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

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

\textbf{Key words:} Army soldiers, stool examination, \textit{Clonorchis sinensis}, \textit{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 \textit{Clonorchis sinensis}, \textit{Metagonimus} spp. and cysts of \textit{Giardia lamblia} were found (Table 1). None of the egg or cyst positive soldiers showed gastrointestinal disturbances. Praziquantel (Distocide\textsuperscript{®}, Shinpoong Pharm. Co., Korea) was prescribed 25 mg/kg t.i.d. for 2 days to the \textit{Clonorchis} egg passers, and 10 mg/kg single dose praziquantel was recommended to the positive cases of \textit{Metagonimus} eggs. One of them was subjected for worm collection with magnesium salt purgation after praziquantel treatment, we could collect \textit{M. takahashii} (Chai et al. 1993). The cyst carriers of \textit{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 \textit{C. sinensis} egg positives were from Kyongsangnam-do. All of the \textit{C. sinensis} egg positives had experiences of eating raw fresh-water fish before their military services.

In 1986, the fourth nation-wide survey for intestinal parasitic infections revealed \textit{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 \textit{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 positive ones had experiences of eating raw fresh-water fish before their military services.

In Table 1, the results of stool examination of Army soldiers in Kangwon-do (1992) are shown.

\begin{table}[h]
\centering
\begin{tabular}{l l}
\hline
Total No. examined & 113  \\
Cumulative positive & 14 (12.4)\textsuperscript{a}  \\
No. positive & 12 (10.6)  \\
\quad \textit{Clonorchis sinensis} & 7 (6.2)  \\
\quad \textit{Metagonimus} sp. & 3 (2.7)\textsuperscript{b}  \\
\quad \textit{Giardia lamblia} & 4 (3.5)  \\
\hline
\end{tabular}
\caption{Results of stool examination of Army soldiers in Kangwon-do (1992)}
\end{table}

\textsuperscript{a}Two soldiers were mixed infected with \textit{Clonorchis} and \textit{Metagonimus} sp. \textsuperscript{b}From one soldier, \textit{Metagonimus takahashii} was collected after treatment.

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C. sinensis than those from other localities.

Kim (1990) reviewed the clonorchiasis in Korea and mentioned that the infection status of C. sinensis remained virtually unchanged for 15 years despite 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 helmint hova 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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REFERENCES


=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%), 음질병균(3.5%)의 감염자를 찾을 수 있었다. 이 중에서 간흡충 감염자 7명 중 6명이 장병으로, 장병으로 16명 중 6명이 양성으로(37.5%) 다른 지역 출신(1.0%)보다 높은 양성율을 보이는 것을 보아, 임대전에 감염되었을 것으로 추정한다.

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