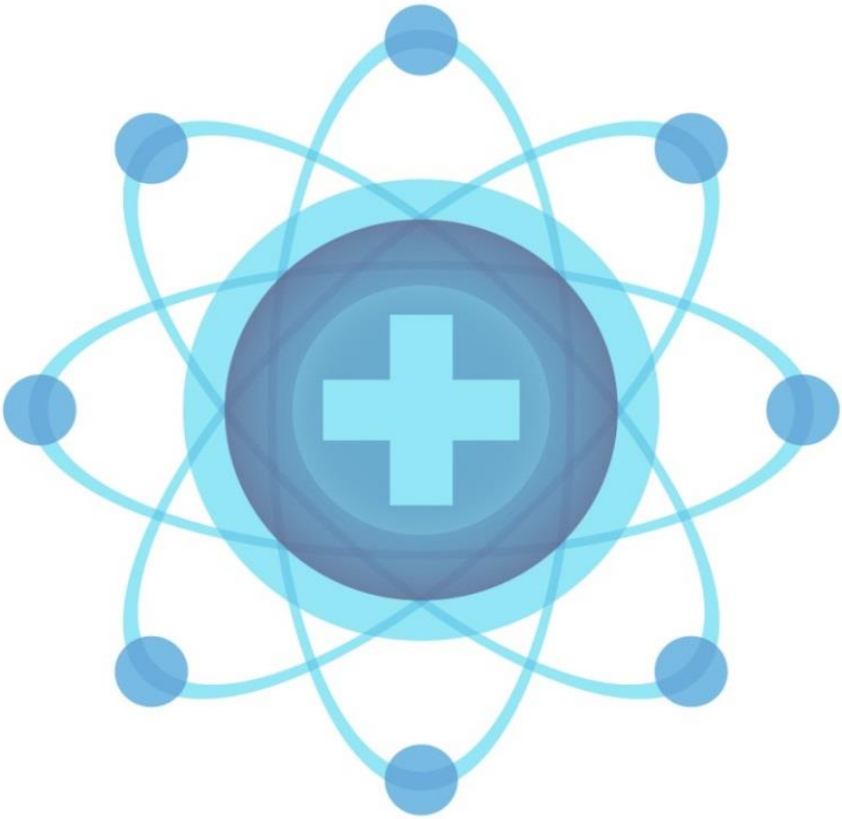

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PREVALENCE AND RISK FACTORS OF ALLERGIC DISEASES IN CHILDREN IN HOT CLIMATIC CONDITIONS.

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Abstract: The priority directions of the state health development policy are the protection of the health of children and adolescents, the timely provision of them with high-quality and effective medical care, and the organization of an active fight against non-communicable diseases. As part of the healthcare reform, government decrees changed the principles of providing specialized allergological care to patients - its structure, management, which led to the need to improve the system of providing medical care to children with allergic diseases. Uncontrolled bronchial asthma reduces the quality of life of patients, and also negatively affects the country's economy. Allergic rhinitis is also one of the most common diseases in childhood.

Keywords: allergic diseases, bronchial asthma, allergic rhinitis, atopic dermatitis, food allergy.

In recent years, the world has seen an increase in the prevalence of allergic diseases (AD) in all age groups [2]. The results of international epidemiological studies indicate a high ubiquitous prevalence (AZ), the values of which vary from 1–3% in adults to 10–24% in the pediatric population [9]. At the same time, its prevalence and incidence rates vary significantly in different countries, which can be of value in terms of identifying risk factors for diseases and developing methods for its prevention [10]. According to the results of the Large International Study of Asthma and Allergy in Children (ISAAC), the mean prevalence of allergic symptoms in children aged 6–7 years is 7.9%, and in children aged 13–14 years it is 7.3% [11].

Bronchial asthma (BA) affects more than 339 million patients worldwide, about a thousand people die every day from this disease [3]. Worldwide, the prevalence of asthma among adults is 6.9%, and among children and adolescents - about 10% [4].

According to the ISAAC study (2009), the global median prevalence of allergic rhinitis (AR) was 31.7% in children aged 13–14 years. Its prevalence varies considerably and there is both a positive and a negative trend in the incidence of this pathology in various countries of the world.

The maximum indicator was recorded in Paraguay (45.1%), the minimum - in Georgia and Latvia (4.5%) [4]. AR significantly reduces the quality of life of children, requires high costs of treatment, and is also the most significant risk factor for the formation of BA. Atopic dermatitis (AD) is one of the earliest clinical manifestations of atopy in childhood [1, 5]. Almost half of children with AD subsequently develop respiratory allergies [6, 7, 8].

average prevalence of AD symptoms is 7.3% in children aged 13-14, with an increasing trend in both developed and low socioeconomic countries, according to the International Pediatric Asthma and Allergy Study. (ISAAC). The indicators obtained in epidemiological studies in certain regions of Russia significantly exceed official statistics, which makes it difficult to really assess the prevalence of AD [9].

