



## MEDICAL MANAGEMENT OF EXTRAOCULAR MUSCLE CYSTICERCOSIS - A CASE REPORT

<b>Dr. Manmeet Singh</b>	Resident, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, UP
<b>Dr. Amrita Bajpai*</b>	Associate Professor, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, UP * Corresponding Author
<b>Dr. Neelima Mehrotra</b>	Professor & Head, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, UP
<b>Dr. Akhil Agarwal</b>	Consultant, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, UP
<b>Dr. Samreen Mehfooz</b>	Resident, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, UP

**ABSTRACT** Taenia solium is a member of Phylum Platyhelminthes, class Cestoda Order Cyclophyllidea and family Taeniidae. Taeniasis is an intestinal infection caused by the adult T. solium and T. saginata. Ocular cysticercosis can be devastating as the cysticercus increases in size leading to blindness in 3-5 years. This is a case report of 7 year old female with extra - ocular cysticercosis, L/E revealed Lid swelling and medical management was done with the role of additional use of topical ciclosporine. Diagnostic modalities like Ultrasonography for both eyes, whole abdomen, Computed tomography (NCCT) were done to rule out neurocysticercosis and orbital cysticercosis. Extra - ocular cysticercosis can be managed with medical treatment. Oral Albendazole, topical and systemic steroids were given as a part of medical treatment, topical ciclosporin was added to the patients with more severe inflammatory response due to dying cysticercus.

**KEYWORDS :** Extra-ocular cysticercosis, Medical management, Ciclosporine

### INTRODUCTION

Cysticercosis is the infestation of cysticercus cellulosae, the larval form of pork tapeworm.<sup>[1]</sup> Taenia solium is a member of Phylum Platyhelminthes, class Cestoda Order Cyclophyllidea and family Taeniidae. Taeniasis is an intestinal infection caused by the adult T. solium and T. saginata. Ocular cysticercosis can be devastating as the cysticercus increases in size leading to blindness in 3-5 years. Ocular cysticercosis is caused by the encystment of the cysticercus cellulosae of the tapeworm, T. solium, in which humans are the intermediate hosts in the life cycle.<sup>[2]</sup> Death of the parasite causes marked release of toxic products, leading to marked inflammatory reaction and destruction of the eye.<sup>[3]</sup>

Factors facilitating the spread of T. solium infection include inadequate sanitation, breeding pigs in unsanitary conditions, and eating uncooked pork.

### PREVALENCE

Risk factors include a family history of parasitic infestation, history of travel to an endemic area or household visitors from an endemic area. Ocular cysticercosis is endemic in tropical areas, such as Sub-Saharan Africa, India and East Asia. There is no specific sex predilection but people of any age may be affected although orbital cysticercosis is more commonly reported in younger ages.<sup>[4]</sup>

### CASE REPORT

It is a case report of a 7 year old female with extra-ocular cysticercosis coming to the out-patient department. Thorough ophthalmological examination with slit lamp biomicroscopy O/E UCVA in R/E 6/6 and L/E 6/6. The anterior segment examination in L/E revealed lid swelling and chemosis of conjunctiva. In addition to routine blood investigations, ultrasonography for both eyes was also done, R/E revealed a well defined cystic lesion with clear contents and a hyperechoic area suggestive of a scolex. NCCT Head was done to rule out neurocysticercosis, orbital and intra-ocular cysticercosis.<sup>[5]</sup>

### RESULTS

As the dying cysticercosis cyst can incite a severe inflammatory response, due to leakage of the toxin from the microperforation present in the cyst wall, in this case promising results showed resolution of extra-ocular cysticercosis with this medical management given for 4 weeks. Treatment regimen given in this case was oral albendazole in

the dosage of 15-20

mg/kg/day alongwith oral prednisolone in the dosage pattern of 1-1.5mg/kg body wt. in addition to which topical ciclosporine and topical corticosteroids to control the inflammatory response.

### CONCLUSION

Extra-ocular cysticercosis can be managed with medical treatment being provided. B/E Dilated fundus examination and ultrasound B-scan is mandatory to rule out any intra-ocular cysticercosis to avoid any vision threatening complication of medical management. Depending upon the response, medical management can be given for 4-6 weeks in addition to topical ciclosporine being added to control the inflammatory response of the dying cysticercus in few patients. Medical management also avoids unnecessary surgical damage to the extra-ocular muscle, severe reaction due to cyst rupture at the time of surgery, long post-operative discomfort and post surgical topical medication. In this case, topical ciclosporin had given wonderful anti-inflammatory response when added to topical steroids.

Thus, medical management of extra-ocular cysticercosis can be a better option to surgical intervention. Cysticercosis can be prevented through practising good hygiene measures, such as washing hands frequently, washing raw vegetables and fruits well before consumption to prevent oro-faecal transmission and avoiding consumption of raw or undercooked pork and other meat.

**Figure-1 : At Presentation**



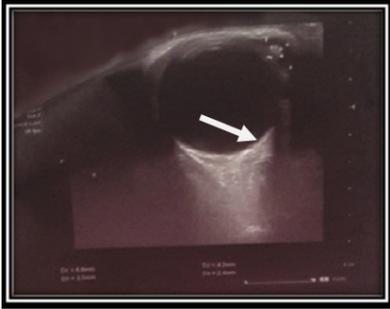
**Figure-2 : Dying Cysticercus**



**Figure-3 : Post-Treatment**



**Figure-4 : USG B-Scan showing Scolex**



**REFERENCES**

1. Odel JG, Moazami G. Diseases caused by helminths. In: Miller NR, Neman NJ, editors. Walsh and Hoyt's Clinical Neuro-Ophthalmology. Baltimore:Williams and Wilkins;1997.p.4439-44.
2. Markel EK, John DT, Krotoski WA. Medical Parasitology Eighth Edition.Pennsylvania: Saunders 1999.
3. Reddy PS, Satyendran OM. Ocular cysticercosis. Am J Ophthalmol 1964;57:664-6
4. Sen DK, Mathur RN, Thomas A. Ocular cysticercosis in India. Br J Ophthalmol 1967;51:630-2
5. Neelam Pushker, Mandeep S Bajaj, Mahesh Chandra et al. Ocular and orbital cysticercosis. Acta Ophthalmol.Scand.2001;79:408-413.