

Clinostomum complanatum Infection in Posterior Wall of the Pharynx of a Human

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Abstract

This paper was reported as the sixth human infection of the genus *Clinostomum*. The adult worm was identified as *C. complanatum* from morphological similarity to the species reported by Yamashita (1938). The patient is a female farmer and sometimes eats roach. She visited the otorhinolaryngologist due to the irritation and pain of the pharynx. Three worms attached on posterior wall of the pharynx were found. Removal of the parasites immediately resulted in the patient free from symptoms.

Key words: *Clinostomum complanatum*, parasitic laryngo-pharyngitis, halzoun, posterir wall of the pharynx

Introduction

The genus *Clinostomum* (Trematoda; Clinostomidae) is normally parasitic on fish-eating birds. Only five human cases of oral cavity infection with *Clinostomum* have been reported (Yamashita, 1938; Witenberg, 1944; Kamo *et al.*, 1962; Sakaguchi *et al.*, 1966; Sano *et al.*, 1980).

We found three adults of *Clinostomum complanatum* on posterior wall of the pharynx of a human.

Case Report

A 35-year-old female farmer, M.T., residing

in Tensui-machi, Kumamoto Prefecture, Japan, visited an otorhinolaryngologist, one of us, H.O., due to the irritation and pain of the pharynx. Otorhinolaryngological examination revealed three small living worms adhered to the posterior wall of pharynx (Fig. 1). The worms were extirpated and one of them was fixed with 10% formalin to transfer to the laboratory.

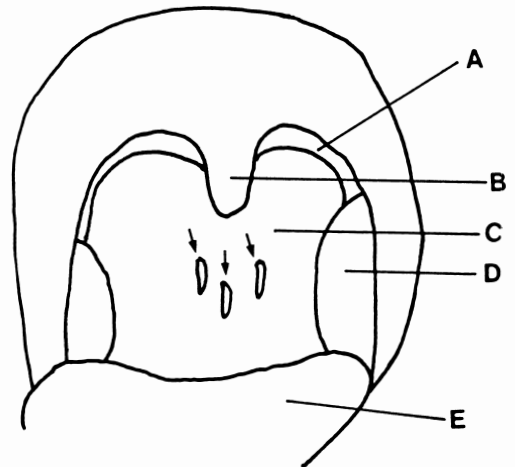


Fig. 1 Posterior oral cavity showing the location of parasite specimen. A; Platopharyngeal arch. B; Uvula. C; Posterior wall of pharynx. D; Palatine tonsil. E; Tongue. Arrows indicate parasite specimens.

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The signs and symptoms in the patient's oral cavity were as follows; cough (-), bleeding (-), sputum (-), fever (-), pain of deglutition (-), pruritic feeling (+), flare of pharynx (-, rather pale), swelling of lymphonodes (-), swelling of mucous membrane (-), and hypertrophy of tonsil (-). Removal of the parasite immediately resulted in the patient free from above symptoms.

Description of Parasite

The fixed worm with formalin was subject to the pressed preparation under pressure of a cover-slip after transferred to 70% ethanol. The pressed specimen was stained by acetic-alum carmine (Figs. 2a and b). The dimensions and morphology of this specimen are as follows: Body elliptical, 3.02 mm in length, 1.44 mm in

maximum width at the median level of body. Oral sucker transverse, 0.21×0.27 mm, subterminal, situated in the center of oral field which is elliptically expanded and measured 0.39×0.55 mm; orifice of oral sucker also transversely elliptical, 0.11×0.16 mm. Behind the oral field, lateral margins of body were slightly constricted. Acetabulum large, situated just posterior to oral sucker, transversely elongated, elliptical, 0.50×0.69 mm. Its orifice elliptical, but internal atrium Y-formed. Pharynx obscure, situated near the posterior margin of oral sucker. Ceca bifurcated immediately posterior to pharynx, reversely running a short distance anteriorly and very thin, then, thickened and directed to posteriorly, with a few constrictions and minute wrinkles, approaching to each other near the caudal end of body. Genital organs almost degenerated, obscure except

