

PREVALENCE OF ATOPIC DERMATITIS IN CHILDREN IN IRAN

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Abstract :

Atopic dermatitis is a very common skin disease specially in childhood. Recently, a new set of six criteria has been proposed for the diagnosis of atopic dermatitis. We used these criteria to determine the prevalence of atopic dermatitis in children younger than twelve years old attending a general pediatric clinic. We also studied the effect of the type of feeding in the first six months of life on the prevalence of this disease.

The point prevalence of atopic dermatitis was 17.6% in this study. It was much higher in children younger than 4 years (21.2%) and it was slightly higher in boys (20% vs 15.3%). Breast-feeding in early life showed a protective effect on the subsequent development of atopic dermatitis.

Introduction :

In different studies the prevalence of atopic dermatitis in children has been found to vary from as low as 1.7%⁽¹⁾ to as high as 23%⁽²⁾. This variation can be attributed to differences in the diagnostic criteria for atopic dermatitis, the genetic background of the population studied and variations in environmental factors⁽³⁾. It seems also that the prevalence of atopic dermatitis is increasing during the past several years⁽⁴⁾.

Recently the U.K. Working Party has proposed a new diagnostic criteria for atopic dermatitis⁽⁵⁾. The diagnosis of atopic dermatitis is based on the presence of an itchy skin condition plus three or more of: (i) a history of a rash in the skin creases (folds of elbows, behind the knees, fronts of ankles or around the neck); (ii) a personal history of asthma or hay fever; (iii) a history of a generally dry skin in

the last year; (iv) onset under the age of two and (v) visible flexural dermatitis as defined by a photographic protocol⁽⁶⁾. These criteria have proved very sensitive, specific and easy to use both in hospital⁽⁵⁾ and community settings⁽⁷⁾.

We have used these criteria to determine the point prevalence of atopic dermatitis in children under the age of 12 years attending a university-based general pediatric clinic in Tehran, Iran. We also studied the effect of the type of feeding (breast-feeding, cow's milk or both) in the first six months of the life on the development of atopic dermatitis.

Materials and methods:

The population study comprised all children under the age of 12 attending the pediatric clinic of Firoozabadi Hospital on January and February 1996.

This is a university-based hospital located in the center of the city of Tehran, Iran with unrestricted access for the general population.

After explaining the purpose of the study to the parents and receiving their verbal consent, the parents were asked to fill in a questionnaire consisting of background information such as age and sex and type of feeding in the first 6 months of life and the five questions proposed by the U.K. Working Party. The children were examined for the presence of visible flexural dermatitis using the photographic protocol. Children who showed an itchy skin condition plus at least three of the other five criteria were considered to have atopic dermatitis.

Results and discussion :

The sex and age distribution of the population studied as well as those diagnosed as having atopic dermatitis are shown in table 1. The type of feeding in the first 6 months of the life is shown in table 2. In this study, the point prevalence of atopic dermatitis was 17.6 percent and the prevalence was slightly higher in boys than in girls. The prevalence of atopic dermatitis in those children who were fed cow's milk in the first six months of life was significantly higher than the children fed with breast milk ($p < 0.05$).

The prevalence of atopic dermatitis has increased continuously during the past few decades. The cumulative incidence rate of atopic dermatitis (birth to 7 years) was 2-3% before 1960, 4-8% during the 1960's, 9-12% in the 1970's and at least 15-20% in the 1980's⁽⁸⁾. The high prevalence of atopic dermatitis found in this study may reflect this global trend.

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Also the cold and dry weather of Tehran at the time of study and the heavily polluted air of Tehran as an industrialized city may contribute to this high prevalence rate.

Prolonged breast-feeding (more than six months) has been shown to have a protective effect on the subsequent development of atopic dermatitis⁽⁹⁾, although this was not confirmed in some studies⁽¹⁰⁾. We also found a significant decrease in the development of atopic dermatitis in the infants who were only breast fed in the first six months of their life.

This study showed that the new proposed diag-

nostic criteria for atopic dermatitis are reliable, easy to use and especially practical for large population studies in children.

The high prevalence of atopic dermatitis found in this study again confirms the global increase in the prevalence of this disease.

Breast-feeding in early life showed a protective effect in the subsequent development of atopic dermatitis in this study. Further studies particularly in other areas with different ethnic backgrounds and environmental conditions and also in adults may be required to confirm these findings.

	Study population	Atopic dermatitis	Prevalence of atopic dermatitis
Male	498	100	20.0 %
Female	524	80	15.3 %
0-4 years	416	88	21.2 %
4-8 years	344	32	9.3 %
8-12 years	262	60	2.3 %
Total	1022	180	17.6%

Table 1. Sex and age distribution of the study population and those diagnosed as atopic dermatitis.

	Study population	Atopic dermatitis
Breast-feed	498	76 (15.3%)
Cow's milk	286	63 (22.0 %)
Breast-feed & cow's milk	238	41 (17.2%)
Total	1022	180 (17.6%)

Table 2. Type of feeding in the first six months of the life in the study population and those diagnosed as atopic dermatitis.

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