BILATERAL INTRA-OCULAR CYSTICERCI*

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Cases of intra-ocular Cysticercus usually affect only one eye, and bilateral cases such as that reported below are very rare.

Case Report

A man aged 55 years attended the hospital complaining of gradual loss of vision in both eyes for one year. He was not a vegetarian and was accustomed to eating pork.

Examination.—The anterior segments of the eyes were normal. The visual acuity in the right eye was perception of light in all quadrants; in the left eye counting fingers 1 m.

The right fundus showed extensive chorio-retinitis proliferans in the upper quadrants. A vitreous cyst occupied the lower temporal quadrant between 6 and 9 o'clock and covered the macular region. The shortest distance between the edge of the cyst and the optic disc was 5 disc diameters. It appeared to be bilobulate with a sharp luminous border, and a thin transparent wall. No movement of the cyst was detected though it was watched by many surgeons; a doubtful undulating movement of the portion of the wall nearest to the optic disc was occasionally noticed by the writer, but this was dismissed as being due to imagination.

The left fundus also showed extensive chorio-retinitis proliferans around the optic disc, and a sub-retinal cyst occupied the area between 7 and 9 o'clock in the lower nasal quadrant. The shortest distance between the edge of the cyst and the optic disc was 6 disc diameters. The cyst was transparent with retinal vessels running over it and a clear luminous border. In the centre was a whitish circumscribed area, suggesting the scolex. No movement of the cyst was noticed, and perhaps none was possible because of its sub-retinal situation.

There was no evidence of the presence of Cysticercus in any other part of the body. The motions were examined repeatedly but no tapeworm segment was detected.

X-ray examination of the skull was normal. The liver and spleen were not enlarged. There were no subcutaneous nodules. The total white blood cell count was 8,000 per cmm. and the differential count showed 18 per cent. eosinophilia. Blood tests for venereal disease were negative. The urine was normal.

Operation.—Because of the typical appearance of the cyst the case was diagnosed as one of bilateral Cysticercus, and the worse (right) eye was operated on first to confirm the diagnosis. After two unsuccessful attempts a third operation was performed under local anaesthesia. A 5-mm. meridional incision was made at 8 o'clock, 17 mm. from the limbus. The wound was retracted with two double hooks in the hope that the cyst would extrude, but as this did not happen it was assumed that the organism was dead and a lens spoon was gently inserted to scoop it out. As the spoon was inserted there was much bleeding from the choroid, so that the spoon had to be withdrawn and the wound mopped up. Suddenly the edge of a white mass presented itself, and this was gently pulled out with Arruga's forceps (Fig. 1, opposite). After the application of surface diathermy, the wound was closed.

* Received for publication July 21, 1960.
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Fig. 1.—Cyst from right eye.

Fig. 2.—Cyst from left eye.

Examination with the loupé showed the mass to be a cyst, the part which had extruded into the wound being the head of the Cysticercus. The protruding head gave it the appearance of two cystic masses lying one above the other, which had been seen by the ophthalmoscope as bilobulate. The head had not been recognized with the ophthalmoscope, because it was projecting towards the choroid.

Post-operatively the patient was given streptomycin and penicillin for 7 days and local atropine. The visual acuity improved from perception of light to counting fingers at 1 m. Recovery was uneventful except that the fundus in that area showed a small detachment with a horse-shoe-shaped hole, and it was decided to do a scleral resection later.

After 4 weeks the left eye was operated on under local anaesthesia. In the lower nasal quadrant, after reflecting the conjunctiva, a 5-mm. meridional incision was made at 8 o'clock, 15 mm. from the limbus. Here again the wound was retracted in the hope that the cyst being sub-retinal would extrude through the wound. As this did not happen, the lips of the scleral incision were gently separated by inserting the lens spoon and then withdrawing it. Again a portion of the cyst protruded from the wound and was gently pulled out with Arruga's forceps (Fig. 2). The wound was closed after surface diathermy.

Examination with the loupé showed a typical Cysticercus with the scolex inside the cyst. Post-operatively the patient was given streptomycin and penicillin for 7 days and local atropine. Recovery was uneventful and the visual acuity improved from 1 to 5 m. with no detachment of the retina.

Comment

(1) In the right eye the head had protruded from the cyst while it lay in the vitreous, and this gave it the appearance of a bilobulate cyst or of two cystic masses lying one above the other. Fig. 1 shows this shape clearly.

(2) Even though no definite movements of the cysts were noted (the patient was examined by four surgeons and many other observers), the cysts must have been alive to present themselves through the scleral incisions.

(3) Involvement of both eyes suggests that there was general dissemination of the organisms absorbed from the intestine, but there was no clinical evidence of their presence in any other part of the body.

(4) Cysticercus produces inflammation of the choroid even when alive, and in this case extensive chorio-retinitis proliferans was present in both eyes.

I should like to thank Dr. E. C. Srinivasan, Honorary Surgeon, Government Ophthalmic Hospital, Madras, to whose Unit this case was admitted, for his help and co-operation, and Dr. T. T. Ramalingam, Superintendent of the Government Ophthalmic Hospital, for permission to report this case.