

**ДИНАМИКА РАСПРОСТРАНЕНИЯ АЛЛЕРГИЧЕСКИХ
ЗАБОЛЕВАНИЙ В РЕСПУБЛИКЕ САХА (ЯКУТИЯ) ЗА 2019-2022 ГГ.
(НА ПРИМЕРЕ ГАУ РС(Я) РКБ №3)**

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Аннотация: Известно, что нарушения в работе иммунокомпетентных клеток организма существенно изменяют способность человека адаптироваться к условиям места проживания в зависимости от климатических и географических условий, биогеохимических факторов, а также могут привести к появлению аллергических заболеваний. Своевременная диагностика, лечение и профилактика аллергических заболеваний является приоритетной задачей врача-аллерголога. В данной работе исследование проводилось по данным амбулаторных карт пациентов аллергоиммунологического кабинета Государственного автономного учреждения Республики Саха (Якутия) "Республиканская клиническая больница № 3". Ретроспективный анализ данных создан на основе результатов первичного и вторичного были проведены обследования аллерголога с 2019 по 2022 год с учетом персональных данных.

Ключевые слова: коронавирусная инфекция, аллергия, бронхиальная астма, атопический дерматит, анафилактический шок, атопическая экзема.

**DYNAMICS OF THE SPREAD OF ALLERGIC DISEASES
IN THE REPUBLIC OF SAKHA (YAKUTIA) FOR 2019-2022
(ON THE EXAMPLE OF THE STATE AUTONOMOUS INSTITUTION
OF THE REPUBLIC OF SAKHA (YAKUTIA) "REPUBLICAN
CLINICAL HOSPITAL NO. 3.")**

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Abstract: It is known that disorders in the work of immunocompetent cells of the body significantly change the ability of a person to adapt to the conditions of the place of residence depending on climatic and geographical conditions, biogeochemical factors and can also lead to the appearance of allergic diseases. Timely diagnosis, treatment and prevention of allergic diseases is a priority task of an allergist. In this work, the study was carried out according to the data of outpatient patient charts of the allergeo-immunological office of the State Autonomous Institution of the Republic of Sakha (Yakutia) "Republican Clinical Hospital No. 3. A retrospective analysis of data created on the basis of the results of the primary and secondary examinations of an allergist from 2019 to 2022, taking into account personal data, was carried out.

Keywords: coronavirus infection, allergy, bronchial asthma, atopic dermatitis, anaphylactic shock, atopic eczema.

Introduction. The late XX and early XXI centuries were marked by a significant increase in the prevalence of allergic pathology among adults and children in all countries of the world. In just thirty years, in many industrially developed regions, the incidence of allergic diseases (bronchial asthma - AD, allergic rhinitis - AR and atopic dermatitis BP) has increased more than 3.8 to 10 times, reaching 25% or more in some groups. This suggests that currently allergic diseases belong to the group of the most common pathology of the adult population. [2]

Our work presents the results of a retrospective analysis, situations and dynamics of statistical indicators of the incidence of allergic pathology in residents of the Republic of Sakha (Yakutia) for 2019-2022. A high prevalence of bronchial asthma, allergic rhinitis, atopic dermatitis was established in the years studied. The most possible causes of allergic diseases are recognized as environmental and geographical features of MS (S) (strong temperature changes in winter and summer due to special climatic and geographical conditions of the North), an increased level of air and water pollution. The relationship between the prevalence of some allergic diseases with the epidemiological situation due to the spread of COVID-19 is not excluded. When rehabilitating patients with allergic diseases, it is recommended to optimize sanitary and hygienic indicators of the environment, long-term monitoring

of the state of health and recovery, taking into account the integrated impact of man-made pollution on the human body.

The purpose of the work is to identify the most common allergic diseases in the Republic of Sakha (Yakutia) (using the example of the State Autonomous Institution of the Republic of Sakha (Yakutia) "Republican Clinical Hospital No. 3).

Tasks:

1. Conduct a retrospective analysis of outpatient patient charts of the allergo-immunological office.
2. Identify the most common forms of allergic diseases.
3. Analyze the possible causes of the spread of the most common allergic diseases.

Study Material and Method

The study was carried out according to the data of outpatient patient charts of the allergo-immunological office of the State Autonomous Institution of the Republic of Sakha (Yakutia) "Republican Clinical Hospital No. 3. A retrospective analysis of data created on the basis of the results of the primary and secondary examinations of an allergist from 2019 to 2022, taking into account personal data, was carried out.

Statistical processing of the obtained data was carried out using Microsoft Office Excel.

