

Subcutaneous fascioliasis: A case report

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Abstract: A 32-year old housewife, living in Seoul, recognized incidentally a painless mass at the left chest wall. During later 3 months, she experienced spontaneous swelling and regression of the mass repeatedly for 4 times. Surgical resection showed a granuloma at anterior serratus muscle containing a nearly matured adult of *Fasciola* species without vitellaria and uterus. This is the 11th human fascioliasis and the first extra-abdominal infection reported in Korea.

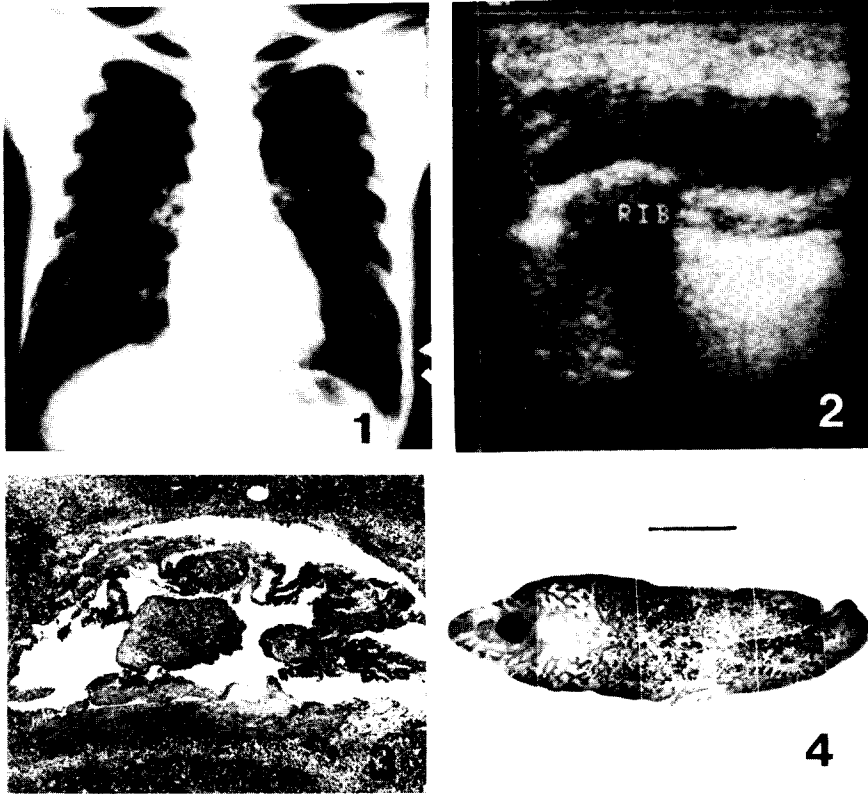
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Fascioliasis is a zoonotic helminthiasis caused by trematode parasite, *Fasciola* sp. Herbivorous mammals, especially cattle are the principal definitive hosts of the trematode in East Asian countries. Human infection is not common; but it is occurring world-widely because people eat inadvertently raw water plants which are contaminated with the metacercariae. In Korea, a total of 11 cases of human infection has been recorded in the literature. Of them, a case description by Kim *et al.* (1990) did not provide the adequate and agreeable evidence of *Fasciola* infection. Excluding the case, therefore, there have been 10 authentic human infections in this country. They are consisted of 7 biliary infections (Cho *et al.*, 1976; Oh *et al.*, 1984; Hong *et al.*, 1986; Chi *et al.*, 1986; Im and Kim, 1988; Park *et al.*, 1989; Shin *et al.*, 1989) and 3 extra-hepatic infections of abdominal organs at the cecum (Lee *et al.*, 1982; Park *et al.*, 1984) or at the omentum (Jang *et al.*, 1990). We report here an additional case of human ectopic fascioliasis who manifested a subcutaneous mass.

The patient, YMC, a 32-year old teacher/housewife, visited Chung-Ang University Hospital on January 18, 1991 with the chief complaint of an indolent mass at the chest wall.

