Two human cases of *Thelazia callipaeda* infection in Korea

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**Abstract:** *Thelazia callipaeda* were observed from a 7-month old baby who lived in
Uijongbu in 1989 and from a 42-year old man who lived in Anyang in 1994. These are the
23th and 24th records of human thelaziasis in Korea as the literature are concerned.

**Key words:** *Thelazia callipaeda*, case record, SEM

Total 22 cases of human thelaziasis had been recorded in Korea (Ahn et al., 1993). The
authors confirmed total 10 adult worms of *Thelazia callipaeda* isolated from a baby and a
man in Korea, and briefly recorded their histories.

Case 1: A 7-month old Korean male infant who lived in Uijongbu, Kyonggi-do, was
consulted to a private ophthalmology clinic by his mother in October 1989 because of moving
worms in his conjunctival sac. He was transferred to the Seoul Baik Hospital, and the
worms were removed from his eyes. His mother stated that she had climbed a mountain in Tongduchosun with him.

Total five worms were recovered from the baby and consulted to the Department of
Parasitology, Seoul National University College of Medicine. The worms were identified as *T. callipaeda*. One was a female and four were
males. The male worms were cylindrical, whitish and slender, and sized 9.7 mm in
average length and 0.2 mm in maximum width (Fig. 1). Transverse cuticular striations covered

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margin of the mouth opening as well as four papillae (Figs. 5 & 6). The amphid was a pocket-shaped depression with a long transverse slit at the center, and was surrounded by compact transverse wrinkles (Fig. 7). The amphid of the other side was obscured by a flower-shaped artifact (Fig. 8).

The intervals between transverse cuticular striations became longer toward the posterior part, and dense corrugations were arranged perpendicularly to the transverse striations (Figs. 9, 10 & 11). The paired preanal sensory papillae were observed on every 12 transverse striations posteriorly as a round crateriform elevation with a central nerve ending which was covered with wrinkled cuticle (Figs. 12, 13 & 14). The tail of the male coiled ventrally, and the anus and spicules were not detected.

The vaginal opening was indistinguishable in a female worm. The anal opening resembled a chestnut, and floored by smooth tissue without striations or wrinkles (Fig. 15). A pair of bead-shaped phasmids, a kind of the chemoreceptor, protruded laterally at the posterior end (Fig. 16).

Case 2: The other case was a 42-year-old Korean male who lived in Anyang, Kyonggi-do. In December 1994, he visited a private ophthalmology clinic because of foreign body sensation and itching on his right eye. His inferior conjunctiva was hyperemic and edematous, but superior conjunctiva was not observed. He was treated under the impression of allergic conjunctivitis, but he complained of same symptoms afterwards.

When he visited the clinic again, seven moving white thread-like worms were removed from his right eye. Among them, five worms were delivered to Department of Parasitology, Seoul National University College of Medicine. The worms were all male and measured average 11.8 mm long and average 0.3 mm wide. The number of transverse cuticular striations was 256 to 320/mm at head portion, 140 to 160/mm at mid-portion, and 173 to 224/mm at tail portion.

The worms from the case 2 were also identified as T. callipaeda. He was a driver of a truck who was working in very dusty environment. He remembered no history of contact with flies.

These two are the 23rd and 24th human cases of thelaziasis in Korea. There may have occurred many unrecorded cases the worms of which had been thrown into the garbage can since extraction of the worm from the eye is all of the treatment. Therefore much more human infection is actually expected further in Korea. The dog was revealed as its reservoir host in Korea (Hong et al., 1985) and some species of the fly including Armonia spp. are suspected as its vector host (Choi et al., 1989). The study on its vector is a subject of further research in this country.

REFERENCES


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Figs. 1-4. Light microscopic findings of male T. callipaeda from the case 1. Fig. 1. Whole worm of a male T. callipaeda. (Bar unit: 1 mm) Fig. 2. Anterior portion of a T. callipaeda, showing the characteristic buccal cavity. Fig. 3. Tail portion of a male T. callipaeda, showing a long spicule (arrow head). Fig. 4. Preanal papillae are lining in a row (arrow heads).

Figs. 5-14. Scanning electron microscopic views of T. callipaeda from the case 1. Fig. 5. Front view of the buccal cavity showing margins of the cavity and esophageal lumen (E). The anterior margin is beset with a pair of amphids (Am), sensory papillae (P), cuboidal elevations (arrow heads) and then connections (open triangle). An: amphid, E: esophagus, P: papillae, arrowhead: cuboidal shape thickening of cuticle, empty triangle: gull shaped cuticular thickening. Fig. 6. A pair of sensory papillae are closely observed at the outer anterior margin. Fig. 7. An amphid is magnified showing a ventral slit. Fig. 8. The other amphid is covered by an artifact. Fig. 9. Transverse cuticular striations at the anterior portion, which are compact.

Figs. 10-11. Transverse cuticular striations at the middle portion are less dense than those at the anterior end. Fig. 12-13. Tail portion of a male with 7 preanal sensory papillae. Fig. 14. One preanal papilla consists of a central nerve and with surrounding crateriform elevation of the cuticle. Fig. 15. Tail portion of a female T. callipaeda. An: anus, Pm: phasmid. Fig. 16. Higher magnification of the anus.
동양안충 인체 감염 2례

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동양안충 인체 감염 2례를 보고하고자 한다. 한 예에는 7개월된 영아로 눈에서 충 체를 발견하여 내원한 결과 동양안충 5마리를 적출하였다. 기생충학적으로 판단한 바, 암컷 1마리에 수컷이 4마리였으며, 길이가 평균 9.7 mm, 폭이 최대 0.2 mm였다. 이 환자의 어머니는 의정부에 거주하며, 아기와 함께 동두천에 있는 산에 오른 경험이 있다고 하였다. 충체를 얻은 환자에게 주사전자현미경으로 관찰하였다. 두번째 증례는 안양에 거주하는 42세의 트럭운전수로, 오랜 동안 이동감과 가려움을 주소로 내원한 결과 외국 전방에서 7마리의 충체를 적출하여 그 중 5마리를 기생충학적으로 관찰하고 그 소견을 기술하였다. 충체는 모두 수컷이었으며, 길이와 폭의 평균이 각각 11.8 mm, 0.3 mm이었다. 이 증례들은 각각 문헌에 보고된 동양안충 국내 증례의 제 23, 24례에 해당한다.

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