Study results and discussion

When analyzing outpatient patient maps, it was revealed that the total number of requests in 2019 was 759 (of which 592 were primary, secondary-167), in 2020 - 403 (primary 246, secondary-157), in 2021-836, in 2022- 691. The age of the examined is from 21 to 77 years. The main contingent of those examined is people of working age from 20 to 60 years old. Thus, the largest number of appeals is in 2021, which is possibly due to the fact that after the lifting of restrictive quarantine measures regarding COVID-19, patients began to often contact the clinic. And the smallest number of appeals in 2020 (403) can be associated with restrictive measures against COVID-19. Among referrals, as a rule, primary patients prevail. (tab. 1).

Table 1

Number of patient visits from 2019 to 2022

	2022	2021	2020	2019
Total medical visits	691	836	403	759
primary	461	576	246	592
repeated	230	260	157	167

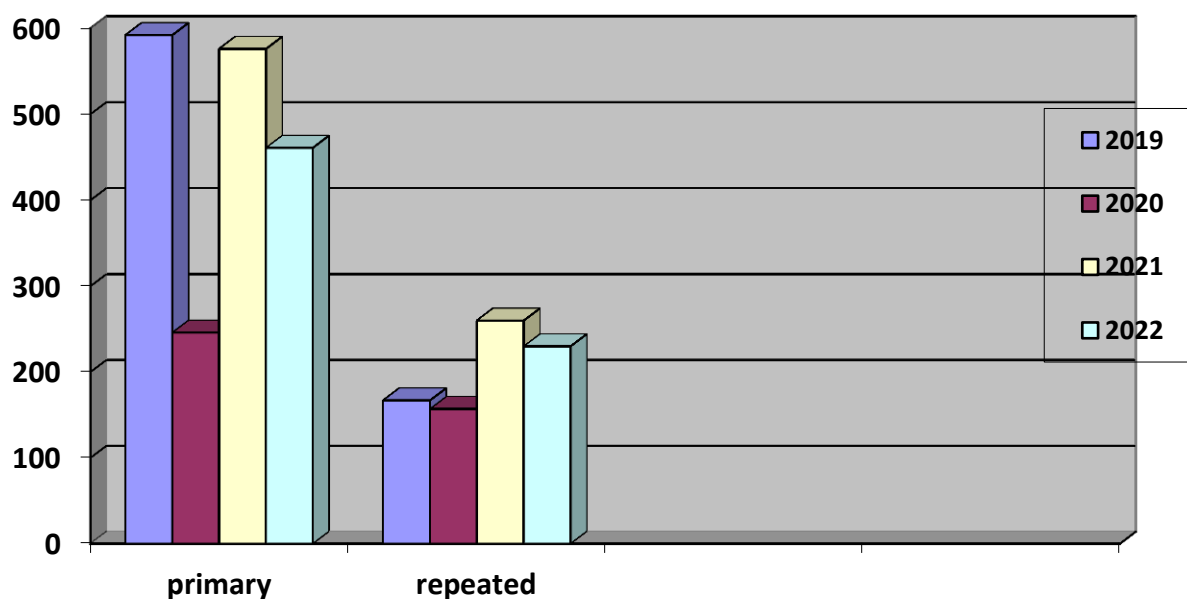


Fig. 1. Number of patient visits from 2019 to 2022

Table 2

Most common allergic diseases

Allergic diseases	2019	2020	2021	2022	
1. Bronchial asthma	155	55	139	167	516
2. Acute urticaria	24	9	22	7	62
3. Urticaria chronic	46	31	73	31	181
4. Pollinosis	65	36	59	58	218
5. Atopic dermatitis	36	27	45	35	143
6. Drug allergy	5	2	23	4	34
7. Anaphylactic shock	-	-	16	-	16
8. Allergic rhinitis	89	27	78	60	254
In total	436	197	467	375	

Based on the data obtained, it can be seen that the most common allergic diseases are bronchial asthma, allergic rhinitis and pollinosis, which coincides with the statistical data of scientific publications [2].

There are also allergic diseases with skin manifestations: atopic dermatitis, atopic eczema, urticaria. Alarming is the fact that 16 cases of anaphylactic shock were reported in 2021. Whereas in other years there was not a single case of AS.

