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CLINICAL AND IMMUNOLOGICAL FEATURES OF ALLERGIC DISEASES IN ADOLESCENCE AND YOUTH

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Abstract
This article highlights current issues in the study of clinical and anamnestic features of the course of allergic diseases in adolescence and young adulthood.

Keywords: allergic diseases, anamnesis, children, adolescents, immunological characteristics.

Introduction

In recent decades, there has been a steady increase in the prevalence of allergic diseases in children. This is largely due to the disruption of the ecological balance, the widespread chemicalization of everyday life and agriculture, the widespread use of antibacterial and vaccine drugs, and the early cessation of breastfeeding.

The problem of allergic diseases is relevant in all countries of the world. According to World Health Organization forecasts, by 2050 they will take first place in the overall morbidity structure [1,2].

The problem of allergies is also relevant in Uzbekistan and other Central Asian countries.

On its territory in Uzbekistan there is a significant influx of radiant energy from the sun, the basis for climate formation.

The amplitude of temperature fluctuations is large from summer to winter. This is one of the characteristic manifestations of the continental climate [4,6].

In this regard, it is of certain scientific and practical interest to study the immunogenetic features of allergies in children living in the hot climate of Uzbekistan.

In Europe, currently every third child suffers from an allergic disease.

Bronchial asthma (BA) is a common chronic lung disease in childhood [3].

Every year the number of children with asthma increases by 5–6% and there remains a steady upward trend in the prevalence of the disease[9].

Atopic asthma affects children from an early age. In the absence of effective treatment, the disease reduces the quality of life of the sick child and his family, can cause disability in children and lead to their death [5].

The official WHO report “Global Initiative on Bronchial Asthma” notes that the increasing prevalence of asthma in all regions of the world is of concern to scientists and health professionals.

Therefore, one of the main goals of developing GINA is to ensure that research is incorporated into asthma treatment standards that identify ways to minimize asthma symptoms, improve lung function, and prevent exacerbations.

Advances in clinical research have made it possible to establish the importance of disease prognosis in patients, as well as the dependence of the response to treatment on various asthma phenotypes [1,3,9].

However, the contribution of various risk factors to the formation of the phenotypic picture of atopic asthma in children, their prognostic value and impact on achieving control of the symptoms of the disease is still unknown.

Purpose of the study. The main goal of our work is to study the clinical and anamnestic features of the course of allergic diseases in adolescence and young adulthood.

Materials and Methods

35 children aged 7-17 years were examined, the average age was 14.2±3.1 years, the average age of onset of the disease was 5.3±2.9 years. Clinical, allergological, immunological, laboratory and statistical studies were carried out.

Results and Discussion

It was noted that in the majority (61%) of children, the first symptoms of the disease appeared in the first 6 years of life.

In every third child (29%), the onset of the disease occurred at the age of over 6 years, which corresponds to the literature data characterizing the age-related features of asthma [1,5].

In almost all children, the period between the first symptoms and the establishment of a clinical diagnosis of asthma did not exceed 2 years.

This is partly due to the difficulty of differential diagnosis of broncho-obstructive syndrome at an early age [3].

In school-age children, the presence of concomitant diseases made it difficult to make a timely diagnosis of asthma: we found that the diagnosis was made later in children with perinatal damage to the central nervous system and intestinal dysbiosis.

Frequent exacerbations of the disease contributed to earlier and more timely diagnosis of asthma.

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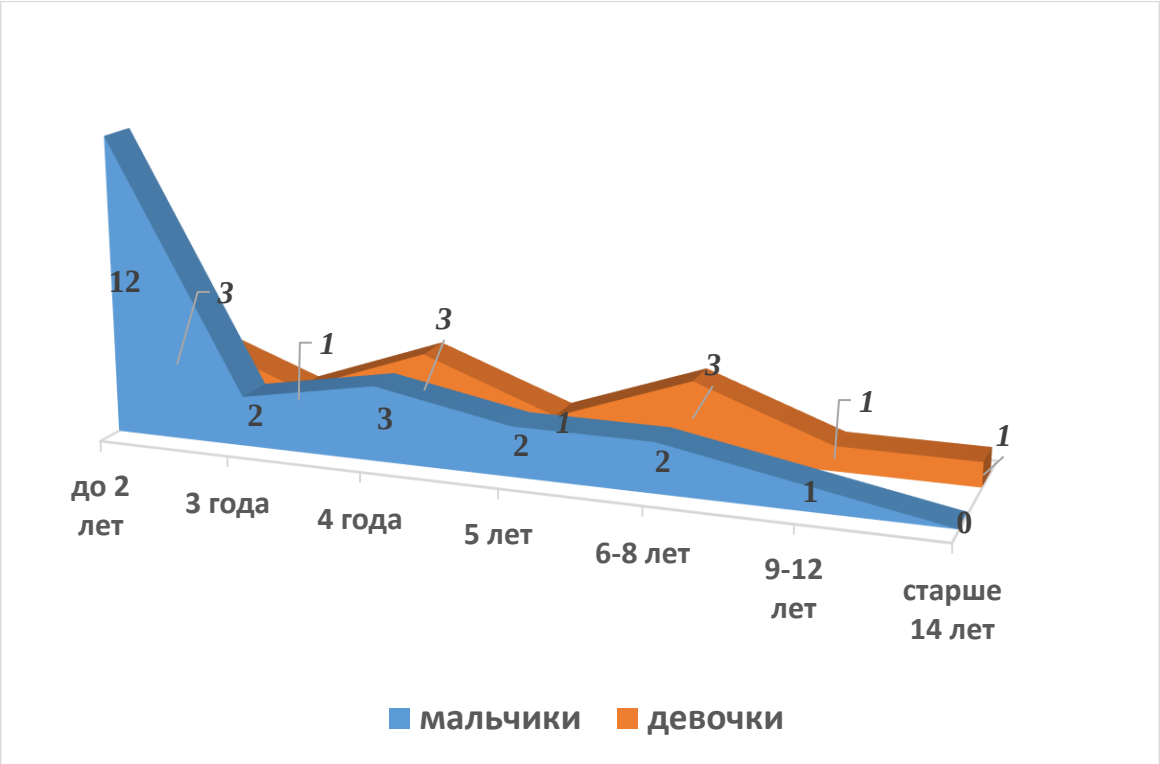

Figure 1. Age of children at the time of asthma onset, abs.

