in eyelids, extraocular muscles, orbit, conjunctiva, anterior chamber, uvea, retina, vitreous and optic nerve.[7] Most common site of involvement is subconjunctival space, followed by eyelids, optic nerve, retro-orbital space and lacrimal gland. All the extraocular muscles are involved in myocysticercosis.[8] With improvement in living and hygienic conditions, the incidence of human cysticercosis has been on decline in recent times. However, such cases are still occasionally seen.

CASE REPORT

A 24 year young male presented at outpatient department (OPD) of Sir Sundar Lal Hospital, Institute of Medical Sciences, Banaras Hindu University, Varanasi, with chief complaints of drooping of upper lid in right eye from one year. There was no complaint of any diminution of vision, double vision or pain during eye movements. He was vegetarian student and not addicted to any substance.

On general examination drooping of right upper lid was observed along with appropriate handshake, normal head posture, eyebrows on equal level, presence of frontal crease and no facial puffiness or proptosis. Extraocular movements were full and free without any restriction. Slit lamp examination for anterior segment was normal. Fundus seen under full mydriasis was normal in both the eyes. Regional lymph nodes were not enlarged. Intraocular pressure was within normal range. On ptosis work up; palpebral aperture height was 7mm, MRD1 (margin reflex distance 1) was 2 mm, MRD2 was 5 mm, LPS action was good, Bell's phenomenon was present, corneal sensation was present, Marcus Gunn phenomenon was absent. Left eye was normal on examination. A provisional diagnosis of Right upper lid acquired moderate ptosis was made.

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

Patient was prescribed 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. Patient was regularly followed up in the OPD. After one month there was significant resolution in the condition. CT scan done 4 months after treatment shows no cystic lesion or nodule or any new lesion.

FIG. 1: Clinical photograph showing pre-treatment photograph.

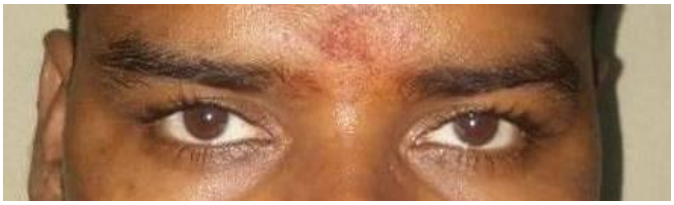

FIG. 2: Clinical photograph showing post-treatment photograph.

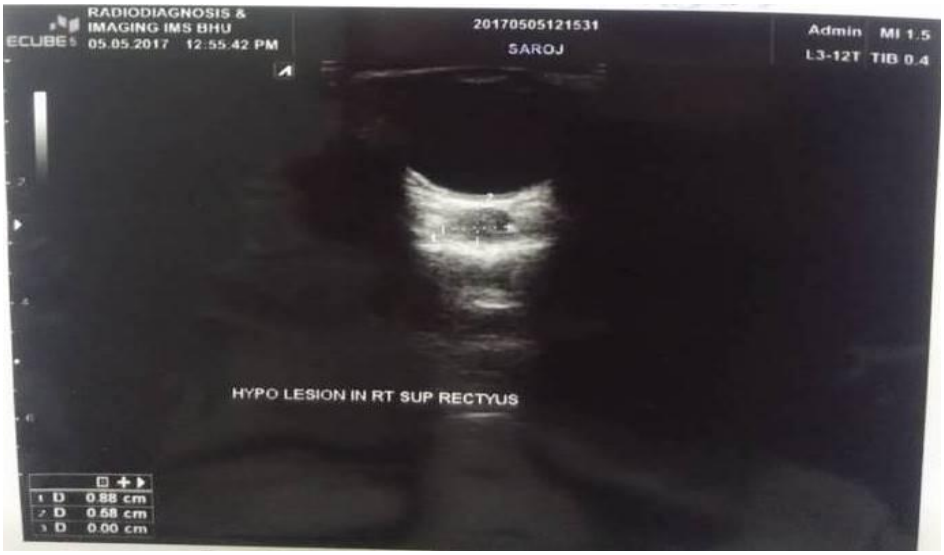

FIG. 3: USG B-Scan photograph showing cystic lesion with scolex in superior rectus muscle.

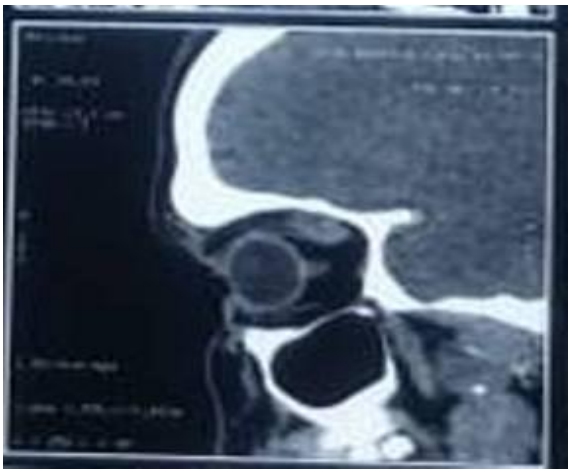

Fig. 4: CT Scan sagittal image showing cyst in superior rectus muscle.

DISCUSSION

Soemmering reported the first case of ocular cysticercosis in 1830. The larva was demonstrated and extracted by Schott in 1836.[9] Ocular or adnexal involvement occurs in 13-46% of infected patients. While the most common site of localisation reported in Western studies is the posterior, in the Indian literature the ocular adnexa is the most common site.[10-11]

In a study reported by Kruger-Leite et al, 35% of the cysts were found in the subretinal space, 22% in the vitreous, 22% in the subconjunctival space, 5% in the anterior segment, and only 1% in the orbit.[12] The diagnosis of extraocular cysticercosis was largely speculative until the advent of advanced imaging modalities like ultrasonography and computed tomography. In another report an unusual association of multiple brain NCC with ocular cysticercosis involving levator palpebrae superioris and superior rectus muscle has been reported.[6] In our case the cyst was present within the superior rectus muscle. Intraocular cysticerci are easily diagnosed because of their visibility by ophthalmoscopy. High-resolution ultrasonography displays the characteristic picture of a sonolucent area with well defined anterior and posterior margins. The presence of a central echodense, curvilinear, highly reflective structure within the cyst suggestive of scolex, helps to narrow the differential diagnosis to cysticercosis as the aetiological cause.[13] Computerised Tomography scan not only confirms the diagnosis but helps to rule out neurocysticercosis.

Neurocysticercosis has been treated successfully with albendazole and with praziquantel.[14,15] Sotelo et al have compared the two drugs and found albendazole to be more effective than praziquantel and also less expensive.[14] This patient received a combination of oral albendazole and corticosteroids for 4-6 weeks. Oral steroids are recommended along with cysticidal drugs to control the inflammation elicited by the dying cyst.

CONCLUSION

Orbital cysticercosis can present with 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. 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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