A juvenile filarial worm, *Wuchereria bancrofti,* extracted from the vitreous of the eye: the first report in the world literature

Sagarika Samarasinghe[1] and **Saliya Pathirana**[2]

(Index words: Filarial fluorescent antibody test, vitrectomy)

Summary

A live worm was extracted from the vitreous of the eye of a patient in Sri Lanka. Based on the details of its length, width, oesophagus and vulva it was identified as a juvenile female *Wuchereria bancrofti*.

Introduction

Wuchereria bancrofti has been reported from the anterior chamber of the eye from three patients worldwide [1–3] but not from the vitreous. This is the first time that a female *Wuchereria bancrofti* has been found in the vitreous of the eye.

Case report

In February 2003, a 46-year old woman from the Southern Province of Sri Lanka, presented to the Eye Hospital, Colombo with a complaint of a moving object in the left eye for 6 months causing irritation. She was not suffering from any other systemic or local manifestations. The full blood count showed polymorphonuclear leucocytosis with no eosinophilia. The filarial fluorescent antibody test was weakly positive and the filarial antigen test was negative.

Her right eye vision was 6/6 and the left eye vision was 6/12. Intra-ocular examination revealed a wriggling pale, motile worm in the vitreous of the eye. Under local anaesthesia vitrectomy was performed on the left eye. An intact live worm was recovered from the vitreous. The patient became symptom free subsequently. Details of the worm are summarised in the Table 1.

Table1. **Details of the *Wuchereria bancrofti* worms extracted from the human eye**

Description of worm	*Samara-singhe et al.*	*Bain et al.*	*Gautriet et al.*	*Fernando SE*
Length (mm)	13	10.4	45	90
Width (µm)	100	105	160	—
Nervering (µm)	100	175	230	—
Oesophagus (µm)	900	1100	1510	—
Vulva(µm)	450	460	830	—
Tail (µm)	120	165	220	—
Site	vitreous	ant.cha.*	ant.cha.*	ant.cha.*

*anterior chamber

Description of the worm

The worm was minute and thread-like in form with a smooth cuticle. Although tapering towards both ends, the terminations were bluntly rounded. The head was slightly swollen (Figure 1). The length of the worm was 13 mm and the width 0.1 mm. The nerve ring was situated 100 µm from the anterior end. The length of the oesophagus was 900 µm. The vulva was situated 450 µm from the cephalic end and was anterior to the oesophagus. The length of the tail was 120 µm. These details are compatible with a juvenile female *Wuchereria bancrofti* worm.

Figure 1. **Head of the worm.**

Discussion

There are three previous reports of filarial worms recovered from the anterior chamber of the eye of the

[1]*Medical Parasitologist and Head, Department of Parasitology, Medical Research institute and* [2]*Opthalmic Surgeon, Eye Hospital, Colombo, Sri Lanka.*
Correspondence*:* SS*, e-mail: <samasagarika@hotmail.com>.* *(Competing interests: none declared). Submitted 15 February 2005 and revised version accepted 12 September 2005.*

patients worldwide, but not from the vitreous [1–3]. There are reports about nematodes extracted from the vitreous of humans, such as hookworm [4], *Dirofilaria immitis* [5] and *Parastrongylus* spp. [6] from Sri Lanka and other parts of the world but no case reports are available of *Wuchereria bancrofti*.

Therefore this is the first record of a *Wuchereria bancrofti* from the vitreous of a human in the world. The features of the worm in this case closely resemble the measurements of a female *Wuchereria bancrofti* [1].

We can only speculate how this worm gained access to the vitreous. The worm may have come through either the blood stream to the choroid and then to the vitreous, or from the anterior chamber to the posterior chamber and through the ciliary body into the vitreous.

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