

Isolated Ocular Cysticercosis- Case Report

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Abstract: Cysticercosis is caused by *cysticercus cellulose*, the larval form of pork tapeworm, *Taenia Solium*. Ocular cysticercosis may be extraocular (subconjunctival or orbital tissue) or intraocular (vitreous, subretinal space or anterior chamber). Intraocular cysticercosis usually occurs as a part of systemic infection. Isolated ocular involvement is uncommon in clinical practice. We report two cases of isolated ocular cysticercosis with special reference to use of diagnostic modalities and treatment.

Keywords: cysticercosis, subconjunctival mass, scolex

I. Introduction

Parasitic infections are a common cause of morbidity in developing countries. Cysticercosis is a common platyhelminthic infection caused by *cysticercus cellulose*, the larval form of pork tapeworm, *Taenia Solium*. Humans are the definitive hosts and pigs are the intermediate hosts for *T.solium*. Humans become intermediate hosts by ingesting eggs of *T.solium* from contaminated food or water. After penetrating the intestinal wall, the embryo invades the blood stream and lodges in various organs like brain, skeletal muscles, eyes and subcutaneous tissues¹. Ocular cysticercosis can involve any part of the eye approximately 4% involve the eyelid or orbit, 20% involve the subconjunctival space, 8% involve the anterior segment, and 68% involve the posterior segment². Intraocular cysticercosis usually occurs as a part of systemic infection. Isolated ocular involvement is uncommon in clinical practice.

II. Case Reports

Case 1: Our first case was a 17 year old male who came with the chief complaint of a gradually enlarging swelling in the right eye. There was pain, redness over the swelling and foreign body sensation in the eye. Vision was normal. There was no restriction of extraocular movements. On examination we found a cystic swelling measuring approx 8 mm × 6 mm inferotemporally (7 to 8 o'clock) around 7 mm from limbus. The swelling was deep to the conjunctiva, mobile over sclera, firm in consistency, overlying conjunctiva could not be moved, vessels were engorged and tenderness was elicited on deep palpation. We suspected the mass to be subconjunctival cysticercosis. Fundus examination was normal. Routine examinations were normal. On USG-B Scan, the cavity of the cyst showed echogenic intramural mass suggestive of scolex (Fig 1.1). On CT -Scan, ring enhancing cystic lesion with eccentric hyperdense dot was detected in the subconjunctival space of right eye which is highly suggestive of cysticerci (Fig 1.2). Topical antibiotics, oral steroids and a single dose of Albendazole 400 mg was given. The cyst was excised in toto under local anaesthesia (Fig 1.3) and histopathological reports confirmed the diagnosis of cysticerci (Fig 1.4).

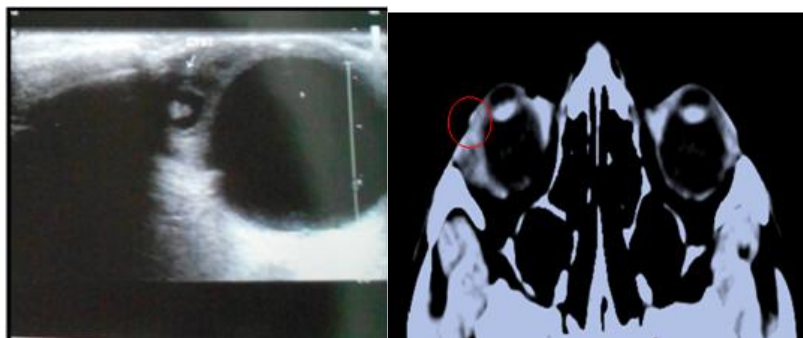


Fig 1.1 – USG B scan shows encapsulated cyst with scolex **Fig 1.2-** Ring enhancing lesion of right eye

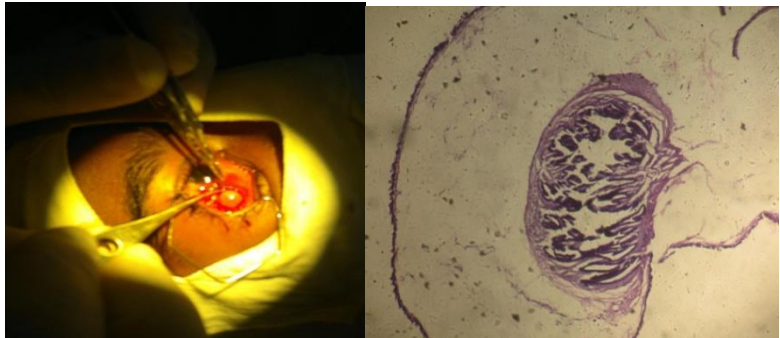


Fig 1.3 – Surgical excision of cyst in toto **Fig 1.4** – HPE of cyst.

Case 2: Our second case was a 10 year old female who presented with painless gradually enlarging swelling in the right eye . Vision was normal and there was no restriction of extraocular muscle movements. On local examination, we found a cystic swelling at the medial canthus of the right eye measuring 6mm X 5mm (Fig 2.1).The mass was well circumscribed,lobulated andoverlying vessels were engorged.Fundus examination was normal.USG- BScan showed a cystic lesion with intramural echogenic mass.CT showed space occupying ring enhancing lesion of the right medial rectus muscle(Fig 2.2). Routine examinations were within normal limits.Topical antibiotics,oral corticosteroids and a single dose of Albendazole 400 mg was given. There was spontaneous extrusion of the cyst in this case. Histopathology of the cyst confirmed the diagnosis (Fig 2.3).



Fig 2.1-cystic, lobulated mass



Fig 2.2-CECT Scan showing ring enhancing lesion in the right medial rectus muscle

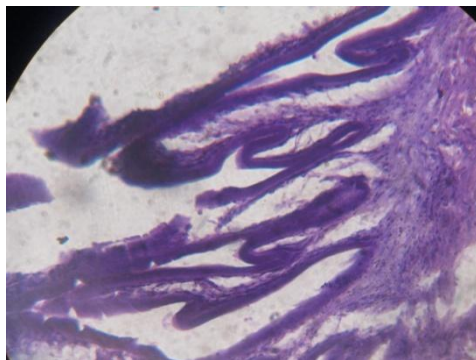


Fig 2.3 – HPE of cyst

III. Discussion

Cysticercosis, the most common ocular platyhelminthic infestation, is caused by larvae of *T.solium*³. Humans are the definitive hosts and pigs are the intermediate hosts for *T.solium*. In intraocular cysticercosis, humans become the intermediate host by ingesting eggs of *T.solium* from contaminated food or water. After penetrating the intestinal wall, the embryo invades the blood stream and can lodge in various organs like brain, skeletal muscle, eye, subcutaneous tissue¹. Ocular involvement is seen in 13 to 46 % of infected patients. Mode of infection: Pork (containing cysticercus cellulosae), uncooked vegetable, drinking contaminated water⁴. Ocular cysticercosis may be extraocular (subconjunctival or orbital tissue) or intraocular (vitreous, subretinal space or anterior chamber)^{5,6,7}.

IV. Conclusion

In both the cases that we have reported, there was no CNS or any other systemic involvement. Intraocular cysticercosis usually occurs as a part of systemic infection. Isolated ocular involvement is uncommon in clinical practice. Both patients were vegetarian. These two case reports highlight the occurrence of intraocular cysticercosis in vegetarians with all the relevant investigations normal. Hence it calls for proper sanitation and hygiene to control this disease.

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