

Prevalence of Infantile and Early Childhood Eczema in a Japanese Population: Comparison with the Disease Frequency Examined 20 Years Ago

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To investigate the prevalence of infantile and early childhood eczema in a Japanese population, we clinically inspected the entire bodies of 4-month-old infants (341 cases), 10-month-old infants (339 cases) and 3-year-old children (341 cases). The examination was performed in spring, when exacerbations of infantile and childhood eczema most frequently occur in Japan.

Eczema was observed in 30-31% of the infants, and in 20% of the 3-year-old children. The prevalence was almost the same as in similar age groups that we examined 20 years ago. *Key word: epidemiology.*

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Many studies have suggested that the prevalence of atopic dermatitis has increased during the last decades in Europe (1-6) and Japan (7-9).

However, it is not clear whether the increase of the prevalence of atopic dermatitis reflects a real increase of patients with atopic dermatitis. Williams (10) and Kay et al. (11) state that some part of the increase in previous reports may depend on biases which come from differences over time in the methods employed in gathering and analyzing the data and criteria used for diagnosis of atopic dermatitis.

Twenty years ago, we performed a clinical examination of the incidence of infantile and early childhood eczema in a Japanese population (12). To see whether infantile and early childhood eczema has increased or not during the last 20 years, we examined the incidence of eczema in similar age groups using the same diagnostic criteria that we used 20 years ago.

MATERIALS AND METHODS

Subjects

Three hundred and forty-one cases of 4-month-old infants, 339 cases of 10-month-old infants, and 341 cases of 3-year-old children were included in the present study. We consecutively examined all the infants and children who came to public health examinations at the Health Care Division of Otsu city, Shiga prefecture, Japan.

Diagnosis of infantile and early childhood eczema

Diagnosis of infantile and early childhood eczema was based on the morphological appearance and distribution of skin lesions described by Hill & Sulzberger (13).

Season of the examination

The examination was performed in April and May, 1993, because infantile and childhood eczema in Japan is exacerbated most frequently in spring (14).

Observation

The total body of each case was carefully observed, and the distribution of eczematous lesions was recorded. The severity of eczema was determined by the following criteria: mild, presence of eczema on less than 10% of the total body surface; moderate, involvement of 10-50% of the body surface; severe, involvement of more than 50% of the body surface (12).

RESULTS

Prevalence of eczema

Eczema was observed in 30% (104/341) of the 4-month-old infants, 32% (108/339) of the 10-month-old infants, and 20% (68/341) of the 3-year-old children.

Distribution of eczema

Of the 104 4-month-old infants who had eczema, 79 had eczematous lesions on the face, trunk and extremities, and 25 had eczema on the scalp and face. Of the 108 10-month-old infants who had eczema, 95 had eczematous lesions on the face, trunk and extremities, and 13 had eczema on the scalp and face. Of the 68 3-year-old children who had eczema, all had eczematous lesions on the face, trunk and extremities.

Disease severity

In the group of 4-month-old infants with eczema, the incidence of severe, moderate and mild cases was 3%, 20% and 77%, respectively. In the group of 10-month-old infants with eczema, the incidence of severe, moderate, and mild cases was 0%, 12% and 88%, respectively. In 3-year-old children with eczema, the incidence of severe, moderate and mild cases was 5%, 11% and 84%, respectively.

DISCUSSION

The present study indicates that the prevalence of infantile eczema and early childhood eczema in Japan is approximately 30% and 20%, respectively. Other recent studies in Japan have shown that eczema occurred in 30% to 36% of infants and 20% to 30% of young children (15,16). Thus, our data on the prevalence of infantile and early childhood eczema is similar to the data described by other investigators.

Twenty years ago, we clinically observed infants and children and found that the prevalence of eczema in 3 month-old infants, 7 month-old infants, and 3 year-old children was 27%, 31% and 17%, respectively (12). Thus, the prevalence of infantile and early childhood eczema in the present time is almost the same as the prevalence of eczema in similar age groups investigated 20 years ago.

It has been reported that the majority of cases of infantile

and early childhood eczema present as eczema of atopic dermatitis of infantile and early childhood (13, 17, 18). It is then likely that the prevalence of infantile and early childhood atopic dermatitis has not changed during the last 20 years in Japan.

Atopic dermatitis is a hereditary disease (3, 19, 20). The incidence of a hereditary disease will not change greatly in a period of just a few generations (21). Thus, a consistency of the prevalence of infantile and early childhood atopic dermatitis during the last two decades seems most likely.

Lastly, previous studies on the prevalence of atopic dermatitis were mostly performed by questionnaires (1-6). Thus, the diagnosis of atopic dermatitis was not made by clinical examination but was based on recall by the children or their parents of the symptoms or signs of the disease. As shown by the present study and the previous one (6), the majority of cases of infantile and early childhood atopic dermatitis are mild. Therefore, infantile and early childhood eczema, unless very severe, might have been ignored in the previous studies based on recall. These facts might be a factor in the apparent increase tendency of atopic dermatitis in recent years.

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