



## ROLE OF BACTERIAL AND EPIDERMAL ALLERGENS IN THE ETIOLOGY OF ATOPIC ALLERGIC DISEASES

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Article history:	Abstract:
<p><b>Received:</b> August 24<sup>th</sup> 2024 <b>Accepted:</b> September 20<sup>th</sup> 2024</p>	<p>B This article highlights the current issues of studying the role of household and epidermal allergens in the etiology of atopic allergic diseases in children. 110 children with atopic allergic diseases were under observation.</p> <p>In 98 (89.0%) of the 110 children examined, the main disease occurred against the background of other allergic diseases: allergic dermatitis, urticaria, angioedema, atopic dermatitis-48 (48.9%), allergic diathesis - 23 (23.5), 12 (18.4%) had food allergies, and -9 (9.2%) - drug allergy.</p> <p>At the same time, 49 sick children noted that the underlying disease was combined with other types of somatic diseases (diseases of the gastrointestinal tract, nervous system, diseases of the cardiovascular system).</p>

**Keywords:** atopy, children, histamine. an epidermal allergen.

**RELEVANCE.** Atopic allergy is associated, firstly, with a steady increase in the number of people suffering from allergic diseases, and secondly, with an increase in cases with a more severe clinical course, the presence of regional features of the spread of non-infectious allergens, as well as the medical and social significance of allergic diseases.

One of the most relevant areas of the problem of atopic allergy is the study of the etiology of allergic diseases.

The cause of sensitization of the body is allergens of non-infectious origin.

However, many questions related to the etiology of atopic allergy remain unresolved.

For example, if the significance of pollen allergens in the etiology of pollinosis is sufficiently established, the same cannot be said for dust and, especially, epidermal allergens [1,4].

Some researchers are inclined to believe that for the specific diagnosis of atopic allergy of dust etiology, standard commercial allergens from house dust made in any one country (for example, in the USA) can be used.

This possibility is explained, allegedly, by the lack of qualitative differences in house dust from different countries.

However, there are compelling facts that refute this claim.

Moreover, it was found that отличаютсяnot only house dust from different countries differs in its composition and specific qualities, but also house dust from different regions of the same country [2,6].

One of the important and relevant aspects of modern allergology is the problem of specific diagnosis of topical allergic diseases.

The fact is that allergy diagnostics should be aimed at finding out the cause of sensitization, that is, identifying the allergen responsible for the development of the disease.

Clarifying the cause of the disease is important for developing a specific therapy based on the etiological principle.

There are different principles of specific diagnostics. All of them have certain advantages and disadvantages[3,8].

This is why further research is needed to significantly improve the quality of specific diagnostics.

**THE AIM OF THE WORK IS** to study the clinical features of atopic allergy in children, to determine the role of household and epidermal allergens in the etiology of this form of human pathology.

**MATERIALS AND METHODS.** We observed 110 children suffering from atopic allergic diseases, including 61(55.5%) boys and - 49 (45.5%) girls (Table 1).

Table 1  
**Distribution of sick children with atopic allergic diseases by gender and age\***

Age in years	Boys	Girls	Both sexes
7-12	12(19,7)	9(18,4)	21(19,1)
12-14	21(34,4)	16(32,7)	37(33,6)
14-16	28(45,9)	24(48,9)	52(47,3)
Total	61(100)	49(100)	110(100)

\* Note: percentages (%) are shown in parentheses here and below

The age of patients ranged from 7 to 16 years, including 7-12 years-21(19.1%), 12-14 years-37(33.6%), 14-16 years-52(47.3%).

The vast majority of children-89(80.9%) - were aged 12-16 years. Children suffered from various clinical forms of atopic allergy, including bronchial asthma-35 (31.8%), recurrent obstructive bronchitis - 31(28.2%), allergic rhinoconjunctivitis-28(25.5%), urticaria and Quincke's edema-16(14.5%) (Table 2).

