

## Survey on Infestation Rates of Head Lice in Two Primary Schools in Dangjin-gun, Chungchongnam-do

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### 충남지역 2개 초등학교의 머릿니 감염률 조사

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1998년 12월 충청남도 당진군 내 2개 농촌 초등학교를 대상으로 병설유치원생과 초등학생의 머릿니 감염실태를 조사하였다. 조사대상자 382명 중 92 명이 머릿니 양성자로 확인되어 24.1%의 기생률을 나타냈으며 학교별로는 각각 13.6%, 32.9%의 기생률을 보였다. 여학생의 기생률은 42.2%로 남학생 5.8%보다 높

게 나타났으며 학년별로는 5학년이 35.7%로 가장 높게 조사되어 머릿니 감염이 계속되고 있음을 확인하였다 (Korean J Infect Dis 31:237~238, 1999).

중심 단어 : Head Lice, Primary, Infestation Rates, Chungchongnam-do

#### INTRODUCTION

Infestation of head lice has been reported in the 1980s and it has been a public health problem. It causes symptoms of itching, difficulty of concentrating on study in school children, and also transfers diseases such as relapsing fever and trench fever in more severe cases<sup>1)</sup>. Because there have been no suitable chemicals or counterplan to control head louse infestation, we continuously have had its infestation since the prohibition of DDT usage in Korea<sup>2)</sup>. Some pyrethroid insecticides, drugs used in foreign countries for treatment of louse, have been known to have their side effects on human and mammals<sup>7)</sup> but are not manufactured in Korea. We surveyed infestation state of head lice in primary schools.

#### METHODS

We examined infestation state of head lice in 2 primary schools after we obtained permission from both schools in 1998. Number of examinees including kindergarten children was 382. The children in whom nits or lice were observed with naked eye were sorted as "infected". Regardless of living nit or dead nit, only untreated children were sorted "infected". We tried not to expose the infected children to others and did massive treatment. The insecticide used was Sumithrin<sup>®</sup> powder (0.4% phenothrin) which was imported from Japan.

#### RESULTS

Among the 382 subjects, 92 (24.1%) children were confirmed as having head lice infestation (Table 1). Infestation rate of each school was 13.6% and 32.9%, respectively.

Infestation rate of girls was higher than that of boys and the 5th grade had more infested children than any other

접수 : 1999년 4월 12일, 승인 : 1999년 5월 26일  
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Table 1. Point Prevalence of Head Lice Infestation among Primary School Children in Dangjin Surveyed in 1998 (by Grade and Sex)

Grade	Total		Male		Female	
	No. exam	No. infested (%)	No. exam	No. infested (%)	No. exam	No. infested (%)
K*	47	11 (23.4)	28	2 ( 7.1)	19	9 (47.4)
1	57	17 (29.8)	25	1 ( 4)	32	16 (50.0)
2	49	16 (32.7)	21	2 ( 9.5)	28	14 (50.0)
3	52	13 (25.0)	31	4 (12.9)	21	9 (42.9)
4	55	8 (14.5)	29	2 ( 6.9)	26	6 (23.1)
5	56	20 (35.7)	20	0 ( 0)	36	20 (55.6)
6	66	7 (10.6)	36	0 ( 0)	30	7 (23.3)
Total	382	92 (24.1)	190	11 ( 5.8)	192	81 (42.2)

\* : Kindergarten annexed to the primary school

grades in both schools (Table 1).

## DISCUSSION

Previous studies showed that infestation rate of head lice was 44.5% in Yongyang-gun, Kyongsangbuk-do<sup>3)</sup>, 23.5% among orphanage children<sup>6)</sup>, 8.8% among primary school children in Namwon-city in 1995<sup>4)</sup>, and 7.9% among primary school children in Iksan-city<sup>5)</sup>.

Improper treatment and side effects of the pesticides should be considered. In the past, people did not know well about the suitable regimen to kill head lice and there was also shortage of drug. Side effects of lindane, including toxic effects on the central nervous system, had been published. Furthermore, head lice with resistance to lindane have been reported<sup>2)</sup>.

Persistence of head lice infestation was thought to be due to shortage of regimen for extermination of head lice in the schools examined in this research. At the moment, the only available drug for treatment at drug stores is lindane in Korea and even this is not sufficient. Therefore, if infested children have severe symptoms, their treatment might be difficult.

The reasons for difficulty of head lice control can be suggested as follows: 1) shortage of knowledge on head lice management, 2) reinfestation after treatment, 3) absence of suitable drug in Korea and 4) avoidance of infestation exposure in the infested.

Considering recent economic crisis and the resultant

indifference about personal health, infestation rate may increase. At this point, health organizations and health education centers should pay more attention to infestation of head lice and to the production of suitable chemicals for the treatment.

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