

## A Case Report of Thelaziasis Callipaeda

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**ABSTRACT.** This is the second case of thelaziasis *callipaeda* (human parasitosis with *Thelazia* nematodes) reported in Okayama Prefecture. In this patient, the nematode was discovered by chance in the upper palpebral conjunctival sac during tests prior to a cataract operation and was removed. There was no sensation of any physical disorder. The nematode was a male, and it was assumed from the degree of curvature of the tip of the tail that the course parasitism was only a month or so long.

Both of the cases in Okayama occurred in Mitsu-gun, which could be of importance in determining the spread of thelaziasis *callipaeda* in the future.

**Key words :** *Thelazia callipaeda* — conjunctival sac

In Japan, 61 cases of thelaziasis *callipaeda* have appeared since the first case was reported by Hagiwara *et al.* in 1957. We recently experienced a case of parasitosis of thelaziasis *callipaeda* in the conjunctival sac and it is reported here. This is the second case reported in Okayama Prefecture, following that of Shimoda *et al.* in 1986.

### CASE REPORT

The patient was a 66-year-old female living in Mitsu-gun, Okayama Prefecture who had been engaged in farming locally for the past 50 years. She was first examined by the authors at Kawasaki Hospital on July 12, 1989 because of a visual disturbance in the left eye. Senile cataracts were found in both eyes. On July 28, she was hospitalized for a cataract operation on the left eye. When the intraocular pressure was measured, a twisted nematode was found in the right upper palpebral conjunctival sac. The ophthalmological findings were visual acuity of 0.4 (0.8 × -2.0D) in the right eye and 0.05 (0.08 × -5.0D) in the left eye. In a slit lamp examination, no particular hyperemia was seen in the right bulbar or palpebral conjunctiva (Fig. 1). Only one nematode was found when the eyelid was turned inside out. No abnormality was seen

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Fig. 1. No particular hyperemia is seen in right bulbar and palpebral conjunctiva.

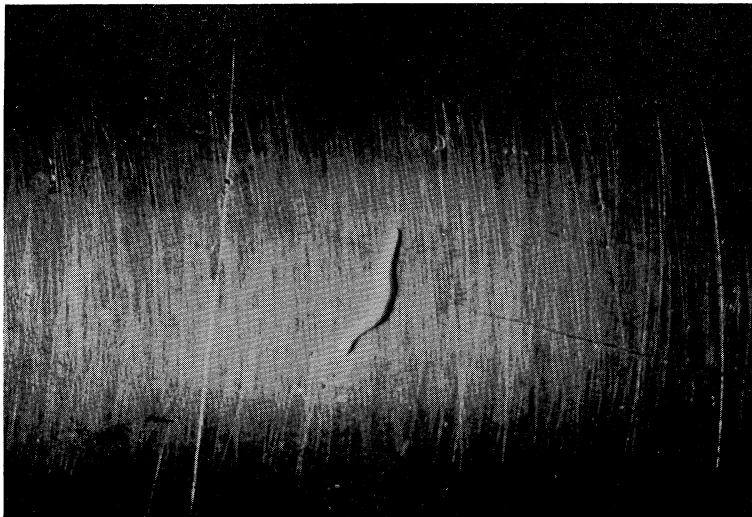


Fig. 2. Nematode directly after removal.

in the left conjunctiva. In the optic media, cortical cataract was seen in the right eye and an immature cataract in the left eye. No abnormality was seen in the right eye by funduscopy, but the fundus of the left eye was invisible.

Systemic laboratory tests disclosed no abnormalities in red or white blood cells, and no eosinophilia was observed. No parasite eggs were found and no abnormalities in general tests on urine and feces were noted.

