



Clinical Criteria for the Manifestation of Atopic Dermatitis in Schoolchildren, Depending on Age

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Abstract: The problem of atopic dermatitis is becoming increasingly important in modern medicine. In the structure of allergic diseases in children, atopic dermatitis is one of the leading in terms of its prevalence. However, many questions of this problem still remain unresolved. The article presents a review of the literature of domestic and foreign authors, summarizing modern concepts of the criteria for the manifestation of atopic dermatitis in schoolchildren, depending on age.

Key words: atopic dermatitis, IgE, trigger factor

INTRODUCTION

Relevance

Over the past decades, allergic diseases have become unusually widespread throughout the world. One of the leading places is occupied by atopic dermatitis, the prevalence of which, according to epidemiological studies, ranges from 17 to 25% [1,2,3]. For the first time the term "atopic dermatitis" was used by Sulzbeger in 1923 for skin lesions associated with increased sensitivity to various allergens, a combination with other atopic diseases (bronchial asthma, hay fever, rhinitis, etc.). the patient and the clinical picture in the presence of many signs of atopy and even diagnostic criteria [4].

This disease is characterized by a persistent, continuously recurrent course. There was a tendency to the formation of severe, therapy-resistant forms of the disease, to a decrease in social adaptation and the development of a child's disability [5,6].

According to modern data, the pathogenetic basis of atopic dermatitis is allergic inflammation and hyperreactivity of the skin, which disrupt the natural reaction of the skin to the effects of various external and internal factors. The key role in the mechanisms of the development of atopic dermatitis is played by IgE - mediated reactions caused by genetically determined dysfunction of TH2 lymphocytes and a number of cytokines, which are the main regulators of immunoglobulin synthesis [7,8,9].

The development of atopic dermatitis in children is closely related to the effects of various allergens, and in children in the first years of life, food allergens (cow's milk, eggs, fish, cereals, orange or red fruits and vegetables) play a leading role. With age, the role of food allergy in the development of atopic dermatitis decreases and inhalation allergens such as house dust, pollen, fungal and epidermal allergens become dominant [10, 11].

Among the factors predisposing to the development of atopic dermatitis in young children, it should be noted a violation of the processes of digestion and absorption due to transient enzymatic insufficiency, malabsorption syndrome, dyskinesia of the biliary and intestinal tract, viral or serum hepatitis, disturbance of intestinal microflora, infection with helminths and protozoa (giardiasis, enterobiasis, opisthorchiasis) [12,13].

In atopic dermatitis, a violation of the systems that protect the body from excessive intake of allergens, as well as systems involved in the elimination of antigens from the body, leads to the fact that long-term antigenic exposure in the presence of a genetic predisposition causes a breakdown of the adaptive-compensatory mechanisms of the body and the development of immunopathological reactions [14].

It is clinically characterized by pruritus, typical morphology and localization of foci with age-related features, chronic recurrent course, staging of the process [15,23].

Hereditary predisposition plays a proven role in the formation of atopic diseases. Studies conducted in many countries have shown that blood pressure develops in 82% of children if both parents have allergies, while blood pressure develops mainly in the first year of a child's life. If only one of the parents has blood pressure, and the other has an allergic pathology of the respiratory tract, the disease develops in 59% of children, and in 42% if first-line relatives have 13 manifestations of atopy. From the father of an allergic person, signs of atopy develop in a child in 40-50% of cases, from the mother in 60-70% [16,17]. The high incidence of AD in homozygous twins also indicates the genetic basis of the disease [18,22].

A number of studies have shown that in AD, one of the trigger factors is a violation of the microbiocenosis. Violation of the composition and function of its own microflora can lead to a more severe course of blood pressure due to a violation of cavity and parietal digestion. Violation of the fermentation of disaccharides (lactose) contributes to the development of carbohydrate imbalance, increased skin colonization by *Staphylococcus aureus* [19, 20, 21].

