SURGICAL EXTRACTION OF INTRA-OCULAR CYSTICERCUS*

BY

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SEGAL, Mrzyglod, and Smolarz-Dudarewicz (1964) described the successful surgical removal of a cysticercus from the macular region by a scleral approach. Reddy and Satyendran (1964) reported a series of ten patients, in eight of whom the location of the cysticercus was extra-ocular and in two intra-ocular. One of the latter was successfully removed surgically (technique not described) with unreported visual results; the other was found on routine sectioning of an enucleated phthisical eye. Barraquer (1964) reported the successful extraction of a cysticercus from the vitreous, the technique consisting of routine lens extraction (lens not cataractous) followed by incision of the anterior hyaloid, then extraction of the larva.

Surgical removal of intra-ocular cysticercus is still uncommon enough to warrant reporting, and success is frequent enough to make this the method of choice. Technique can vary depending on whether the larva lies in the vitreous or is subretinal. An additional case, and the surgical technique used, is described below.

Case Report

A 38-year-old Ecuadorean bus-worker was seen at the local hospital in Otovalo, Ecuador, when a group of physicians from the ship *Hope* conducted clinics there. He had noted the onset approximately 2 years previously of visual impairment in the left eye, with gradual, painless, progressive loss of vision, marked in the last 6 months.

Examination.—Visual acuity was normal in the right eye and limited to gross light perception with no projection in the left. The right eye was normal in all respects. The left eye was normal externally. The pupil was in mid-position and showed minimal reaction to direct light. Finger tension was normal and equal to that of the right eye (no tonometer available). Gross muscle studies were normal, with no left exotropia. Fundus examination under pupillary dilatation showed total retinal detachment with no hole visible. In the upper temporal quadrant in the region of the equator was a typical cysticercus having active movement. While it appeared to be pre-retinal, it was fixed in its location, and its behaviour on surgery showed it to be sub-retinal.

Treatment.—The patient was hospitalized on the *Hope* and the cysticercus was removed under local anaesthesia (xylocaine lid block and retrobulbar injection).

* Received for publication November 9, 1964.

Operative Technique.—Traction suture placement under the superior rectus was followed by a wide conjunctival incision over the upper temporal quadrant at the globe equator. A trap-door incision was then placed through sclera to choroid over the equator of the globe (Fig. 1). The three sides of the door were each 5 mm. long, and the trap door had its opening anteriorly. Two 7-0 black silk sutures were placed, one in each anterior corner of the doorway. Turning back this scleral flap, the choroid was then lightly cauterized with the Hildreth cautery in the midline row (Fig. 2), after which puncture was made with the cautery. No bleeding occurred. Much subretinal fluid gushed forth and the cysticercus presented itself immediately after. The parasite was milked through the trap door by external pressure on the globe (Fig. 3). The trap door was then closed by both the pre-placed and four additional post-placed silk sutures. No diathermy was applied and no attempt was made to treat the retinal detachment. The conjunctiva was closed, the traction suture removed, and a uniocular dressing applied.

The parasite (Fig. 4) was a typical cysticercus.

FIG. 1.—Site of trap-door incision. Suture under superior rectus to facilitate exposure of area.

FIG. 2.—Row of Hildreth cautery applications to choroid immediately prior to opening globe.

FIG. 3.—Cysticercus being milked through trap door.

FIG. 4.—Extracted cysticercus.

Progress.—Convalescence was uneventful; the eye remained quiet; and the patient was discharged on the seventh post-operative day. At this time, the visual acuity was unchanged from its pre-operative level. The detachment appeared unaltered, and no attachment of it to the underlying operative site had occurred. Attempts at follow-up of the patient were unsuccessful 4 months post-operatively.

Laboratory Studies.—These were unremarkable. Two stool examinations were negative for *T. solium* ova, but were positive for *E. nana*, *E. histolytica*, *E. coli*, and *Iodoamoeba butschlii*. Skull x rays were negative for intra-cranial calcifications. Blood and urine were within normal

limits; there was only 2 per cent. eosinophilia (this low percentage being the usual finding in cysticercosis). The Kahn test was negative.

Surgery for the retinal detachment could be considered but would probably not be feasible, the macula having been detached for at least 6 months.

Comment

Surgical excision or extraction of a cysticercus through scleral section appears to be a relatively simple procedure, and offers the patient the advantage of ridding the eye of the parasite before its natural death, since presence of a dead parasite intra-ocularly leads to inflammatory reaction that results in destruction of the globe and requires ultimate enucleation.

Summary

A successful surgical extraction of an intra-ocular cysticercus is reported. Total retinal detachment existed before and subsequent to the extraction. The visual acuity was not altered.

REFERENCES

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