The nematode (Fig. 2) was 8.5 mm long and 0.35 mm wide. The esophagus was not divided, there were no lips and an oral cavity was seen in the head (Fig. 4). Marked striations were seen on the body surface and serrated transverse annulation was observed at the edges (Fig. 4). The tail

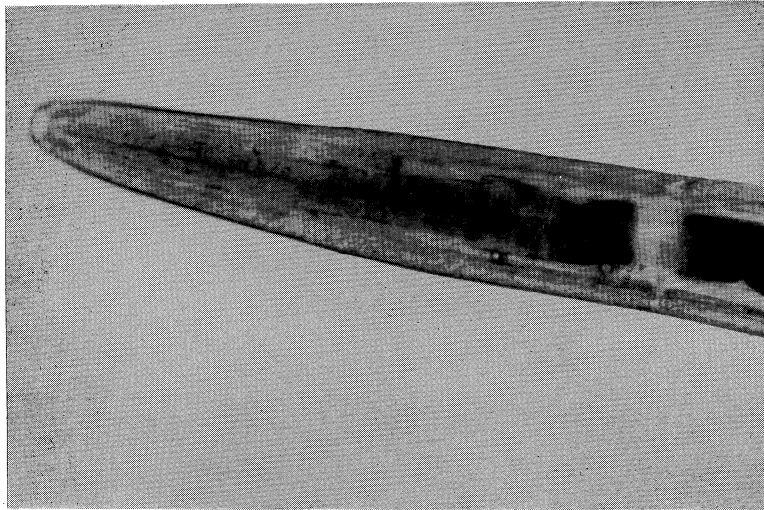


Fig. 3. Esophagus is not divided.

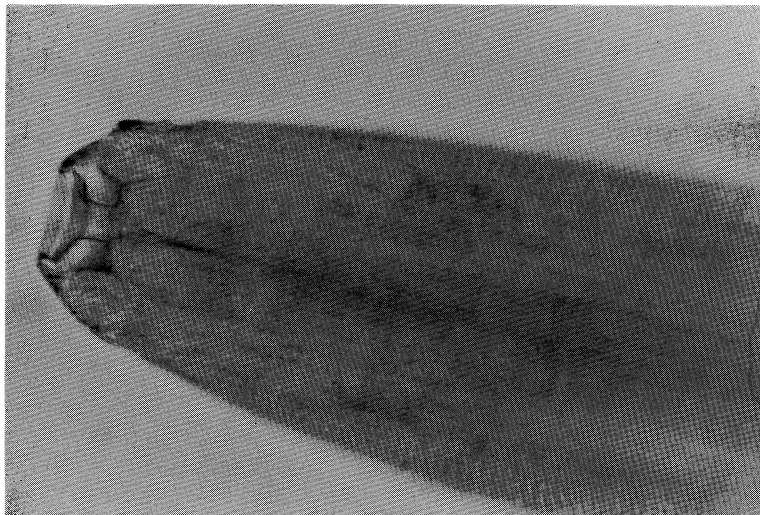


Fig. 4. An oral cavity without lips is seen in the head. Marked fine striations are seen on the body surface and serrated annulation at the edges.

part was sharply bent toward the abdominal surface (Fig. 5) and a short copulatory rod was present (Fig. 6).

Since morphology of the oral cavity and teeth in the oral cavity were lacking, the esophagus was not divided and there was serrated annulation on the cortex, the parasite was identified as *Thelazia*. To determine the species of nematode; It is necessary to confirm the number and locations of the papillae at the tip of tail. In the cases reported in Japan, however this almost never been done, and the parasite has been taken to be *Thelazia callipaeda*.

In the present case, it is more correct to say that the parasite was a *Thelazia* type nematode considered to be *Thelazia callipaeda*.

