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PREVALENCE OF ALLERGIC DISEASES AMONG THE AGE GROUP 0-18 YEARS OF THE POPULATION OF THE REPUBLIC OF UZBEKISTAN

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ANNOTATION

Allergic diseases (AD) in recent decades have attracted more attention due to the increasing prevalence among the population. Numerous epidemiological studies studying the degree of prevalence of AD in Russia and abroad objectively reflect the steady increase in allergopathology, especially in children.[1] According to WHO forecasts, by 2050 most of the world's population will be affected by allergic diseases, which will be 50-60%.[2] To obtain reliable statistics on the prevalence of allergic diseases in children 0-18 years old in Uzbekistan, the Republican Scientific and Specialized Allergological Center (RSSAC) for the first time in the execution of the Decree of the President of the Republic of Uzbekistan (DP RUz) dated 05/11/2018 No. 3715 "On measures to fundamentally improve prevention, diagnostics and treatment of allergic diseases", according to the developed questionnaire, the State screening program was conducted in the period from January 1 to July 1, 2019. Objective: To identify the prevalence of allergopathology among children from 0 to 18 years in Uzbekistan, taking into account various risk factors and regional characteristics, to conduct a retrospective and prospective analysis of allergopathology in children of the republic, to obtain reliable statistical data on nosologies of allergic diseases and to develop a set of preventive measures to prevent them.

KEYWORDS: Allergic rhinitis, pollinosis, atopic dermatitis, the prevalence of allergic diseases, bronchial asthma, children, control of bronchial asthma, PP 3715, screening, allergopathology.

MATERIAL AND METHODS

To solve the tasks, we relied on the Decree of the President of the Republic of Uzbekistan dated 05/11/2018 No. 3715 "On measures to radically improve the prevention, diagnosis and treatment of allergic diseases."

In compliance with DP RUz No. 3715, the Ministry of Health of the Republic of Uzbekistan approved Order No. 559 "On a one-time State screening program for the early detection of allergic diseases in children 0-18 years old" and the Republican Scientific Specialized Allergological Center (RSSAC) developed a set of measures for early detection allergic diseases in the republic, on the basis of the above regulatory documents, a 3-stage questionnaire was developed, which was sent to all regions of the republic and with the help of Racei primary care pediatricians, allergists and regions RSSAC selected children of allergy.

RESEARCH OBJECTIVES

1. Conduct an epidemiological study among children 0-18 years old to identify the prevalence and study the nosological structure of allergic diseases.
2. Evaluate the proportion of allergic diseases in different age groups of children and study the regional characteristics of etiological factors.
3. Develop a diagnostic algorithm that allows you to identify allergopathology at an early stage, to identify risk groups for preventive measures.

RESULTS AND DISCUSSIONS

For the first time in Uzbekistan, a three-stage study was conducted to study the prevalence of allergic diseases among children 0 to 18 years old according to PP No. 3715 of May 11, 2018 and the "Recommendations of an epidemiological study" approved by the Ministry of Health of the Republic of Uzbekistan.

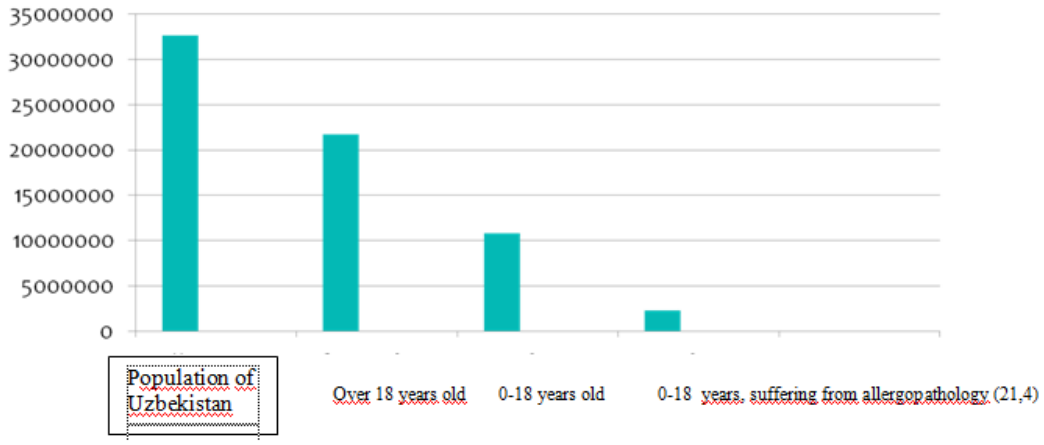
High rates of the prevalence of allergic diseases among children 0 to 18 years old, significantly exceeding the statistical reporting rates of medical institutions (statistics of the Ministry of Health of the Republic of Uzbekistan, F.039), were revealed. The main risk factors were identified: hereditary burden of allergopathology, pathological course of pregnancy, maternal malnutrition during pregnancy and lactation, pathology of the neonatal period, improper feeding of the baby, adverse living conditions, unfavorable social and environmental