In this group of patients, boys made up the majority 62.8% (n=22).
We found that gender differences in patients had a significant effect on the age of onset of the disease (Figure 2).
Thus, boys predominated in the groups of patients with the onset of the disease before the age of 2 years - 80% (n = 12) and in the group with the onset of BA at the age of 3–5 years - 58% (n = 7).
In the group of patients with the onset of the disease at the age of 6 years and older, girls predominated 62.5% (n=5).
According to the literature, gender differences between patients with atopic asthma disappear only after the age of 10 years [1,3,7].
When distributing children by place of residence, gender and age, it turned out that, compared with urban ones, sick children living in rural areas were hospitalized 1.7 times more often (62.8%).
In the analysis, rural boys predominate among genders - 60.7%. In terms of age, rural children develop allergies more often at the age of 6-10 years.

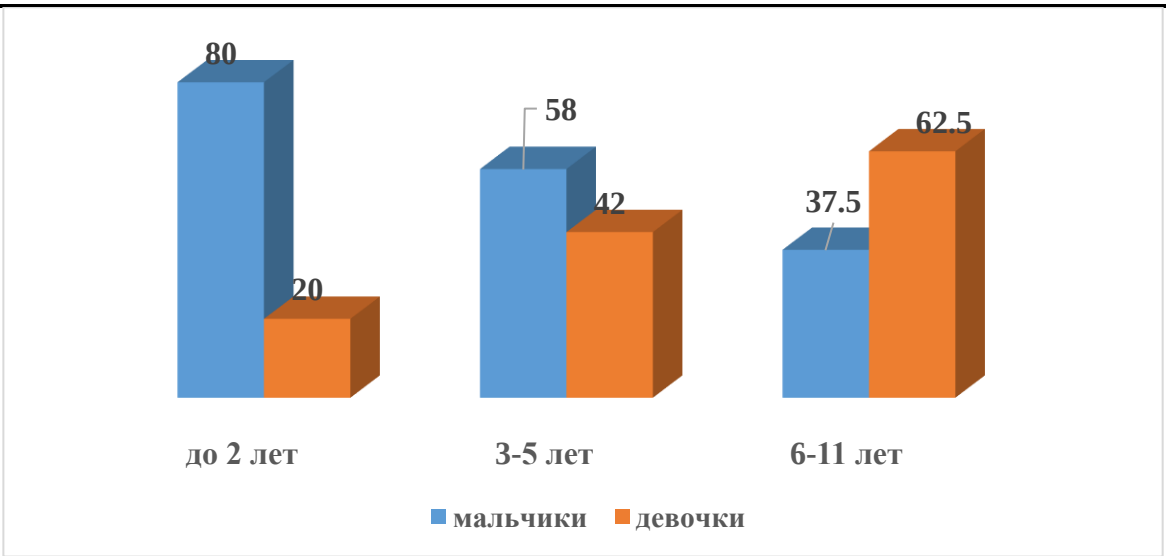

Figure 2. Gender differences in asthma patients with different ages of disease onset,%

The clinical picture of bronchial asthma depended on the periods of development of the disease.

In the pre-attack period, patients experienced nasal discharge, sneezing, itching in the eyes and nose, cough, general anxiety, irritability, and poor sleep.

During the attacking period, patients complained of typical attacks of suffocation, expiratory shortness of breath and noisy wheezing, especially at night.

Both dry and moist rales of various sizes were heard in the lungs. During the interictal period, the condition of sick children was relatively satisfactory; physical phenomena during the period of remission were, as a rule, absent.

However, spirometry and peak flowmetry revealed a decrease in respiratory function indicators.

Eosinophilia in the blood persisted. Since classic attacks of bronchial asthma were observed, not all patients underwent radiographic examination.

X-rays revealed increased airiness of the lung tissue, as well as increased vascular patterns.

Respiratory distress syndrome was observed almost ten times more often in children of the main group compared to healthy ones, and an inverse relationship with body length at birth was revealed.

In children of the older age group, the etiological significance of food sensitization has decreased significantly.

A study of the anamnesis of sick children with bronchial asthma revealed that the cause of attacks of bronchial asthma were non-infectious allergens: house dust - 7 (20%), epidermal - 7 (20%): pet hair (cats, dogs), pollen 16 (45.2 %). In some patients 11.5% (n=4), the cause remained unclear (Table 1).

Table 1. Causes of respiratory allergies (n = 35)

Allergen	abc	%
Pollen	16	45,7
Epidermal	8	22,8
Dust	7	20
The reason remains unclear	4	11,5

Conclusions

Thus, patients in the analyzed group of adolescents are characterized by polyvalent sensitization, often combined with household and food allergens, increased weather lability, the prevalence of moderate and severe disease, changes in the microbiota of the upper respiratory tract.

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