



Development of Atopic Dermatitis in Children Living Around Oil Refining Factories

Khushvaktova Madina Farkhodovna ¹

¹ Bukhara State Medical Institute named after Abu Ali Ibn Sina, Uzbekistan

Abstract: Atopic dermatitis in children is one of the urgent problems of pediatrics and pediatric allergology. Currently, the prevalence of this disease is 10-20% of children worldwide. The incidence of atopic dermatitis in children in different regions of the Russian Federation is very variable and usually ranges from 10 to 28%, and its share in allergic diseases is 50-75%. To date, a number of factors have been identified that aggravate the course of atopic dermatitis - food sensitivity, contact with pets, psychological discomfort and emotional stress, a history of intrauterine infections, skin colonization with *Staphylococcus aureus*.

Keywords: Atopic dermatitis, microbiocenosis, young child, inflammation, microbiological examination, prevention, treatment.

During our research, the clinical part of the work is based on the results of the study of 150 children with atopic dermatitis aged 4 to 12 years who applied to the central polyclinic of the Karavulbazar district of the Bukhara region. In the majority (98/90.8%) of early-aged children, the onset of atopic dermatitis was recorded at 4-6 months. According to clinical observations and anamnesis, the primary damage to the skin was mostly local. The most common localization of injury areas was in the face area, and the skin of the cheeks was injured, which was observed in 100% of children. At the same time, according to the affected areas of atopic dermatitis, 119 (80.6%) patients in children simultaneously had 86 (58.3%) in the ear area, 141 (95.4%) in the scalp, and 134 (90.7%) in the jaw. there are also rashes. In sick children, 100 (67.6) in the neck area, 138 (93.5) in the collar area, 32 (22.2) in the buttock area, 104 (70.4) on the outer surfaces of the legs, 64 (43) on the wrists and hands .5%) rashes are also located. Widespread atopic dermatitis was observed in 32 (21.3%) children.

During the study, we found out that in most children, 78 (52.7%) diseases became chronic and worsened from 2 to 6 times a year, and the duration of the disease was from 1 to 15 years.

The main complaints of sick children and their parents are itching of varying intensity, which is mainly accompanied by rashes. Itching zones are more localized on the face, neck, skin folds: elbow, wrist and ankle joints, on the back surface of the hands. The most common localization is damage to the back surface of the hands (109 /74.2%), folds (elbow, popliteal) – 63 /42.6%. Rashes are characterized by erythematous-squamous elements with unclear boundaries, small-papular pink rashes, joining foci of various sizes, vesiculation, infiltration, lichenization, hemorrhagic crusts, as well as areas of hyper- and hypopigmentation (Table 1) (Fig. 1).

During the study, lichenization occurred in 25 child patients (16.7%), all of whom were older than 4.5 years. The affected skin was distinguished by very dry, thickened areas, many angular lichenoid papules and scabs, as well as the presence of dyschromic areas. We observed the localization of lichenized foci mainly in skin folds, on the face and neck, called "atopic face", with the development of an allergic phenomenon. At the same time, during the study, we also saw cases with gray skin, dullness, thickened lower eyelids, accentuated folds, and often hyperpigmentation.

Table 1. Clinical manifestations in research groups of children with atopic dermatitis

| Dermatological syndromes | Number of patients | % |
|-----------------------------|--------------------|------|
| Erythema, edema | 121 | 81,7 |
| Vesiculation, exudation, | 62 | 41,8 |
| Infiltration, lichenization | 43 | 29,0 |
| Scratching | 94 | 63,5 |
| Itching | 137 | 93,0 |
| Excoriation | 76 | 51,3 |

When we analyzed the distribution of rash elements and symptoms of atopic dermatitis in children examined during the study, it was found that the manifestations of this dermatosis in children were mainly itching (93.0%), erythema and swelling (81.7%) and scratching (63.5%). was determined. Signs such as exudation, infiltration with lichenization and, oddly, excoriation were less common, but we observed that they were recorded in 41.0% to 51.0%.

According to the classification of atopic dermatitis (RODV 2010 recommendations), the patient children were divided into three age groups according to the clinical and morphological form of the disease: age group 1-2 (41.7%), age group 3-4 (34.3%) and age 5-6 group (24.1%), did not have significant differences from the control group. We found these indicators in children with infantile form (Table 1). The mean age ratio in the group was 3.5 ± 4 years, which was comparable to the corresponding figure of the control group (2.4 ± 3.8). In patients with infantile form of the disease, these data were obtained in the age range.

Table 2. Distribution of children with atopic dermatitis according to the form of the disease, gender, period of the disease, spread and severity

| Research indicators | Grouping of sick children by age | | | |
|---------------------------|----------------------------------|---------------|---------------|---------------|
| | Total | 1-2 age group | 3-4 age group | 5-6 age group |
| | n=150 | n=50 | n=47 | n=53 |
| Gender of patients | | | | |
| Son | 62 | 19 | 18 | 25 |
| Girl | 86 | 29 | 29 | 28 |
| The course of the disease | | | | |
| Sharp | 78/52,7% | 43/89,6% | 20/42,5% | 15/28,3% |
| Sharp under | 70/47,3% | 5/10,4% | 27/57,5% | 38/71,7% |
| Remission | 0 | 0 | 0 | 0 |
| Disease spread | | | | |
| Localization | 58/39,1% | 16/33,3% | 30/63,8% | 7/13,2% |
| General | 64/43,2% | 20/41,6% | 9/19,1% | 12/22,6% |
| Diffuse | 26/17,6% | 12/26,7% | 8/17,0% | 34/64,2% |

Aggravation of the disease was noted in many sick children 72.2% / 78. In the subacute period 70/47.3% In the acute period of atopic dermatitis, clear signs of skin inflammation and severe itching were noted in the patient's children. Among the common symptoms, 47 children complained of sleep disorders, 36 children complained of subfibrillation, especially when secondary infection was added.

The subacute period is characterized by few clinical manifestations of atopic dermatitis. Hyperemia was weakly expressed, which was accompanied by a slight injury due to its almost complete absence. In a large percentage of sick children, itching continued during this period.

The nature of the affected areas of the skin has changed: skin elasticity decreases, dryness, lichenoid and follicular lichenization rashes, excoriations, and bloody crusts appear in places. Also, hyperhidrosis of palms and feet was found in 21 children, white or mixed dermographism in 19 children, positive pyloromotor reflex in 9 children.

SCORAD (index) was used to obtain objective, comparative, standardized data on the nature and severity of clinical manifestations of dermatosis. The initial values of the SCORAD index in all patients ranged from 24.5 to 62.6 and averaged 41.3. In the initial examination of sick children, 48 patients had an average level of dermatosis (SCORAD 19 to 44).

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