factors, natural and climatic features of the region, associated somatic diseases, pathology of ENT organs. According to the approved schedule, RSSAC employees traveled monthly to all regions of the republic and, together with regional specialists, general practitioners, and pediatricians, examined children from 0-18 years old. To screen for allergopathology, doctors, together with their parents, filled out a questionnaire and children with signs of allergopathology were selected for the next stage of the screening campaign. Currently, children from the risk group aged 5-18 are preparing for the 3rd stage of the screening campaign, which includes skin allergological tests with pollen and household allergens during the period of remission of the underlying disease.

According to the statistics of the Institute of Health of the Republic of Uzbekistan, the country's population is 33 million, of which more than 10 million are people aged 0-18.[3]

77.9% of children took part in the state action.

Of these 8409446 children, 4150246 are children with various manifestations of allergopathology, who are often ill, with recurrent pathologies of ENT organs.



It was revealed that out of 4,150,246 children, 1,765,984 are children with various allergic pathologies.

In some areas, there is a particularly high incidence of allergopathology among children and adolescents aged 0 to 18 years.

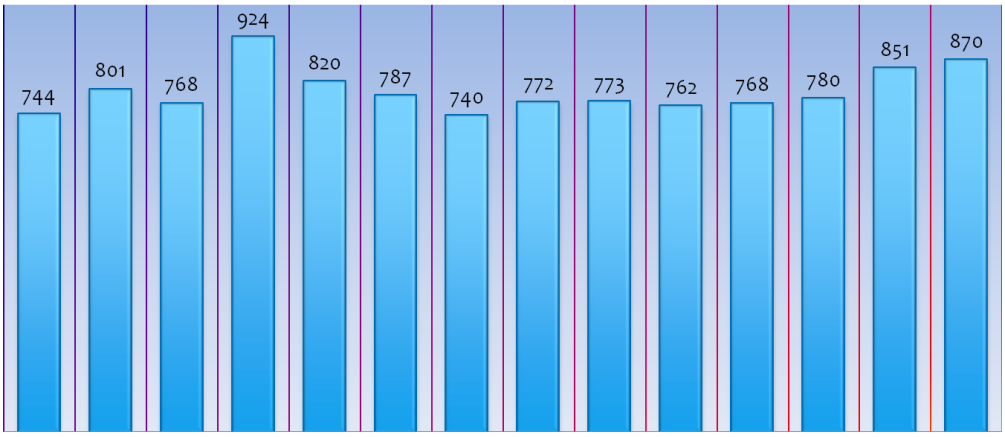


Fig. 2 Allergopathology incidence rate among children and adolescents aged 0 to 18 in the Surkhandarya region.

Note: each bar of the chart corresponds to the next city (from left to right):
Termez, Angor, Boysun, Denov, Zharkurgon, Kumkurgon, Kizirik, Muzrobod, Oltinsoy, Sariosiyo, Termez district, Uzun, Sherabad, Shurchi.

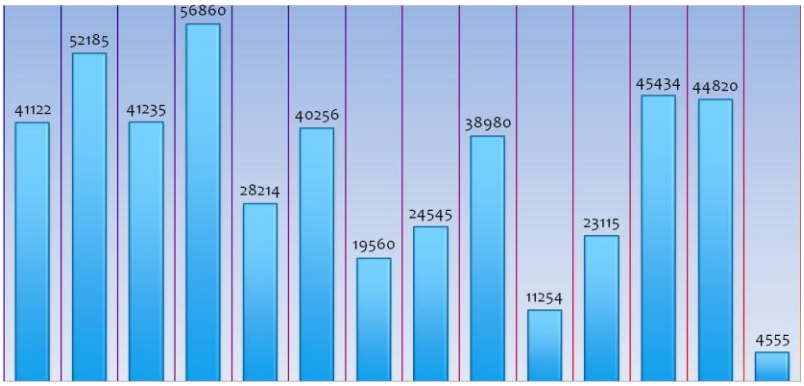


Fig. 3: The incidence rate of allergopathology among children and adolescents aged 0 to 18 years in the Kashkadarya region.

Note: each bar of the chart corresponds to the next city (from left to right):

Karshi city, Karshi region, Guzor, Koson, Nishon, Kasbi, Muborak, Mirishkor, Yakkabog, Shakhrisabz, Kamashi, Kitob, Chirokchi, Dekhkonobod.

