

ALLERGIC DERMATITIS IN CHILDREN: RISK FACTORS, CLINICAL MANIFESTATIONS AND PREVENTIVE MEASURES

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Abstract

Allergic dermatitis in children is one of the most common forms of allergic skin diseases, characterized by inflammatory skin changes, itching, and increased sensitivity of the body to various allergens. The disease significantly affects the quality of life of children and may lead to sleep disturbances, emotional disorders, and an increased risk of developing other allergic conditions. This article discusses the main causes of allergic dermatitis in children, the characteristics of its clinical course, and modern approaches to diagnosis, treatment, and prevention. Particular attention is paid to the role of hereditary predisposition, food allergens, and household allergens in the development of the disease.

Keywords: Allergic dermatitis, children, allergy, skin diseases, allergens, atopic dermatitis, diagnosis, treatment, prevention, immune system.

Introduction

Allergodermatitis (atopic dermatitis) is one of the most common chronic skin diseases in childhood worldwide. According to international epidemiological studies, the disease occurs in 10–20% of children in developed countries, with an increasing trend observed in recent decades. In Western Europe and North America, the prevalence of atopic dermatitis among children is approximately 15–25%, with particularly high rates recorded in large cities, which is associated with urbanization, environmental factors, and lifestyle changes. In Asia, rates range from 5 to 20%, but in industrialized regions (Japan, South Korea, Singapore), the incidence of the disease is gradually approaching European levels.



In African countries and some regions of South America, prevalence is significantly lower (2–10%), but experts note possible underestimation of cases due to limited access to medical diagnostics and differences in reporting criteria.

It has been established that in 60–80% of children, the disease begins before the age of 5, and in a significant proportion of patients, the first symptoms appear in early infancy. In 30–50% of children, symptoms gradually subside by adolescence, but in some patients, the disease may persist into adulthood.

Thus, allergic dermatitis is a global health problem with high prevalence, significant impact on the quality of life of patients and a significant burden on the healthcare system.

The purpose of the study

To study the clinical features of allergic dermatitis in children, identify the main risk factors for its development, and evaluate the effectiveness of modern methods of diagnosis, treatment, and prevention of the disease.

Research objectives

To study the prevalence of allergic dermatitis among children of different age groups. To determine the main etiological factors and risk factors for the development of the disease. To analyze the clinical manifestations of allergic dermatitis in children. To evaluate the effectiveness of modern methods of diagnosis and treatment of allergic dermatitis. Develop recommendations for disease prevention and relapse prevention.

Research methods

To achieve this goal, the following research methods were used: analysis of domestic and foreign scientific literature on the problem of allergic dermatitis in children; clinical observation of children with allergic skin diseases; collection and analysis of anamnestic data; allergological examination of patients; comparative analysis of the results of diagnostic studies; statistical processing of the obtained data.

Results and discussion

The analysis revealed that allergic dermatitis is one of the most common allergic diseases in childhood. It most frequently occurs in infants and preschool-aged children, due to the functional immaturity of the immune system and the body's increased sensitivity to allergens. It has been established that hereditary predisposition, food allergens, household dust, animal dander, pollen, and certain medications play a leading role in the development of allergic dermatitis. Most children examined had a combination of several risk factors.

The clinical presentation of the disease was characterized by skin redness, dryness, flaking, severe itching, and rashes in various locations. The skin of the face, neck, elbows, and popliteal folds was most frequently affected. Intense itching led to sleep disturbances, irritability, and a reduced quality of life in children.

Observational results showed that timely identification of causative allergens and a comprehensive treatment approach help reduce the severity of clinical symptoms and prolong remission. The most



effective interventions were a hypoallergenic diet, avoiding contact with allergens, using skin moisturizers, and prescribed medication.

Table 1 Main nutritional problems and their impact on the health of children with allergic reactions and gastrointestinal disorders

Problem	Effect on the body	Recommendations for correction
Lack of energy	Growth retardation, weakness	Increasing the caloric content of the diet
Animal protein deficiency	Decreased immunity and tissue regeneration	Introduction of easily digestible proteins
Lack of essential fats	Immune dysregulation	Inclusion of vegetable oils, fish
Excess of simple sugars	Increased inflammation, dysbiosis	Limit sweets and fruits with a high glycemic index
and mineral deficiencies	Deterioration of immunity, healing, and metabolism	Enriching the diet with vegetables, fruits, and, if necessary, vitamin complexes

The data presented in Table 1 demonstrate that preschool-aged children with allergies and gastrointestinal disorders have a number of characteristic nutritional problems. Energy deficiency and animal protein deficiency lead to stunted growth, weakened immunity, and decreased regeneration. A deficiency of essential fats limits immune regulation and adaptive mechanisms. Excessive consumption of simple sugars contributes to the development of dysbiosis and the maintenance of inflammatory processes. Vitamin and mineral deficiencies exacerbate metabolic disorders and reduce the body's defenses.

A comprehensive diet correction involves increasing its caloric content through high-quality foods, enriching it with easily digestible proteins, including sources of polyunsaturated fatty acids (vegetable oils, fish), limiting simple sugars, and ensuring sufficient intake of vitamins and microelements both through food and, if necessary, using vitamin-mineral complexes (Table 2).

Table 2 Frequency of consumption of basic food products by preschool children

Product	Healthy children (once a week)	Children with allergic reactions and gastrointestinal tract (once a week)
Dairy products	5–6	3–4
Meat	4–5	2–3
Fish	2	0–1
Vegetables	6–7	4–5
Fruits	6–7	5
Porridges/cereals	6–7	6–7
Sweets	2–3	4–5



An analysis of the frequency of consumption of basic foods revealed that healthy preschool-aged children have a more balanced diet and are closer to recommended norms. Their diets more often include dairy products, meat, vegetables, and fruits, providing them with protein, vitamins, and micronutrients. Children with allergies and gastrointestinal disorders have a reduced consumption of dairy products, meat, vegetables, and fruits, leading to a deficiency of calcium, vitamins A, C, and B, as well as protein. At the same time, they consume sweets more frequently, which can exacerbate allergy symptoms and intestinal dysbiosis .

Thus, the identified differences in the dietary structure confirm the need to adjust the diet of children with AD and gastrointestinal tract with an emphasis on increasing the proportion of foods with high nutritional and biological value and limiting simple sugars.

The data obtained confirm the need for early diagnosis of allergic dermatitis and preventive measures aimed at preventing exacerbations and improving the quality of life of children.

Conclusions

Allergodermatitis in children is a pressing medical and social problem due to its high prevalence and tendency to become chronic. The main factors in the development of the disease are hereditary predisposition and exposure to various environmental allergens. The actual nutrition of allergic preschool children does not fully correspond to physiological norms. Deficiency of essential nutrients is associated with forced exclusion of allergenic foods. Diets need to be adjusted using hypoallergenic protein sources (rabbit meat, turkey, specialized mixtures, dairy-free cereals), and enriched with vitamins and mineral supplements. of allergic dermatitis symptoms is essential .

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