

## A human case of *Stellantchasmus falcatus* infection

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**Abstract:** A human case infected with *Stellantchasmus falcatus* (Heterophyidae) is reported based on the adult worms collected after praziquantel treatment. The patient is a 33-year old male residing in Seoul. For several months he experienced vague abdominal discomfort and hunger pain. Praziquantel at a single dose of 600 mg was given followed by purgation with magnesium salt, and 17 adult *S. falcatus* specimens were collected from the diarrheal stools. He recalled he had eaten raw flesh of several kinds of brackish water fishes. This is the 4th human case of *S. falcatus* infection in Korea.

**Key words:** *Stellantchasmus falcatus*, case report, praziquantel, fish-borne parasite

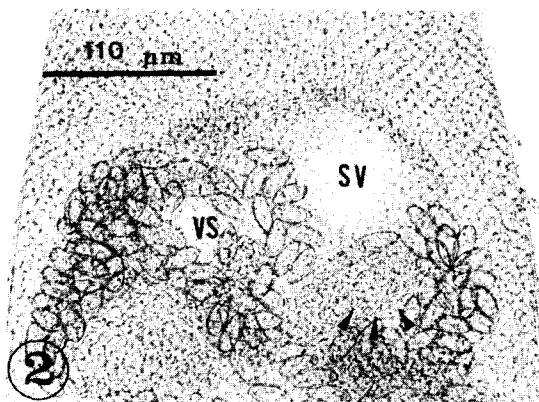
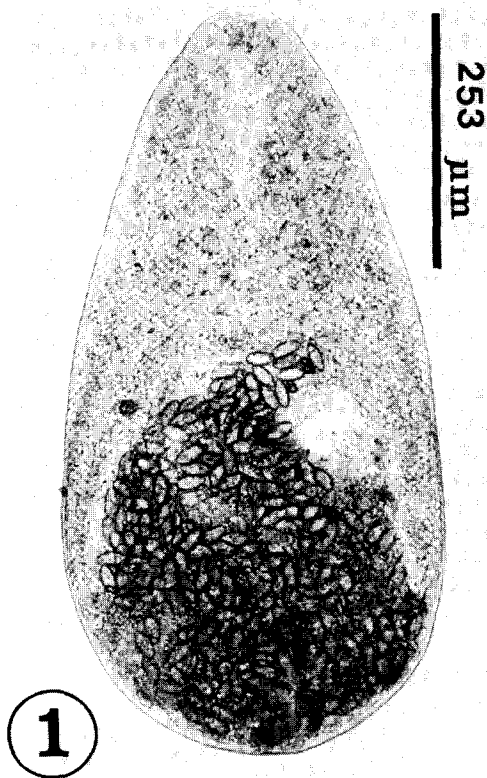
*Stellantchasmus falcatus*, a species of the fluke family Heterophyidae, is a minute intestinal trematode of fish-eating birds and mammals. Human infections with this fluke have been reported in Korea (Seo *et al.*, 1984; Hong *et al.*, 1986), Japan (Kagei *et al.*, 1964), Philippines (Africa *et al.*, 1940), Thailand (Tantachamrun and Kliks, 1978) and Hawaii (Alicata and Schattenburg, 1938). This paper describes the 4th human case in Korea.

The patient, a 33-year old male residing in Seoul, experienced vague abdominal discomfort and hunger pain for a period of several months, and recalled he had eaten raw flesh of several kinds of brackish water fishes. Several eggs of heterophyid fluke were found in the stool examination by formalin-ether sedimentation technique in December, 1988. He was treated with praziquantel at a single dose of 600 mg, and purged with 25 g of magnesium salt 1 hour later. Through stereomicroscopy of the diarrheal stools, 17 specimens of *S. falcatus* and 14 *Heterophyes nocens* were collected.

One month after the treatment, the eggs were not found. His clinical symptoms disappeared completely.

The worms were identified as *S. falcatus* based on the measurements and descriptions (Onji and Nishio, 1924; Seo *et al.*, 1984). They were dorsoventrally flat, pyriform or ovoid in shape, 0.634~0.811 mm long and 0.312~0.385 mm wide (Fig. 1), and were characterized by the presence of ventrogenital sac and seminal vesicle consisted with an elongated muscular expulsor and a round vesicular part (Fig. 2). The measurement data are as presented in Table 1.

As for the source of human infection (second intermediate host) of *S. falcatus*, brackish water fishes such as mullets or gobies were reported in Japan, Hawaii, China and Korea (Onji and Nishio, 1924; Alicata and Schattenburg, 1938; Kobayasi, 1968; Chai and Sohn, 1988). In the present case, the brackish water fishes he had eaten seem to have been the source of infection.



**Fig. 1.** An adult of *S. falcatus* collected from the present case.

**Fig. 2.** Magnification of another worm near the ventral sucker(VS) and seminal vesicle(SV), which consists of a muscular expulsor and a vesicular part(arrows).

**Table 1.** Measurements\* of *S. falcatus* collected from the present case

Items	Measurement(mm)	
	Range	Average
<b>Body</b>		
length	0.634~0.811	0.759
width	0.312~0.385	0.342
<b>Oral sucker</b>		
length	0.051~0.061	0.056
width	0.056~0.067	0.061
<b>Pharynx</b>		
length	0.033~0.041	0.038
width	0.036~0.056	0.044
<b>Esophagus</b>		
length	0.102~0.146	0.129
<b>Ventral sucker</b>		
length	0.038~0.046	0.041
width	0.038~0.049	0.044
<b>Seminal vesicle(expulsor)</b>		
length	0.064~0.115	0.083
width	0.056~0.067	0.060
<b>Ovary</b>		
length	0.054~0.090	0.071
width	0.064~0.128	0.089
<b>Right testis</b>		
length	0.061~0.149	0.108
width	0.051~0.115	0.083
<b>Left testis</b>		
length	0.056~0.128	0.109
width	0.051~0.108	0.084
<b>Eggs(intrauterine)</b>		
length	0.023~0.027	0.025
width	0.010~0.013	0.012

\* 12 worms were measured.

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==국문초록==

***Stellantchasmus falcatus*에 의한 인체 감염 1례**

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*Stellantchasmus falcatus*에 의한 인체감염 1례가 프라지관텔 투여 후 총체를 수집함으로써 확진되었다. 환자는 서울에 거주하는 33세 남자로 복부 불쾌감과 공복통이 있다고 하였다. Formalin-ether 침전법으로 실시한 대변 검사에서 이형흡충류의 충란이 검출되어 프라지관텔 600 mg을 1회 투여하고 1시간 후 황산 마그네슘 25 g으로 설사를 유도한 바 설사변에서 *S. falcatus* 17 마리와 *H. nocens* 14마리가 검출되었다. 치료 후 1개월에 실시한 대변검사에서는 충란이 검출되지 않았고 임상증상도 없어졌다고 하였다. 환자는 평소에 여러 종류의 생선회를 즐겨 먹었다고 하며 이들이 감염원인 것으로 추측된다. 이 증례는 *S. falcatus*의 국내 4번째 인체감염례에 해당된다.