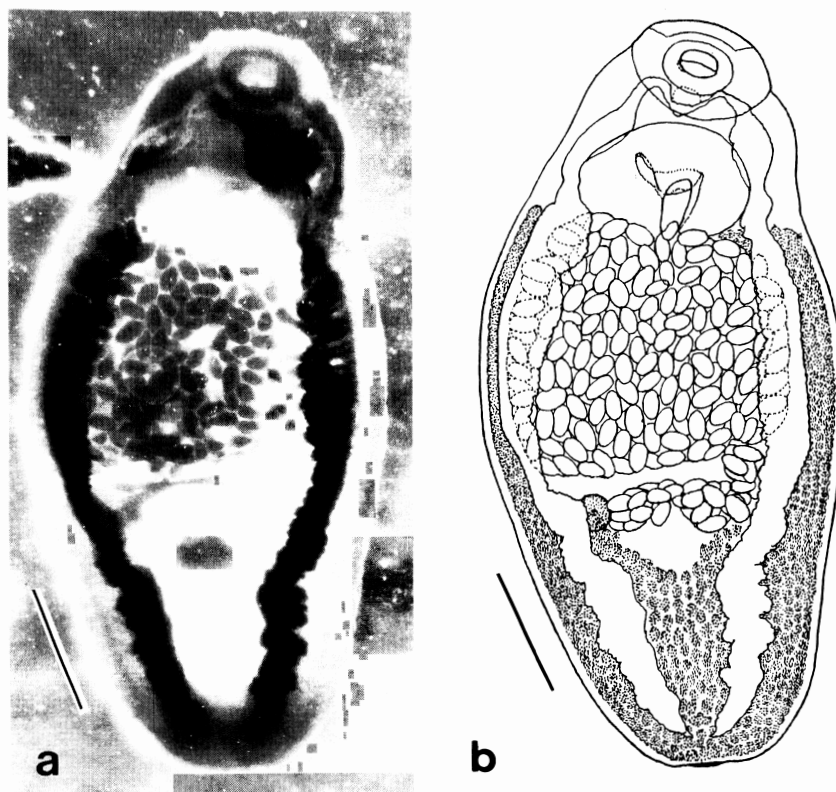


Fig. 2 *Clinostomum complanatum* obtained from our case. a) Photomicrograph (ventral) of stained specimen. b) Drawing of the ventral view of the specimen. Scales show 0.5 mm.

uterus which develops voluminously and contains numerous eggs. Vitellaria distributed from the postacetabular level to the caudal end of body along the lateral margins, medially limited to the posterior region to uterus where degenerated posterior testis occupied. Uterus occupying about median third of body, lateral portion partially overlapped with ceca. Eggs elliptical, not embryonated, $0.115-0.123 \times 0.059-0.069$ mm, operculated. Ootype complex scarcely visible just posterior to uterus, sinistral to the median line.

Discussion

The "parasitic laryngo-pharyngitis" in man, an acute irritation of the throat based on the temporary attachment of worms, is known in the Near East by the name of "halzoun". As the causative agent for this situation, three different parasites have ever been reported: leeches, liver fluke, and *Clinostomum*. The first case of *Clinostomum* in man had been reported by Yamashita (1938) in Japan. Then Witenberg (1944) reported that *Clinostomum* caused "halzoun". In both cases the worm was identified as *Clinostomum complanatum*.

The present specimen is almost identical to *Clinostomum complanatum* (Rudolphi) reported by Yamashita (1938). There have been reported 3 other cases infected with the congeneric trematodes (described as *Clinostomum* sp.) in Japan (Kamo *et al.*, 1962; Sakaguchi *et al.*, 1966; Sano *et al.*, 1980). Considering the morphological characteristics, though gonads are obscure, we identify the present species as *C. complanatum*. According to Ukoli (1966), about 20 species of *Clinostomum* recorded from Asia (mainly from India), Africa, and Americas are synonyms of *C. complanatum*.

This species is commonly parasitic on several species of fish-eating birds. The second intermediate hosts of this parasite are various species of fishes. The infection, therefore, occurs through eating fish infected with metacercariae of the parasite. In present case the patient has often eaten roach (*Carassius carassius*), which was already proved to be the host of *C. complanatum* (Yamaguti, 1933). In previous five cases, too, the parasitism of *Clinostomum* spp. occurred after having eaten some raw fishes.

Acknowledgement

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