

CASE REPORT

CLINOSTOMUM TREMATODE FROM HUMAN EYE

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Abstract. The first human case of *Clinostomum* lacramatitis in Thailand is reported. A 38-year-old man visited an ophthalmology clinic after having itchy pain in the right eye for two days. Ophthalmological examination revealed a living worm adhered to the lacramal opening and after removal, it was identified as *Clinostomum* sp. The patient admitted that he used to eat raw freshwater fish, he caught in Prachin Buri Province where he lives.

There are about 19 valid species of trematode in the genus *Clinostomum*, but the most common species is *C. complanatum* (Rudolphi, 1814) a parasite in the esophagus of piscivorous birds in the families Ardeidae, Accipitridae, Laridae, Fregatidae and Phalacrocoracidae (Yamaguti, 1958). It has also been known to cause a clinical syndrome called halzoun or marrara (Witenberg, 1944), a unique infection of man causing pharyngitis, laryngitis and laryngo-pharyngitis (Witenberg, 1944; Furukawa and Miyazato, 1987; Hayashida and Takao, 1988; Hirai *et al.*, 1987; Yoshimura *et al.*, 1991; Kamo *et al.*, 1962; Sakaguchi *et al.*, 1996; Fejzullaev and Mirzoeva, 1987; Isobe *et al.*, 1992; 1994; Ukoli, 1966; Yamane *et al.*, 1990; Umezaki *et al.*, 1990). The first human infection with *Clinostomum* had been reported in Japan (Yamashita, 1938), where up to date about 16 cases were recorded in man (Chung *et al.*, 1995). There were also reports from Israel (Witenberg, 1944), India (Cameron, 1945) and Korea (Chung *et al.*, 1995). Human infection by clinostome fluke is very rare and the infection is acquired from eating raw freshwater fish such as carp, *Cyprinus carpio* and crucian carp, *Carassius auratus*, infected with the fluke metacercaria (Cameron, 1945). In Thailand, the metacercaria of clinostome fluke was found in the body cavity of Pla Kra Dee, *Trichopodus trichopterus* and Pla Krim, *Trichopsis vittatus* (Waikagul, unpublished data). This is the first report of human clinostomiasis in Thailand and the first record in the eye.

A 38-year-old man visited the ophthalmology clinic in Chao Phya Abhai Bhu Bejhr Hospital on June, 1997 due to the painful and foreign body sensation in the right eye. Before visiting the clinic,

he had a pain in the frontal sinus area for two to three months. He was quite healthy with no other complaints. Ophthalmological examination revealed the white point at the right lower inner eyelid, mild inflammation and conjunctivitis. The worm was removed from the lacramal opening and transferred to the Department of Parasitology, Faculty of Medicine Siriraj Hospital, Mahidol University. Visual acuity was normal, right eye 20/20, left eye 20/20; tension measured 19 mmHg in the right eye and 17 mmHg in the left eye. For three days, stool examination was negative for parasite eggs. The patient lived in Prachin Buri Province and usually went fishing in his free time. He admitted eating several species of the fish he caught raw. After the worm was removed, the patient was fully recovered without pain in both frontal sinus and the right eye.

The worm was fixed in 10% formalin and pressed before being stained with carmine and fast green. The posterior part of the worm was broken by forceps during removal and apparently not in good condition, some internal organs were degenerated. The worm body was linguiform, 5 mm in length and 2 mm in width at the posterior third of the body (Fig 1). No tegumental spines were observed. The mouth was subterminal, oral sucker and digestive tract were not clearly seen. Numerous frontal glands were located anteriorly between mouth and ventral sucker. Ventral sucker was large, 0.8 mm in diameter, in the middle of anterior half of the body. Anterior testis was somewhat triangular, situated in the posterior part of the middle third of the body. Posterior testis was crescentic, located in the anterior part of the posterior third of the body. Ovary was small, located between the two testes,

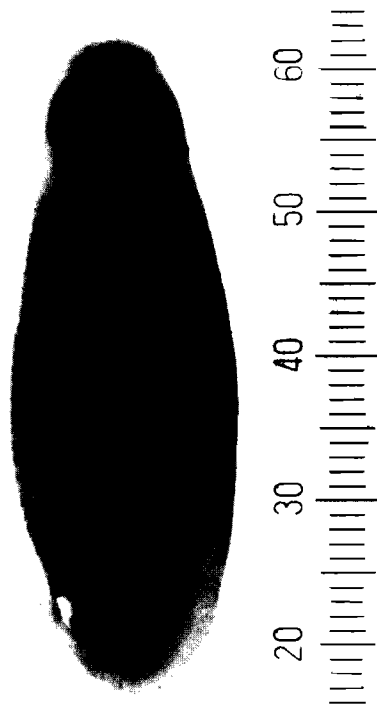


Fig 1—*Clinostomum* sp, a trematode removed from the right eye of a 38 years old man from Prachin Buri Province, Thailand.

slightly on the right of the body mid line. Vitelline follicles lay in both lateral sides of the body, from the posterior of ventral sucker to the middle level between posterior testis and posterior end of the body.

Earlier reports on clinostomiasis have been described as laryngitis or laryngo-pharyngitis. The metacercaria of the clinostome fluke is naked without cyst wall and moves freely in the abdominal cavity of the fish. When the infected fish is consumed raw, the metacercaria attaches itself to the pharynx and develops to the adult within four to seven days (Chung *et al*, 1995). In this case, the fluke was found in the eye, a site that has never been reported before; how the worm finds its way to the eye is still not clear. However, as the patient claimed that he had some pains in the frontal sinus area two to three months before visiting the clinic, it could be possible that it moves through the frontal sinus to the eye. On the other hand, the worm might contaminate the hand during handling fish and reach the eye from the outside by direct contact

and as the metacercaria is unencysted, it can attach directly to the eye.

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