

Orbital Cysticercosis- A Case Report of Youngest Child Infected with *Taenia Solium*

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Abstract: Orbital cysticercosis is an uncommon disease even in endemic countries like India. Few case reports are available in litteratura. It is caused by *T. solium*. MRI or CT scan is diagnostic if scolex is seen. A child aged 3.5 year had swelling of left eye for 10 days. Investigation revealed orbital cysticercosis with no ocular and brain involvement. Child was successfully treated with oral albendazole and steroids.

INTRODUCTION

Cysticercosis is common parasitic disease worldwide including India. It is caused by infection with the intermediate stage of *Tenia solium*, also called pork tapeworm. This tapeworm has two host life cycles, human as definite host and swine as intermediate host. Pigs become infected when they eat *T. solium* eggs in human faeces, which later on develop into cysticerci in the muscle and brain. Man develops intestinal tapeworm infection after eating undercooked pork containing viable cysticerci. Humans are also intermediate host when they ingest *T. solium* eggs through faeco-oral route in areas with poor hygiene and sanitation as auto-infection or from faeces of human carriers. These eggs develop in central nervous system leading to neurocysticercosis. Brain and eye cysts caused the most morbidity, with the brain being the most common location for cysts (60-90%) of all cases and the eye being the least common (1 to 3%) Ocular cysticercosis occurs in most parts of world. In retrospective analysis of 118 surgically excised cysts over 20 years showed location as subconjunctival -63%, intraocular 26%, orbital-7% and lid 4%. We are presenting a case report of orbital cysticercosis of three years and five months old male child, youngest reported in litterature as far as we could search.

CASE REPORT

A three year and five month old male child presented with fever of 2 days, left eyes swelling for 10 days. Ocular examination showed, left eye had per orbital and ocular movements were full in both eyes. Child had 6/6 vision both eyes and fundus examination was normal. Systemic examination was normal. Investigations were as follows - Hb-12gm, TLC-11800, DLC - neutrophils 63% lymphocytes-30 eosinophils-2%, monocytes-5% , platelets 283000, PCV-33.7%, Urea-28mg, creatinine-0.5mg, Na+134, k+ - 4.8, Serum billrubin -0.9mg/dl, malaria parasite-ve, blood culture - ve. MRI orbit with contrast showed evidence of altered signal seen in the intraconal compartment of left orbit involving retro bulbar fat and laterel rectus and superior rectus muscles with hypo intense on T1 W images and heterogenous hyper intense on T2 W and FLAIR images. Small hypo intense cystic focus (4x4mm) on T1 W images is seen, which appears hyper intense on T2 and FLAIR images with surrounding hyper intense ring shadow on T2 and FLAIR images in the intraconal fat pushing the optic nerve medio-inferioli (Fig.1). A small intermediate to hyper intense focus is noted in the cyst-suggestive of scolex. On contrast - enhancement of the whole phlegmonous shadow was noted except the centre cystic component suggestive of degenerating cysticercosis (MRI). It is causing proptosis of left eye. MRI brain was normal. Elisa for cysticercosis was negative.

After taking ophthalmologist opinion child was started with albendazole-15mg/kg/day divided bid PO for 28 days. Child was also given oral corticosteroids. Eye examination showed complete relief from all signs and symptoms except some resistance to retropulsion was still noticed in left eye. Repeat orbital scan showed resolution of edema and decrease in size of swelling as observed earlier. Child was asymptomatic after completion of a albendazole treatment for four weeks.

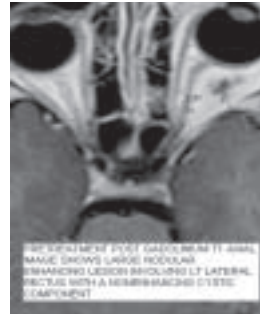


Fig. 1: Pretreatment post gadolinium T1 axial image shows large modular enhancing lesion involving LT Lateral rectus with a nonenhancing cystic component



Fig. 2: Post-treatment T1 axial - showing small modular shadow in relation to lateral rectus with minimal effect on optic nerve

DISCUSSION

Cysticercosis can occur in vegetarians eating contaminated vegetable. Orbital cysticercosis present as parasitic cysts (echinococcus, cysticercus, coenurus), abscesses, congenital cysts, etc. Diagnosis of cysticercosis requires visualization of cystic lesion with scolex in MRI or CT scan⁷. Elisa for cysticercosis can be supportive evidence for diagnosis but it can be negative. This child belong to low social economic strata and had the MRI finding of orbital cysticercosis of left eye. Most of literature showed occurrence of disease in the second half of first decade of life and youngest patient reported in one study was 5 years old⁸. In a case series of cysticercosis of the eye in south India successful treatment with oral drugs was seen in eight out of ten patients with age ranged from 12 to 55 years⁹. To best our knowledge child is the youngest of all the reported cases. Orbital cysticercosis should alert the doctor to search for infecting brain and detailed eye examination is must. This boy showed no evidence of other system involvement. Child was successfully treated with oral corticosteroids and albendazole for 28 days. Most of the cases do not requires surgical intervention.

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