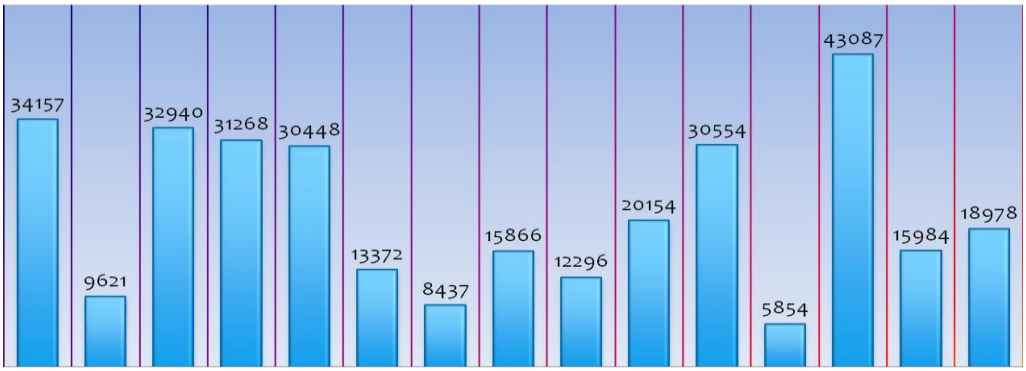


Fig. 4: Allergopathology incidence rate among children and adolescents aged 0 to 18 years in the Samarkand region.

Note: each bar of the chart corresponds to the next city (from left to right):

Samarkand, Kattakugon, Samarkand region, Urgut, Passdorgom, Paiarik, Bulungur, Zhomboy, Kattakurgon region, Narpai, Ishtikhon, Kushrobod, Nurobod, Pakhtachi.

Nosological structure of allergic morbidity by regions of the Republic.

№	Regions	BA	Hay fever	Ar All year	Food allergy	Drug allergy	Insect allergy	Total
1	Tashkent	127	194	219	467	68	95	1176
2	Tashkent region	1650	4320	6596	3617	395	577	17391
3	Andijan region	1719	84343	146096	110931	39893	36460	453556
4	Bukhara region	292	520	957	791	291	377	3567
5	Dzhizak region	165	2105	6740	5920	952	189	17416
6	Kashkadaria region	1251	85	1598	194	90	248	3454
7	Navoi regin	2196	3925	4927	7342	1711	929	22027
8	Namangan region	1735	3787	2990	849	199	129	6647
9	Samarkand region	544	689	1345	261	264	183	3375
10	Surkhandarya region	309	3008	2640	4459	585	5810	16811
11	Syrdarya region	106	92	240	116	1	38	737
12	Ferghana region	2303	1123	1561	2847	173	4315	12564
13	Khorezm region	605	975	723	978	133	123	3537
14	Republic of Karakalpakstan	783	3177	4781	2266	304	587	12068
	Total	13658	108149	181194	140571	44991	49965	572531

The work presents materials of an epidemiological, clinical and allergological examination of children from 0 to 18 years. The study was conducted in the period from January to July 2019 according to the State program (One-time Action to identify allergic diseases among children from 0 to 18 years old) living in cities and regions of the Republic of Uzbekistan. Questionnaires or 3-stage questionnaires for children from 0 to 6 years old, 9-10 years old were issued to parents and filled out. Pupils of 11-18 years old answered questions of the questionnaire independently or with the help of parents. Additional information was entered into the collection from the primary medical documentation of the child. The questionnaire included questions for identifying signs of respiratory and skin allergies. To study the "risk" factors AD, the questionnaire included questions regarding the most common "risk" factors for the development of AD.