Purpose of the study

Clinical criteria for the manifestation of blood pressure in schoolchildren, depending on age

MATERIAL AND METHODS

To assess social adaptation, the parameters characterizing behavior, contacts with children and adults, independence of actions and features of the functioning of the psychoemotional sphere. Irrigation plants are designed for children 6-7; 8-12 and 13-17 years old, taking into account the age-related anatomical, physiological and psychological characteristics. The assessment of morbidity and assessment of the social status of the child's family have been added to the main blocks. The four main blocks contain five features characterizing the corresponding problems (physical, psycho-emotional, social and intellectual) and five options for assessing each feature (never occurs; almost never; sometimes, often, almost always). The incidence block includes the assessment of frequent and long-term acute diseases; characteristic for a particular age period and background conditions (chronic diseases; presence of disability). The block for assessing the social status of a family consists of four parts: completeness of the family and large families; material support (per capita); condition of housing; intra-family problems.

To solve the set tasks, 85 surveyed children were divided into 3 groups:

age 6-7 years;

age 8-12 years;

age 13–17 years;

CONCLUSION

The data given in the table indicate the identification of the main criteria for blood pressure at the time of examination in most children. Additional criteria for blood pressure were found only in some of the schoolchildren. At 6-7 years of age, more often in relation to other groups, there were such additional criteria as xerosis, the onset of the disease in childhood, conjunctivitis. At 8-12 years old, frequent infectious skin lesions, pityriasis alba, were manifested. At the age of 13-17, ichthyosis, increased pattern on the palms, increased serum IgE levels, dermatitis of the skin of the hands and feet, pityriasis alba, itching with increased sweating, white dermographism. An increased level of IgE was detected in 78.2% of schoolchildren aged 13-17, which indicates the predominance of the allergic variant of blood pressure. At the age of 6-7 years, an increase in the IgE content in the blood was found in 71.4% of children, at 8-12 years in 67.6%.

Clinical criteria for the manifestation of blood pressure in schoolchildren, depending on age

| Groups | 6-7 years old n = 28 | | 8-12 years old n = 34 | | 13-17 years old n = 23 | |
|---------------------------------------|----------------------|------|-----------------------|------|------------------------|------|
| Criteria | abs. | % | abs. | % | abs. | % |
| | | | | | | |
| Mandatory: | 18 | 64,3 | 25 | 73,5 | 19 | 82,6 |
| Itching | 17 | 60,7 | 24 | 70,6 | 18 | 78,3 |
| Typical morphology and localization | 27 | 96,4 | 32 | 94,1 | 22 | 95,6 |
| Recurrent course | 21 | 75 | 24 | 70,6 | 15 | 65,2 |
| History of atopy | | | | | | |
| Additional | 20 | 71,4 | 23 | 67,6 | 18 | 78,2 |
| Early onset (before 2 years) | 21 | 75 | 24 | 70,6 | 17 | 73,9 |
| Infectious skin lesions | 10 | 35,7 | 13 | 38,2 | 9 | 39,1 |
| Neck folds | 5 | 17,8 | 6 | 17,8 | 4 | 17,3 |
| Itching with increased sweating | 8 | 28,5 | 11 | 32,3 | 9 | 39,1 |
| White dermographism | 13 | 46,4 | 14 | 41,1 | 11 | 47,8 |
| Follicular hyperkeratosis | 5 | 17,8 | 5 | 14,7 | 4 | 17,3 |
| Conjunctivitis | 2 | 7,1 | 2 | 5,8 | 1 | 4,3 |
| Hyperlinearity of the palms | 4 | 14,3 | 5 | 14,7 | 4 | 17,3 |
| Nonspecific dermatitis of hands, feet | 4 | 14,2 | 5 | 14,7 | 5 | 21,7 |
| Ichthyosis / Xerosis | 15 | 53,5 | 18 | 52,9 | 11 | 47,8 |

A comprehensive examination revealed that, on average, there were 3.8 diseases for each child with blood pressure. Most often, from the background and concomitant pathology, there were diseases of the gastrointestinal tract, endemic goiter, functional disorders of the central and autonomic nervous system, diseases of the upper respiratory tract and ENT organs. 3% of children have bronchial asthma.

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