Ocular Cysticercosis

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Ocular cysticercosis is a parasitic infection contracted through consumption of infected pork, vegetables, or water with the eggs of Taenia solium. The larvae escape into circulation once the eggs lose their envelopes; they are finally deposited at places where the capillaries are narrow and the circulation sluggish. The problem is common in children because of their unhygienic habits.

CLINICAL MATERIAL

The study comprises eight cases of ocular cysticercosis seen in the last ten years in Pondicherry. The cases involved the lid, conjunctiva, anterior chamber, retina, and vitreous (Figs. 1, 2). The clinical features of the patients are summarized in Table I. The diagnosis was made histologically in each patient except Patient No. 7 where it was diagnosed because of the visible scolex (Fig. 3).

DISCUSSION

Ocular cysticercosis has world-wide origin with a large variation in its statistics in different parts of the world and even the same country. The variations are due to the differences in personal hygiene and the habits of local people. The influence of unhygienic habits on ocular cysticercosis was confirmed by Michail and Melanowski who reported an increase in the incidence of the disease in Roumania and Poland following the first and second world wars. Lech reported 116 cases of ocular cysticercosis from a single hospital in Brazil. In India 78 percent of the cases with ocular cysticercosis have been reported from the states of Andhra, Tamilnadu, and Pondicherry. We went into the details of food and personal habits of local people to find the cause of its prevalence here. People here go into the open fields for evacuation of bowels and subsequently clean themselves with stagnant pond water. The habit of cleaning the hands with soap and water, as in other parts of the country, is rarely seen here. The same pond water is used for washing the vegetables and even for drinking at places. Thus, the unhealthy habits, use of water contaminated with the egges of Taenia solium, and autoinfection by anus to mouth transmission are responsible for the high frequency of the disease.

In the eye, the uvea is the most common site of cysticercosis. This is because the larval emboli are carried into the posterior ciliary circulation rather than into the retina because they occupy peripheral parts of the blood stream due to their large size. Once in the eye, the cysts usually remain stationary, but sometimes they migrate from one part of the retina to another and even into the anterior chamber.

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Fig. 1. Clinical photograph to show a cyst in the lower part of the anterior chamber.
through the pupil. Bilateral involvement by the disease is infrequent; similarly, multiple cysts in one eye are rarely seen although a large number of cysticerci are liberated into the circulation during a single infection. In this regard our Patient No. 8 is quite unique in that a bilateral ocular involvement as well as two cysts were found in one eye.

Cysticercus cellulosae proves dangerous to the eye if it is not removed. An attempt should be made to remove a live rather than a dead cysticercus; a dead cysticercus leads to marked uveal inflammation and loss of the eye. Removal of the cyst from the conjunctiva and the anterior chamber does not offer much of a problem. A cyst in the vitreous can be removed if its localization is exact. Diathermy, photoocoagulation, cryocoagulation, an open approach with lens extraction, and vitrectomy have been advocated in the management of cysts in the posterior segment of the eye. The eye of Patient No. 7 could have been saved if the facility of transvitreous cryoprobe would have been available.

**TABLE I**

<table>
<thead>
<tr>
<th>Case</th>
<th>Age</th>
<th>Sex</th>
<th>Eye</th>
<th>Site of Involvement</th>
<th>Clinical Features</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>F</td>
<td>RE</td>
<td>Lid</td>
<td>Lid nodule</td>
<td>Excision</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>F</td>
<td>RE</td>
<td>Lower bulbar conjunctiva</td>
<td>Conjunctival cyst</td>
<td>Excision</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>M</td>
<td>LE</td>
<td>Lower fornice</td>
<td>Conjunctival abscess</td>
<td>Excision</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>F</td>
<td>LE</td>
<td>Lower bulbar conjunctiva</td>
<td>Conjunctival granuloma</td>
<td>Excision</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>M</td>
<td>RE</td>
<td>Anterior chamber</td>
<td>Anterior uveitis</td>
<td>Paracentesis</td>
</tr>
<tr>
<td>6</td>
<td>30</td>
<td>M</td>
<td>LE</td>
<td>Subretinal</td>
<td>Retinal cyst, posterior uveitis</td>
<td>Surgical removal</td>
</tr>
<tr>
<td>7</td>
<td>35</td>
<td>F</td>
<td>LE</td>
<td>Vitreous</td>
<td>Free floating cyst, visible scolex, posterior uveitis, neuroretinitis</td>
<td>Surgical removal failed</td>
</tr>
<tr>
<td>8</td>
<td>25</td>
<td>F</td>
<td>Bilateral Retinal</td>
<td>RE two cysts, LE one cyst, visible scolex, exudative detachment, RE total loss of vision, LE finger counting at one foot</td>
<td>Surgical removal successful in LE, but the cyst ruptured during delivery in RE which reformed after sometime</td>
<td></td>
</tr>
</tbody>
</table>

JOURNAL OF PEDIATRIC OPHTHALMOLOGY AND STRABISMUS 171
SUMMARY

Eight cases of ocular cysticercosis are reported. A rare case of cysticercus in the anterior chamber, and another case with bilateral involvement and two cysts in one eye are reported. The reasons for its prevalence in this region are discussed.

REFERENCES