

Intestinal parasitic infections of Korean Army soldiers in Whachon-gun, Korea

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Abstract: We examined stools of 113 soldiers of Korean Army in Whachon-gun, Korea in 1992. The eggs of *Clonorchis sinensis* (7/113) and *Metagonimus* sp. (3/113), and cysts of *Giardia lamblia* (4/113) were detected. No eggs of soil-transmitted helminths were found. Most of the *Clonorchis*-infected soldiers (6/7) were recruited from Kyongsangnam-do.

Key words: Army soldiers, stool examination, *Clonorchis sinensis*, *Metagonimus*

In December 1992, we carried out stool examination of a small group of Korean Army soldiers who were residing in Whachon-gun, Kangwon-do, Korea. We took formalin-ether concentration technique for the 113 specimens. Eggs of *Clonorchis sinensis*, *Metagonimus* spp. and cysts of *Giardia lamblia* were found (Table 1). None of the egg or cyst positive soldiers showed gastrointestinal disturbances. Praziquantel (Distocide®, Shinpoong Pharm. Co., Korea) was prescribed 25 mg/kg t.i.d. for 2 days to the *Clonorchis* egg passers, and 10 mg/kg single dose praziquantel was recommended to the positive cases of *Metagonimus* eggs. One of them was subjected for worm collection with magnesium salt purgation after praziquantel treatment, we could collect *M. takahashi* (Chai et al, 1993). The cyst carriers of *G. lamblia* were treated with metronidazole 250 mg t.i.d. for seven days. All of the treated soldiers were found negative by follow-up examination after three weeks. Any adverse reaction was not observed.

Resident area of the soldiers before the recruitment was informed, and six out of seven *C. sinensis* egg positives were from Kyongsangnam-do. All of the *C. sinensis* egg

positive ones had experiences of eating raw fresh-water fish before their military services.

In 1986, the fourth nation-wide survey for intestinal parasitic infections revealed *C. sinensis* egg positive rate 9.5% in Kyongsangnam-do (Ministry of Health and Social Affairs and Korea Association of Health, 1987). It is well-known that *C. sinensis* is highly endemic in Kyongsangnam-do. Although the number of examinees is not large enough for a definite conclusion, we could suggest a tendency that the soldiers recruited from Kyongsangnam-do are more highly infected by

Table 1. Results of stool examination of Army soldiers in Kangwon-do (1992)

	No. of cases (%)
Total No. examined	113
Cumulative positive	14 (12.4) ^{a)}
No. positive	12 (10.6)
<i>Clonorchis sinensis</i>	7 (6.2)
<i>Metagonimus</i> sp.	3 (2.7) ^{b)}
<i>Giardia lamblia</i>	4 (3.5)

^{a)}Two soldiers were mixed infected with *Clonorchis* and *Metagonimus* sp. ^{b)}From one soldier, *Metagonimus takahashi* was collected after treatment.

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C. sinensis than those from other localities.

Rim (1990) reviewed the clonorchiasis in Korea and mentioned that the infection status of *C. sinensis* remained virtually unchanged for 15 years despite of introduction of praziquantel, since the prevalence rate in 1976, 1981, 1986 were 1.8%, 2.6%, 2.7% each. However, we thought that the real situation at present was characterized as not only the slow decrease of the nation-wide prevalence but also the highly persistent endemicity in many local areas (Lee *et al.*, 1993).

Hong (1986) reported the positive rate of helminth ova 22.6% and protozoan cyst 4.0% in 2,643 Korean soldiers. He found the 7.6% of *C. sinensis* egg positive rate. He understood that this high *C. sinensis* egg positive rate was due to location of the troops in the endemic area *i.e.* Taegu. In our survey, the location of the troops looks not important, but the localities before the military recruitment were closely related to *C. sinensis* infections in the soldiers.

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=국문초록=

강원도 화천군 주둔 한 군부대 장병의 장내 기생충 감염률

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강원도 화천군에 위치한 한 군부대 장병 113명의 대변을 검사하여 간흡충(6.2%), *Metagonimus spp.*(2.7%), 람블편모충(3.5%)의 감염자를 찾을 수 있었다. 이 중에서 간흡충 감염자 7명 중 6명이 경상남도 출신이었다. 경상남도 출신 16명 중 6명이 양성으로(37.5%) 다른 지역 출신(1.0%) 보다 높은 양성률을 보이는 것을 보아, 입대전에 감염되었을 것으로 추정한다.

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