The mass had first been recognized 3 months ago. Thereafter, the mass regressed spontaneously in a week but reappeared at the same site a month later. The size of mass wax and wane repeatedly for 4 times. On palpation, it was rather ill-defined, non-tender and hard mass. No other abnormalities were exhibited in physical examination. Results of laboratory tests were normal. Chest X-ray film revealed a localized swelling of soft tissue at her left lower chest wall (Fig. 1). On ultrasonography (Fig. 2), it was a solid mass of 3 cm with heterogenous echogenicity.

Excisional biopsy was done under an impression of bone tumor or vascular lesion. However, a granulomatous lesion (Fig. 3) was located within anterior serratus muscle. The lesion was connected with a tract along the lower margin of a rib. From the tract, a brownish worm with black mottlings was recovered (Fig. 4). The worm, 2.46×0.71cm, was nearly elliptical and flat. It had a conical projection. Oral sucker (0.705×0.360mm) was smaller than acetabulum (1.140×1.035mm). Integument was armed with spines. Intestinal ceca branched in complicated fashions. Testes and cirrus pouch were well developed. Branched ovary and Mehlis' gland



- Fig. 1.** Soft tissue swelling at the left lower chest (arrow heads). Compare with the contralateral side.
Fig. 2. Ultrasonography revealed a solid mass with heterogenous echogenicities. Intact cortex of rib is also observed.
Fig. 3. Histologic findings of the main granulomatous mass(H&E, $\times 40$). Cavitory lesion is surrounded by palisading epithelioid cells and inflammatory cell infiltration.
Fig. 4. Immature adult of *Fasciola* sp. collected from the lesion. Semichon's acetocarmine staining (scale 5 mm).

were faintly stained with Semichon's acetocarmine. Vitellarian follicles and uterus were not formed at all. The worm was identified to be an immature adult of *Fasciola* species. The patient serum was tested by ELISA for specific (IgG) antibody on the day of surgery. Only the antibody to *Fasciola* was marginally positive. The patient was treated additionally with praziquantel in a dose of 75mg/kg/day for 3 days to kill the possibly remaining *Fasciola*.

Ectopic infection is not uncommon in human fascioliasis, because strayed juvenile *Fasciola* may direct its way to extra-hepatic tissues. But its relative frequency is hardly accountable. In this respect, Bürgi (1936) listed 16 ectopic infections out of 185 hitherto reported human

fascioliasis. Of the 16 cases, 10 were subcutaneous or muscular infections. Catchpole and Snow (1952) also mentioned that 14 of 24 human ectopic fascioliasis were subcutaneous infections. Interestingly, no cases of subcutaneous fascioliasis have been reported in Korea up until now.

Up to present, cysticercosis, sparganosis or paragonimiasis have been regarded as causes of migrating or fixed subcutaneous masses of parasitic origin in Korea (Chi *et al.*, 1988). In addition to them, we think fascioliasis should also be considered especially in mind of parasitologists or pathologists. However, preoperative diagnosis of fascioliasis seems almost impossible, as in the present case, because of its rarity,

Unless associated with high eosinophilia and migrating tendency, even the presumption of parasitic nature of a subcutaneous mass is actually difficult. Correct postoperative identification of the inflicting parasites, however, is quite necessary because the principles of patient management are different by etiologic helminth.

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＝국문요약＝

흉벽 근육내에 발생한 간질(肝蛭)의 이소기생 증례

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서울에 거주하는 32세 가정주부가 좌하측 흉벽에 발생한 직경 약 3cm인 종괴를 제거하기 위하여 입원하였다. 종괴는 지난 3개월간 네번 커졌다가 없어지고는 하였다. 수술 소견상 전거상근(前鉅上筋)내에 육아종이 있었고 그 안에서 미성숙 간질 총체를 발견하였다. 이 증례를 우리나라의 인체 간질 감염 제11례로 보고한다. 간질의 이소기생중 가장 흔한 것으로 알려진 피하기생레로는 우리나라에서는 처음으로 경험한 증례이며 앞으로 기생충성 피하종괴의 감별대상에 간질(肝蛭) 감염도 고려하여야 한다고 생각한다.

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