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INVESTIGATIVE REPORT

Prevalence and Severity of Atopic Dermatitis in Jeju Island: A Cross-sectional Study of 4,028 Korean Elementary Schoolchildren by Physical Examination Utilizing the Three-item Severity Score

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The objective of this study was to evaluate the precise prevalence of atopic dermatitis (AD) in schoolchildren in Jeju Island in South Korea examined in 2009. Nine elementary schools were randomly selected from Jeju Island and a total of 4,028 schoolchildren were examined by a dermatologist. AD was diagnosed based on the Korean Atopic Dermatitis Research Group criteria for the disease. The severity of AD was measured with the three-item severity score (TIS). The point prevalence of AD was 9.5% overall. The prevalence among higher graders (age 9–12 years) was significantly lower than that in lower graders (age 6–9 years) (7.5% vs. 11.9%, *p*<0.00001). AD prevalence in girls (11.1%) was higher than that in boys (8.1%) (*p*<0.005). In each grade, more than 50% of those affected had the mild form (TIS score 1 or 2). There were no apparent differences in severity of AD between grades or genders. This is the first Asian study of prevalence in schoolchildren using TIS score for evaluating AD severity. ***Key words: atopic dermatitis; elementary schoolchildren; Korean; prevalence; three-item severity score.***

[illegible]

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]

Atopic dermatitis (AD) is a relapsing inflammatory skin [illegible]
backgrounds. Questionnaire surveys and physical exa- [illegible]
of AD. In English-speaking countries, the International [illegible]
[illegible] ween questionnaire and skin examination methods in non-English speaking populations (2). A recently pu- [illegible]
questionnaire has not been validated, skin examination is [illegible]

[illegible]
excellent for use in clinical trials, but too complicated and [illegible]
three-item severity (TIS) score, which was first presented by Wolkerstorfer et al. (4), is a simple scoring system [illegible]
The TIS score is easy and quick to obtain. Dirven-Meijer [illegible] 4 [illegible] - [illegible] (5) [illegible] (6, 7).

[illegible]
clinical examination in 3 different areas of South Korea: [illegible]
AD using dermatologist's physical examination for the first time in Jeju Island in South Korea.

[illegible]

Subjects

[illegible]
examinations were carried out by a single dermatologist (DSK). Nine elementary schools were selected randomly. Six schools [illegible]
Island) were selected and all the schoolchildren were examined by the dermatologist. The target population was first to sixth [illegible]

Diagnosis of atopic dermatitis

[illegible]
diagnostic criteria are the same as those of Hanafin & Rajka (10), [illegible]
eczema, scalp scaling and skin-prick test reactivity).

[illegible]
oedema and excoriations (scratches). The TIS score is the sum

[illegible]
[illegible]

[illegible]

Data analysis

The χ^2 [illegible] *t*-[illegible] $p<0.05$ [illegible]

[illegible]

Prevalence of atopic dermatitis

[illegible] girls) were examined. The overall prevalence of AD in Jeju [illegible] (p [illegible] <0.005). The prevalences of AD in first to sixth graders were 12.2%, [illegible] overall combined prevalence of AD in first, second and third graders was 11.9%, which was significantly higher than the combined prevalence among fourth, fifth and sixth graders (7.5%) ($p<0.0001$). [illegible] (p [illegible] >0.05).

Severity of atopic dermatitis

[illegible] ± [illegible] with no significant difference ($p>0.2$). [illegible] (p [illegible] >0.1). [illegible] (p [illegible] >0.1). [illegible]

[illegible]

[illegible]

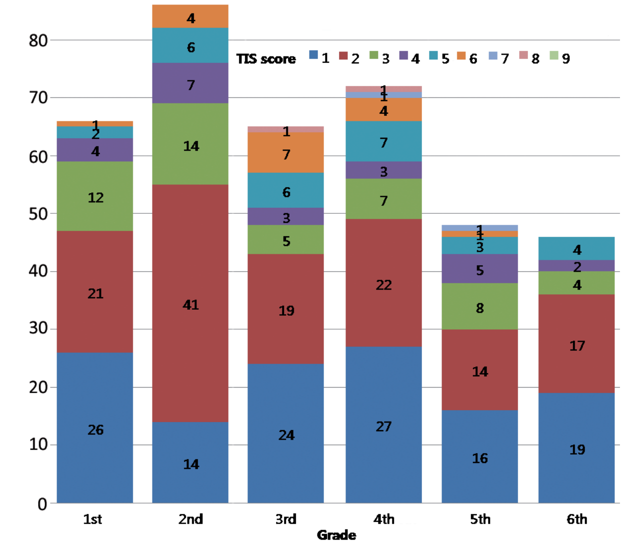

Fig. 1. [illegible]

[illegible] been confirmed. Studies from Germany, Hong Kong and [illegible] that the prevalence rate measured by skin examination is [illegible] of AD prevalence, measured by skin examination, reveal [illegible]

[illegible] years, identification of loss-of-function mutations in the gene encoding filaggrin has shed new light on disease [illegible]

[illegible]

[illegible] *Prevalences of atopic dermatitis (AD) by grade and gender in elementary schoolchildren in Jeju Island*

[illegible]	[illegible]		[illegible]		[illegible]	
	[illegible] *n*	[illegible] *n* (%)	[illegible] *n*	[illegible] *n* (%)	[illegible] *n*	[illegible] *n* (%)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sixth	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ever, a nationwide study in Japan revealed no significant

There was a significant difference in the prevalence of

$p < 0.005$.

fic hereditary components and skin physiology, or the fact

factors influencing the gender difference (20–24).

The severity of AD did not differ significantly between boys and girls. TIS score, classified as mild (< 3),

of schoolchildren of both sexes in Jeju Island (6). Thus

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