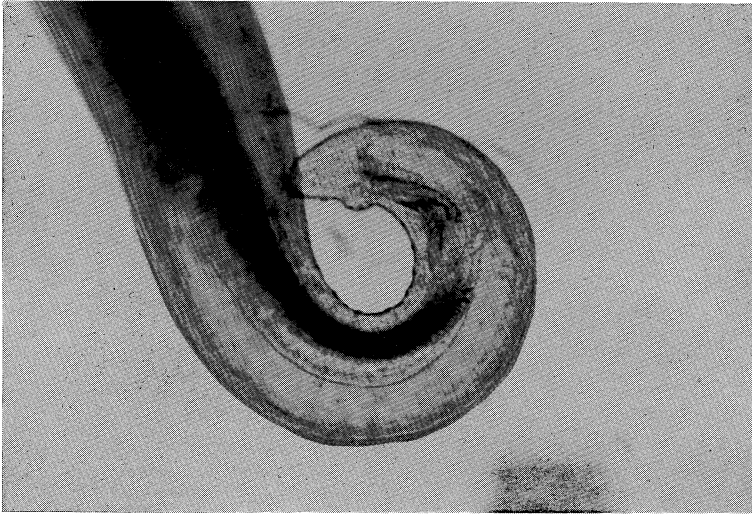


Fig. 5. The tail part is sharply curved toward the abdominal surface.

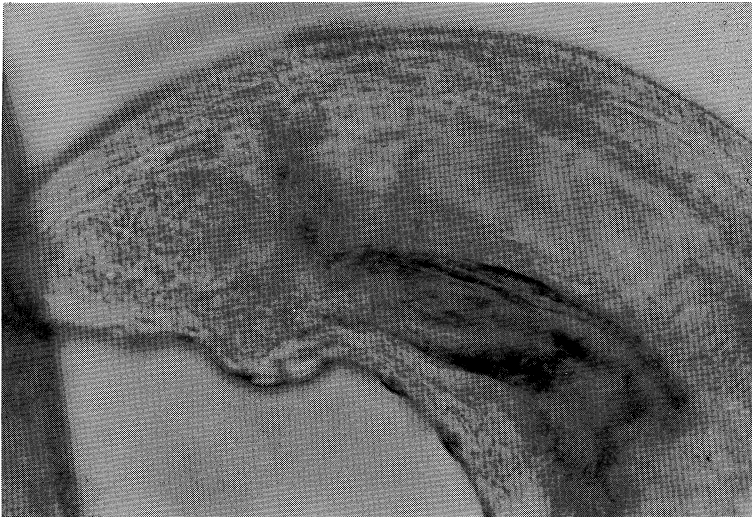


Fig. 6. A short copulatory rod is seen in the tail.

#### DISCUSSION

*Thelazia callipaeda* inhabits the conjunctival sacs of animals such as dogs or rabbits and deposits eggs on the conjunctival surface. The eggs are present in the lacrimal fluid and eye discharge. *Drosophila* such as *Amiota variegata* which serve as the intermediate host ingest the eggs from around the eyes of the animals. The parasites ingested by the *Amiota* are in the form of infective parasites 2-2.5 mm in size. When the *Amiota* ingests the lacrimal fluid of the final host, the parasites are released on the surface of the conjunctiva.<sup>1)</sup>

In experiments, it has been found that it takes about 35 days for the

infective parasites to mature in the final hosts and deposit eggs.<sup>2)</sup> The tail region of the males gradually becomes curved and is sharply curved by the 12th day after parasitism. The nematode in this patient was a male and from the degree of curvature of the tail, it was assumed that only about 10 days had passed after parasitism.

The cases of thelaziasis *callipaeda* reported in Japan were most often discovered accidentally. The presence of this type was followed by complaints of a sensation of foreign matter, hyperemia, lacrimation or eye discharge. With respect to geographical distribution, most of the cases were seen in Kyushu, including Oita, Kumamoto and Miyazaki, with a tendency to gradually move northwards. The most common site of parasitism was the conjunctival sac, but cases in the anterior chamber<sup>3,4)</sup> and in an upper palpebral tumor (eosinophilic granuloma)<sup>5)</sup> have also been reported.

In Okayama Prefecture, this is the second case of thelaziasis *callipaeda* to be reported following that of Shimoda *et al.* in 1986.<sup>6)</sup> However, there was only one parasite present and no sensation of a physical disorder in the conjunctiva.

It is highly interesting that both of the cases in Okayama Prefecture occurred in persons living in Mitsu-gun. This could be of importance in determining the spread of thelaziasis *callipaeda* in the future.

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