Population-based studies, on the contrary, provide data on the true prevalence of the disease in each individual region, which further contributes to the development of relative risk factors for the development of this pathology and an increase in the effectiveness of treatment. The reasons for underdiagnosis are not only the lack of a unified approach to the diagnosis of AD among doctors,

but also the unwillingness of parents to recognize the fact that the child has a chronic disease, which leads to the refusal of the examination.

The purpose of the study is to study AD in children, using the example of a multidisciplinary hospital at the Tashkent Medical Academy, as well as to identify the main risk factors that contribute to their development.

Research materials and methods: Analysis of official data on the prevalence of AZ in children was carried out on the basis of a study of the data of the annual reporting form for the last 5 years (from 2016-2021), a multidisciplinary hospital at the academy, in the department of " Allergoneurology of children and adolescents" and factors contributing to the development of diseases have been identified. This center geographically corresponds to the administrative boundaries of the city of Tashkent.

Research results.

An epidemiological cross-sectional study was conducted as part of the Global Asthma Network (GAN), which was established in 2012 to identify and address the challenges associated with AD in children, an important chronic noncommunicable disease (CNCD) worldwide. In essence, this organization arose from the union of two other organizations: the International Study on the Prevalence of Allergies and Asthma in Children (International Study of Asthma and Allergies in Childhood (ISAAC) and the International Union Against Tuberculosis and Lung Disease (International Union Against Tuberculosis and lung Disease (IUATLD)), which have been helping countries to identify and treat this important non-communicable disease for more than two decades.

In accordance with official information on the number of diseases registered in patients, the prevalence of AZ in children under the age of 17 who received treatment at the Multidisciplinary Hospital at the Tashkent Medical Academy, in the Department of Allergoneurology in Children and Adolescents, has remained stable over the past 5 years and varies from 345 to 978 per 1000 children in different age groups. When analyzing data on cases of patients with major diseases in the allergoneurology department, they were divided into three groups:

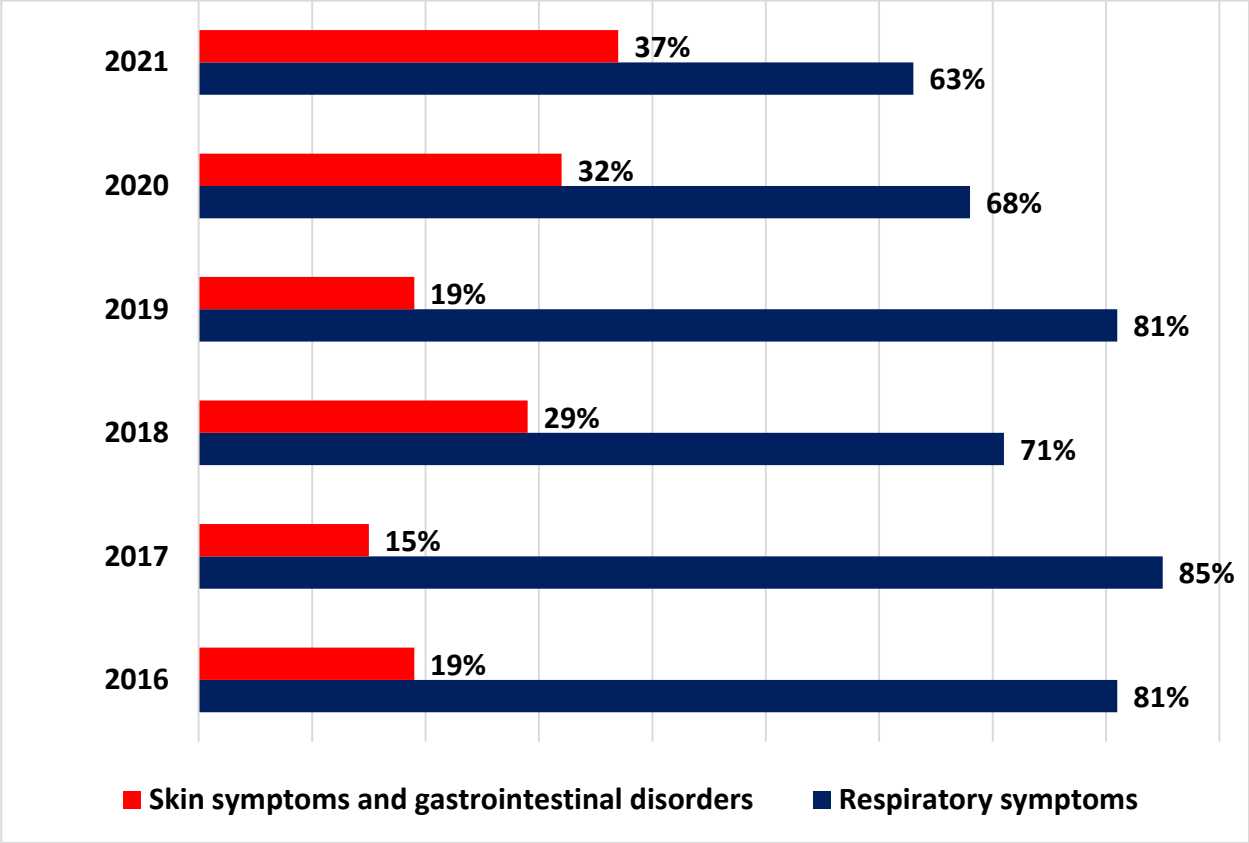
The first group consisted of children with pathology of the respiratory tract. These include diseases such as: bronchial asthma (ICD codes J 45.0, J 45.1, J 45.8), all forms of obstructive bronchitis (ICD codes J 40.0, J 20.9, J 20.0, J 41.8), pollinosis and allergic rhinitis (ICD code J 30.0), nasopharyngitis (ICD code J 30.1.) The second study group included children with AD associated with skin integument with gastrointestinal disorders. These include diseases such as: atopic dermatitis (ICD codes L20.0, L20.8, L20.9) urticaria (ICD code L 50.0), toxicoderma (ICD code L 27.0), toxic vasculitis (ICD code D 69.9). The third group consisted of children with neurological disorders who received treatment in the allergoneurology department with cerebrovascular disease (ICD code G 160-169) and all diseases with disorders of the central- peripheral nervous system (ICD code G 160-169, G 50-64, G 00- 09, P 10-15 Q 00-99). The total number of visits to the multidisciplinary hospital in the department of allergoneurology at the Tashkent Medical Academy over the past 5 years amounted to 11.86 per 1000 population.