Application to the questionnaire "Predisposing factors (possible causes of the disease):
a) the time of birth of the child (season, spring, summer, autumn) underline the necessary;
b) place of birth (city, village) underline;
c) allergic diseases (maternal, paternal, lateral) underline the necessary;
d) what kind of feeding the child was up to 1 year old;
e) the illness of the child (at what age); infectious diseases; - concomitant somatic diseases in a child; - diseases of the ENT organs;
f) previous operations, especially on ENT organs (adenotomy, tonsil ectomy, nasal polypotomy, etc.) at what age?
g) whether the child has signs of intolerance to food or drugs, manifested in the form of exudative diathesis, urticaria, Quincke's edema, asthma attacks, allergic rhinitis, etc. and from what age?
h) was there an increased sensitivity in the child for bites and stings of insects and hymenopterans, the introduction of sera?
i) whether the exacerbation of this disease is associated with any particular factor (season, flowering of trees, herbs and plants, contact with animals, fish food, household products, food, medicine, climate change, etc.) ?
j) did you have any pets?
k) what floor is your apartment on, how many rooms are there in the apartment?
l) Are there many upholstered furniture and carpets in the apartment?
m) are there any traces of mold in the apartment?
o) do trees grow around the house?
p) are there flowers in the apartment?
q) Do you have an aquarium in the apartment?
r) Concomitant diseases in the mother.
S) Features of the course of pregnancy in the mother.
T) Pathology of childbirth, prematurity.
U) Marriage or not.
V) Intracranial injury during childbirth.
X) What foods did the mother consume during pregnancy?
Y) Bad habits (smoking, drinking) emphasize the necessary.
- Taking ototoxic drugs during pregnancy.
- Rhesus is a conflict.
- Maternal infectious diseases of children.
- The time of appearance of the first signs of AD, signs of atopy in a personal and family history,

The results of the questionnaire were entered into the electronic database we created (in Excel format) for subsequent statistical analysis.

The study was conducted in two stages. At the first stage, after appropriate organizational preparation (coordination of the study with health and education authorities, the choice of schools and the contingent of children of a certain age group, material support for the working group for conducting screening questionnaires, etc.), a continuous survey of students from the first to eighth grades was carried out.

At the second stage, a medical verification of the diagnosis was carried out, children were selected who answered positively to at least 1-2 questions. A3 were diagnosed based on modern criteria.

In the age group of the children (0-14 years old) population, the incidence of atopic dermatitis in the territory in the Navoi region is 1.27 times higher than the incidence of bronchial asthma, the Tashkent region - 1.58 times, and the incidence of allergic rhinitis (AR) is lower than atopic dermatitis in the Samarkand region by 6.6 times, in Kashkadarya region - by 3.65 times and the Republic of Kazakhstan - by 3.62 times. At the same time, the prevalence rate of bronchial asthma (BA) in Navoi is 5.2 times, in Samarkand - 2.88 times and Andijan region - 2.28 times higher than allergic rhinitis.

In adolescents, the prevalence of AD is 1.53 times higher than the prevalence of atopic dermatitis in the region, 2.36 times in Navoi and 1.74 times in the Tashkent region. The incidence in adolescents of AD is higher than the incidence of AR in the region by 5.65 times, in Samarkand - by 3.4 times and in Ferghana - by 2.36 times. The data obtained indicate that the prevalence of AD is related to age, and the older the age, the higher the incidence. Thus, in the Navoi region, the teenage incidence of asthma is 1.62 times higher than the incidence of children, in the Tashkent region - 1.96 times, and in Andijan region - 1.74 times. Atopic dermatitis (AD) in the structure of the allergic incidence of the population occupies a leading role and makes up 41% for children in the Navoi region over a 7-year period, 38.3% in the Tashkent region and 37.5% in the Andijan region; among adolescents in the Ferghana region - 41.4%. In general, the trends in the incidence of allergic diseases in our region reflect the age-related features of the course of AD in industrial regions (Navoi

and Tashkent regions). In adolescence, the incidence of bronchial asthma and allergic rhinitis increases, and the incidence of atopic, allergic and contact dermatitis decreases. In the structure of the general allergic incidence as a whole, atopic dermatitis occupies the third rank 9.7% in the whole population, and 3.52% in the adult population, 26.14% in children and 20.32% in adolescents.

The analysis showed that among the entire population of the regions there is an increase in the prevalence of atopic dermatitis by 7.9%, in the adolescent population there is a tendency to increase by 1.7%.

The clinical course of allergic diseases has been established considering concomitant somatic diseases such as pneumonia, bronchitis, diseases of the gastrointestinal tract and pathology of ENT organs (adenoiditis, rhinitis, sinusitis, tonsillitis, otitis media, curvature of the nasal septum, laryngitis).

The results of the studies show that in most cases the disease occurs in children from large families (from five children or more), where there is a hereditary predisposition to allergic diseases and adverse living conditions, which is one of the regional characteristics of Uzbekistan.[4]

In the presence of a constant tendency to increase A3, their true prevalence is still unknown, which is largely due to the lack of data from universal standardized epidemiological studies.[5]

In general, data on morbidity are based on statistical reporting from health facilities.[6] All statistics are based on indicators obtained by patient referral to hospitals and do not correspond to the true prevalence of AD.[7]

Thus, data obtained only by reversibility do not characterize the true, in the true sense of the word, but only the registered incidence. It is possible to obtain more complete information during epidemiological studies, followed by clinical screening.

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