A case of non-resolving subconjunctival cysticercosis managed by surgical excision

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Introduction

Cysticercosis is an infestation caused by the dissemination of the larval form *Cysticercus cellulosae* of *Taenia solium* (pork tapeworm) or rarely *Taenia saginata* (beef tapeworm). The most common form of systemic involvement is neurocysticercosis. Ocular and adnexal cysticercosis represents 13% to 46% of systemic disease. The most common site of localization reported in India is orbit and adnexa, whereas in Western world it is in the vitreous cavity or the subretinal space. Among the orbital cysticercosis, extraocular muscle (EOM) involvement is the commonest.

Incidence of subconjunctival cystercous cysts among the cystic lesions of conjunctiva is 8.89%. We report here a case of subconjunctival cysticercosis which was managed by surgical excision.

Case Report

A 16-year-old student from West Bengal presented to us with complaints of swelling in the upper part of the right eye which was gradual in onset and constant in size since 3 months associated with pain. There was no significant past ocular or systemic history. The patient had undergone computed tomography (CT) scan of the brain and orbit 1 month before elsewhere (Fig. 1).

On examination, the best corrected visual acuity was 6/5, N6 in both the eyes. On examination, the right upper lid, a small 1 × 1 cm firm and mobile mass was at the 12 o’clock meridian near the insertion of the superior rectus muscle.

The left eye was within normal limits. Ocular movements were full and free. There was no proptosis and retrobulbar resistance was normal. Anterior segment and posterior segment were normal in both eyes. Our radiologist opined that the CT scan showed a small cyst with the scolex in the superior periocular region anterior to the insertion of the superior rectus muscle in the tendon of the levator palpebral superioris muscle, suggestive of cysticercosis.

Conservative treatment was started after obtaining physical fitness from our physician. She was prescribed oral wysolone 1 mg per kg body weight per day in tapering doses and oral albendazole 15 mg per kg body weight per day for 6 weeks. At 6 weeks, there was no change in the size of the lesion.

She underwent excision biopsy of the mass under general anaesthesia. She was started on topical steroids, lubricants and analgesics postoperatively (Fig. 2).

Histopathological examination showed a cyst from the epibulbar region; the lumen contained oral and intestinal parts of the tapeworm. There were numerous giant cells, epitheloid cells, lymphocytes and plasma cells suggestive of cysticercosis, capsulated with surrounding granulomatous inflammation. On the basis of the history, clinical examination and investigations, a diagnosis of subconjunctival cysticercosis of the right eye was made (Fig. 3).

Figure 1:
Discussion

Cysticercosis is an infestation caused by *Cysticercus cellulosae*, the larval form of the cestode *Taenia solium*. On infestation of the undercooked pork which contains cysticerci of *T. solium*, the larval cyst is released and the inverted scolex attaches to the host intestine. The adult worm grows and releases proglottids in the stool which contaminates the environment. Thus, humans play the role of a definitive host. Cattle ingests the proglottids and releases thousands of eggs. The eggs develop into oncosphere that becomes a cysticercus in the intermediate host. So, when humans ingest undercooked pork, they develop taeniasis (infection with an adult worm), whereas when they ingest eggs, they suffer from cysticercosis (infection with the larva). Pigs are the definitive hosts and humans play a role of intermediate host. Infection with eggs results through infected food handlers or by ingestion of fruit and vegetables fertilized with contaminated human waste and by contaminated water supplies in endemic areas. The eggs develop into a cysticercus in the small intestine and reach other tissues via the haematogenous route.

The patient can present with floaters, moving sensations, pain, redness, photophobia, diminution of vision, seizures and meningitis (Neurocysticercosis). On rupture of the cyst, the patient may develop anterior uveitis, vitritis, rhegmatogenous or exudative retinal detachment, disc oedema and phthisis bulbi. Diagnosis of cysticercosis is usually made on history, clinical examination and radiological investigations like magnetic resonance imaging (MRI) and CT scan and by histopathology when it can be excised. B scan ultrasonography is useful in detecting the scolex.

Medical therapy with albendazole and oral steroid is recommended for the EOM form and orbital cysticercosis.

In our case, the patient was not responding to the medical treatment, so we went ahead with the surgical excision. The patient is doing well without any recurrence of cysticercosis.

References


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