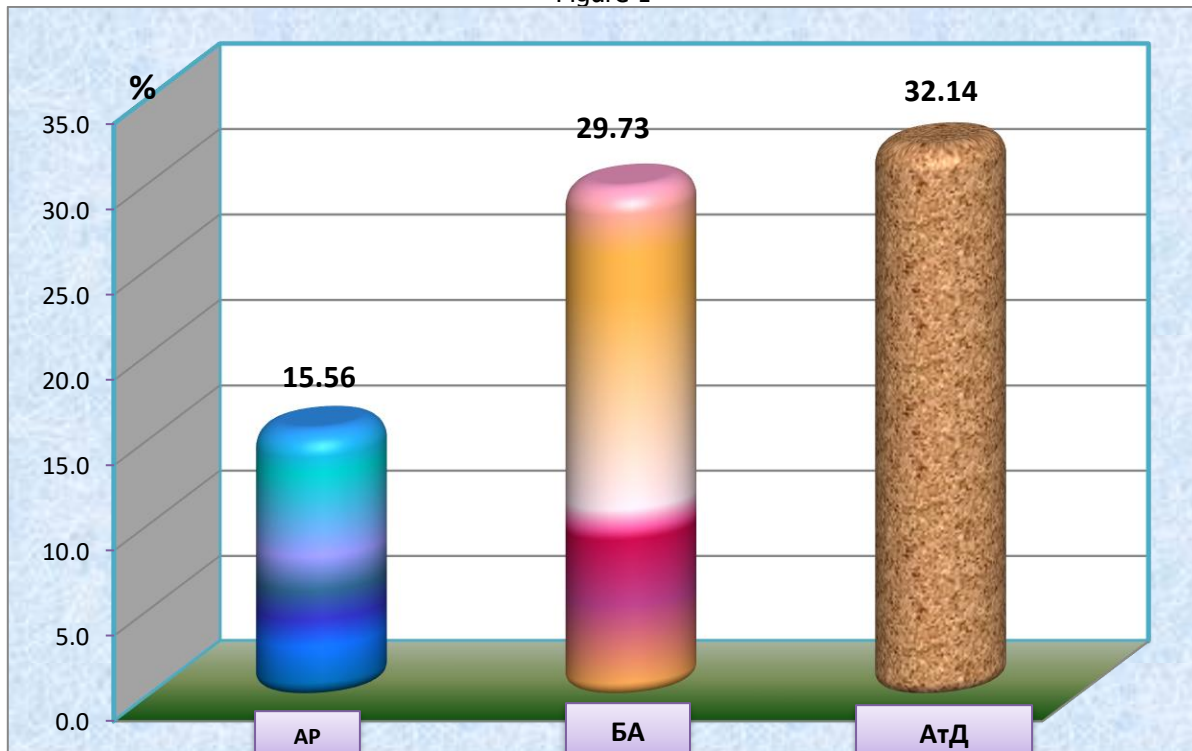
Table 2  
**Clinical forms and manifestations of atopic allergic diseases in children\***

Name of diseases	Number of patients
with Bronchial asthma	35(31.8,)
Recurrent obstructive bronchitis	31(28.2,)
Allergic rhinoconjunctivitis	28 (25.5,)
Urticaria and angioedema	16(14,5,)
Total	110(100)

\* Note: percentages (%) are shown in parentheses here and below

**Results of scarification tests in children for epidermal allergens suffering from atopic allergic diseases**

Figure 1



**RESULTS AND DISCUSSION.** It was noted that out of 110 patients, 98(89.0%) had the underlying disease combined with other allergic diseases: allergic

dermatitis, urticaria, angioedema, atopic dermatitis-48(48.9%), allergic diathesis-23(23.5%), food



allergy 12 (18.4%), drug allergy-9(9.2%), which is typical for atopic allergies.

Along with this, in 49 (44.5%) patients, the underlying disease was combined with other somatic diseases: pathology of the gastrointestinal tract, nervous system, and cardiovascular system.

The most important indicator of atopic allergic diseases is a hereditary predisposition.

According to our data, allergic hereditary burden was observed in 77 (70.0%) patients.

According to the family history, hereditary predisposition was on the paternal side- in 11 (14.3%), on the maternal side - in 24(31.2%), and simultaneously on the part of both parents – in 42(54.5%).

Factors contributing to the development of sensitization and the occurrence of atopic allergic diseases in children include dietary disorders by mothers during pregnancy.

According to our data, there were 42 such mothers(38.2%).

Pregnancy toxicosis, artificial or previously mixed feeding of children play a contributing role in the development of sensitization of the fetus and newborn. 85(77.3%) women had toxicosis in the first half of pregnancy, and 25(22.7%) women had toxicosis in the second half of pregnancy.

46(41.8%) sick children were on artificial or early mixed feeding.

The severity of the clinical course was different. Of the 110 children suffering from atopic allergies, 23(20.9%) had moderate severity, 36(32.7%) had moderate severity, and 51(46.3%) had severe atopic allergies.

**CONCLUSIONS.** On the basis of comprehensive clinical and allergological examinations of patients, it was possible to clarify some features of the clinical course of atopic allergic diseases in children. Atopic allergies mainly affected older children (12-16 years).

Manifestations of clinical forms of diseases depended on the duration or duration of the disease, their severity, the presence of concomitant allergic and somatic diseases, and hereditary burden.

The threshold of sensitivity of the receptor apparatus of patients with respiratory allergies to the action of biologically active substances was high, that is, bronchospasm developed with inhalation of low concentrations of histamine and acetylcholine.

Atopic allergy in children is characterized by the presence of the following regional features of the clinical course: the predominance of cases of polymorphism of symptoms, poly - and combined sensitization, a high degree of hypersensitivity of the

body to the action of a specific allergen, a high degree of bronchial excitability to the action of minimal doses of biologically active substances (histamine, acetylcholine), moderate and severe course.

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