At the same time, the average prevalence of diseases in children under the age of 18, divided into groups, tended to increase over the period 2016-2021. the largest part were children with disorders of the central nervous system. When studying the age distribution, the largest number of patients is registered in the group of young children with a consistent decrease in the prevalence rate in older age groups.

The dynamics of the development of symptoms in children from the respiratory system, gastrointestinal tract and skin in the first and second groups is shown in Figure 1.

The first group, associated with the respiratory system, had an overall prevalence in 2016 (81%), the rate increased by (85%) in 2017, decreased in subsequent years, in 2020 the rate was 68%, and in 2021 decreased to 63%.

Figure 1. **Dynamics of the development of symptoms in children from the respiratory system, gastrointestinal tract and skin in accordance with official statistics (in %).**



Among chronic diseases in childhood, in addition to BA and AR, there are AD, urticaria and toxic vasculitis. In children with AD associated with symptoms of the skin, gastrointestinal disorders, in 2016, according to the general indicator of groups, it was 19%, and in 2017 this indicator slightly decreased to 15%, and in subsequent years the incidence increased and in 2021, rose to 37%.

When studying the prevalence of morbidity, the largest number of patients is recorded in the group of children with respiratory disorders with a consistent decrease in the prevalence of AZ with skin lesions and gastrointestinal disorders.

Thus, in ¾ of children with lesions of the skin, the disease begins at an early age, its prevalence decreases with age and occurs 1.5 times less often in adolescents than in young children. In the vast majority of cases, the disease in them proceeds in a mild form, regardless of age group and gender.

When examining the questionnaires of sick children, we identified the main factors contributing to AD. For example, in most children under one year of age, AD is a consequence of food allergy (FA). PA is one of the most common diseases affecting the economic performance of the country. The main factors determining the possibility of developing sensitization are the exposure and properties (biochemical and physical) of a particular allergen [1]. Almost any product can cause allergic reactions. The nature of PA significantly depends on the age of the child. During the study, we found that in children of the first year of life, the most common causes of AD development are cow's milk proteins, cereals, eggs, fish, seafood, etc. And at an older age, other allergens cause AD. According to parents, allergic reactions to bananas, kiwi, persimmon, and pomegranate have become more frequent in children. At the age of 3 to 7 years, more AR and BA occur, sensitivity to some food allergens decreases, but the importance of allergens present in the air increases. These can be microscopic mites that live in house dust, plant pollen, pet hair, bird feathers. One of the main factors in the spread of respiratory pathology and an etiologically significant allergen is plant pollen.

When studying the questionnaires, in the anamnesis of sick children, non-compliance with the principles of proper nutrition by the mother during pregnancy and breastfeeding, as well as various diseases and pathologies of pregnancy, bad habits of the future mother, were revealed. Bottle-feeding of infants is increasingly marginalizing the beneficial and much-needed breastfeeding. And in children of "artificial" AD is much more common than in children who are breastfed. Even the most adapted and expensive formulas cannot compete with breast milk, because. are only artificial analogues of the latter and do not contain ingredients important for babies.

Conclusions: the article presents the results of an epidemiological study of the prevalence of AD in children. Over the past five years, there has been a slight decrease in respiratory diseases, but AR has a very high prevalence, which is possibly due to the climatic and geographical features of the place of residence and environmental factors. Atopic dermatitis, vasculitis, etc., an indicator of morbidity among children, is steadily increasing every year, which requires further updating and improvement of knowledge in this area.

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