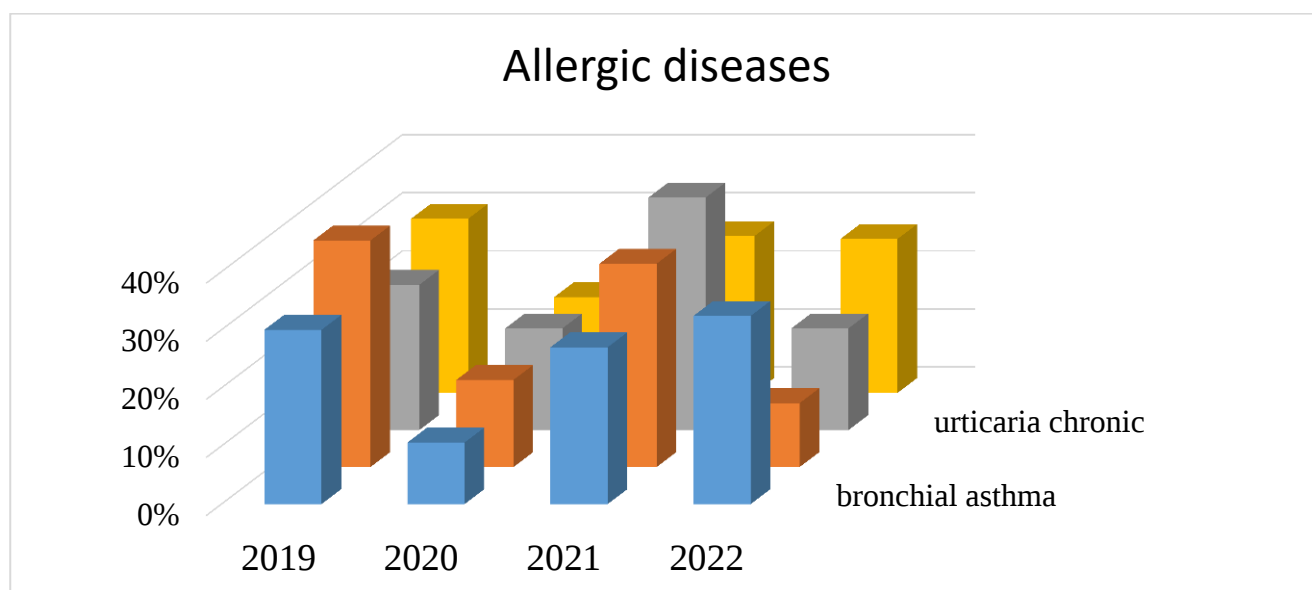


Fig. 2. Dynamics of the spread of allergic diseases

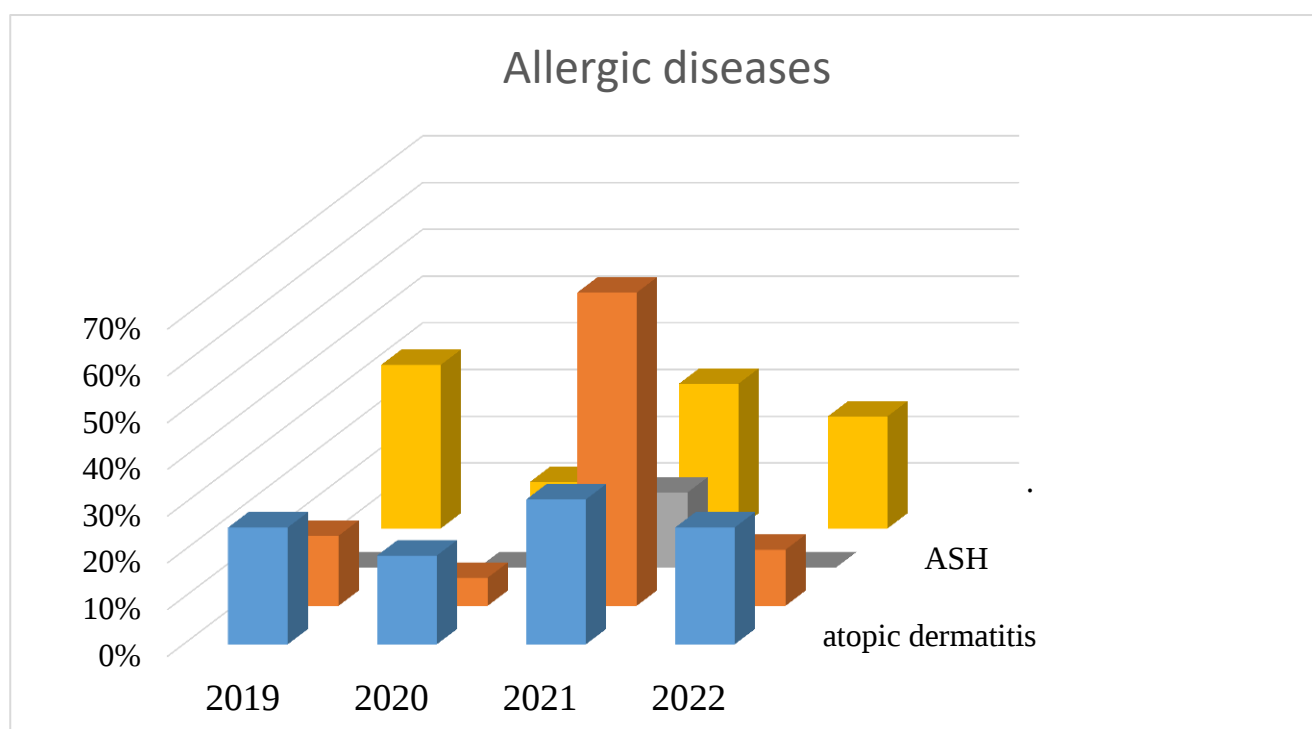


