

BLURRING OF VISION DUE TO VLM

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ABSTRACT: A thirty two year old taxi driver presented with complaints of headache, nausea, vomiting and blurring of vision of the left eye of two days duration. He was found to have an acute anterior uveities and secondary glaucoma. On further examination patient was also found to have a neuroretinitis and phlebitis in the same eye. A worm was found in the anterior chamber and it was removed via a limbal incision under local anaesthesia. The worm-like structure sent to the Department of Parasitology was identified as *Gnathostoma spinigerum*. The patient was treated with topical eye drops and oral steroids at the same time to reduce the inflammation. No neurological symptoms were seen. The patient was not available for further evaluation and followup. (JUMMEC 1999; 2: 115 -116)

KEYWORDS: Blurring of vision, Gnathostomiasis

Introduction

Gnathostoma spinigerum is a rare cause of ocular helminthiasis. This worm was originally identified in the stomach of a tiger by Owen in 1836. The first human case of orbital gnathostomiasis was reported by Rhithibaed and Daengsvang in Thailand in 1937. Several cases of intraocular involvement, primarily of the anterior segment have been described (1). This parasite is found in many countries of the orient, but the most important foci for human infections are Japan and Thailand. A person acquires infection by eating raw, marinated, or poorly cooked fish. Third-stage larvae have been reported to be found in pork (2). It is suspected that food prepared from poorly cooked meat of paratenic hosts, such as the hog or chicken, may be important sources of human infection. There is the possibility that infective larvae liberated from dead aquatic intermediate hosts can be ingested in drinking water. There are previous records of human gnathostomiasis in Malaysia (3) but this is the first ocular gnathostomiasis reported in Malaysia.

Material and methods

This paper presents a case of blurring of vision due to ocular gnathostomiasis. Patient is a 32 - year old Malay taxi driver who complained of headache associated with vomiting of one day duration and blurring of vision in the left eye of two days duration before admission. Patient showed no history of trauma, no history of eating raw meat or having travelled abroad recently. The ocular examination revealed vision of the right eye to

be 6/6 and of the left eye, 6/36. The remainder of the right eye examination was normal. Cornea of the left eye was hazy and intraocular pressure was raised to 33 mmHg (normal 15 mmHg - 20 mmHg). Slit lamp examination of the left eye showed marked activity in the anterior chamber with fibrinous exudate covering the pupil. A worm like structure was seen covered with the exudate inferiorly in the anterior chamber. The left pupil was intensively dilated. On further examination, the fundus showed a swollen disc with surrounding oedema. There was a track, noted below the upper temporal arcade with retinal haemorrhages. Track was in the shape of a worm. A diagnosis of acute anterior uveitis with secondary glaucoma was made. The admitting laboratory studies demonstrated a marked eosinophilia (Eosinophils - 17%, Polymorphonuclear cells - 43%, Lymphocytes - 35%, Mononuclear leukocytes - 5%). Erythrocyte sedimentation rate was raised to 43 mm / hr. LFT was normal. Stool examination for ova and cyst was negative after repeated examination for 3 times. Chest x-ray and skull x-ray were normal.

The patient was treated with topical antiglaucoma therapy, topical steroids and antibiotics and oral prednisolone 60 mg daily for 3 days which was tapered subsequently as the vision improved after two days. The patient's vision improved to 6/18 and the inflammation in the anterior chamber reduced remarkably after 3 days of treatment. About one week later, the worm like structure was found to be alive on slit lamp exami-

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nation. An operation was performed under local anaesthesia. The worm like structure was removed in a limbal incision with a Mac Pherson's forceps. M.R.I. was done after removal of the worm from the eye. No intraocular or intracranial calcifications or foreign body seen. Patient was discharged home 2 days after operation with topical steroid eye drops to the left eye. Patient was last reviewed about 2 weeks after operation and vision had improved to 6/9. There was no more inflammation in the anterior chamber. The optic disc was normal with pigmentary changes in the retina. Patient defaulted further follow up. The worm like structure was preserved in formalin and sent to the Department of Parasitology, Faculty of Medicine, University of Malaya. It was taken out and clean with fine brush to remove debris. It was then mounted in Hoyer's media. The length of the larva is approximately 4mm (Fig. 1). The anterior end of the worm or head bulb had diagnostic features of the third larval stage of the *Gnathostoma*. These features were the 4 circular rows of spines surrounding the mouth and 4 glandular sacs lying on either side of the oesophagus. From the anterior row to the posterior row of the head bulb, the numbers of hooklets in each row were respectively : 34, 38, 40, 44 (Fig. 2). The morphologic characteristics of the larva are consistent with the third stage larva of *Gnathostoma spinigerum*.

Discussion

Gnathostoma spinigerum is the most common species known to cause human gnathostomiasis. Human infection is more often acquired by eating raw or improperly cooked fish, either through carelessness or through choice. Third stage larva fails to mature in man and it migrates for years causing inflammation in multiple organ systems. Clinical finding of gnathostomiasis are variable and may include : larva migrans, respiratory disorders, gastrointestinal masses, and intraocular infection (4). CNS involvement have been reported (4). Currently diagnosis of human gnathostomiasis can be made only by removal and morphologic identification of the larvae. An eosinophilia or elevation of sedimentation rate is more often absent than present in gnathostomiasis. In our patient there was marked eosinophilia and ESR was raised. The uveitis was caused by a third stage larva of *Gnathostoma spinigerum* which had entered the globe by boring through the sclera, choroid and retina, traversing the vitreous, entering the anterior chamber after penetrating the ciliary body and iris. In the future, ophthalmologists should be aware of *Gnathostoma spinigerum* for causing intraocular lesions because removal of the parasite may be life saving in view of the longevity of the worm in the human host and the potential for central nervous system involvement.

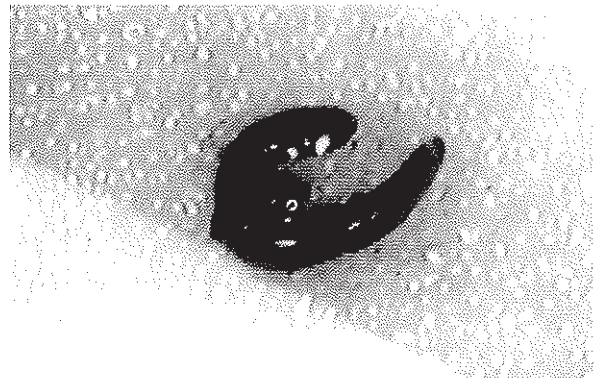


Fig. 1 The whole third stage larva recovered from the eye.

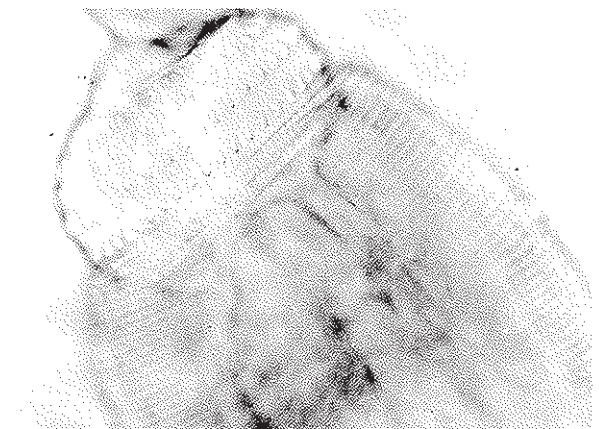


Fig. 2. Anterior end of worm showing the head bulb, with the four circular rows of spines surrounding the mouth.

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