Fig. 2.1. Dynamics of the spread of allergic diseases

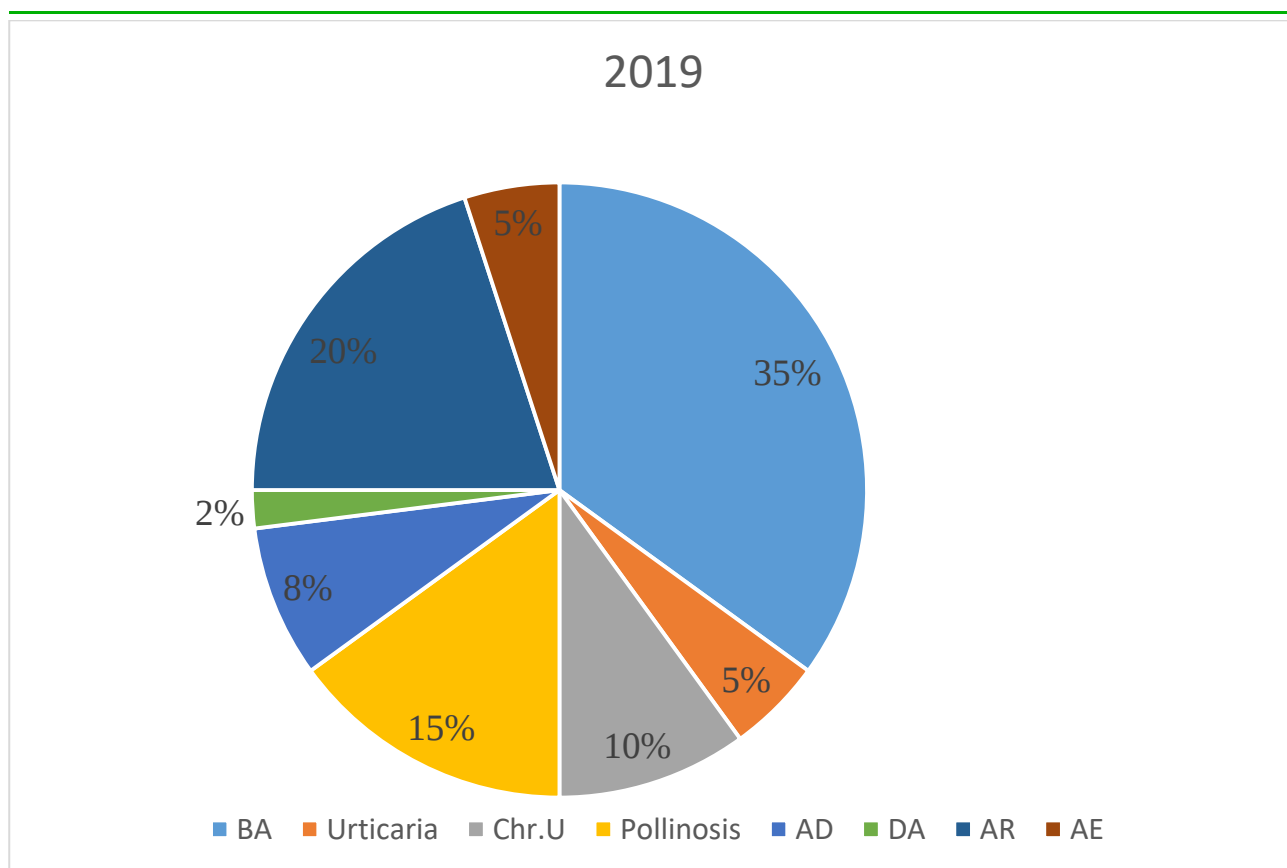


Fig. 3 Incidence of allergic diseases in 2019

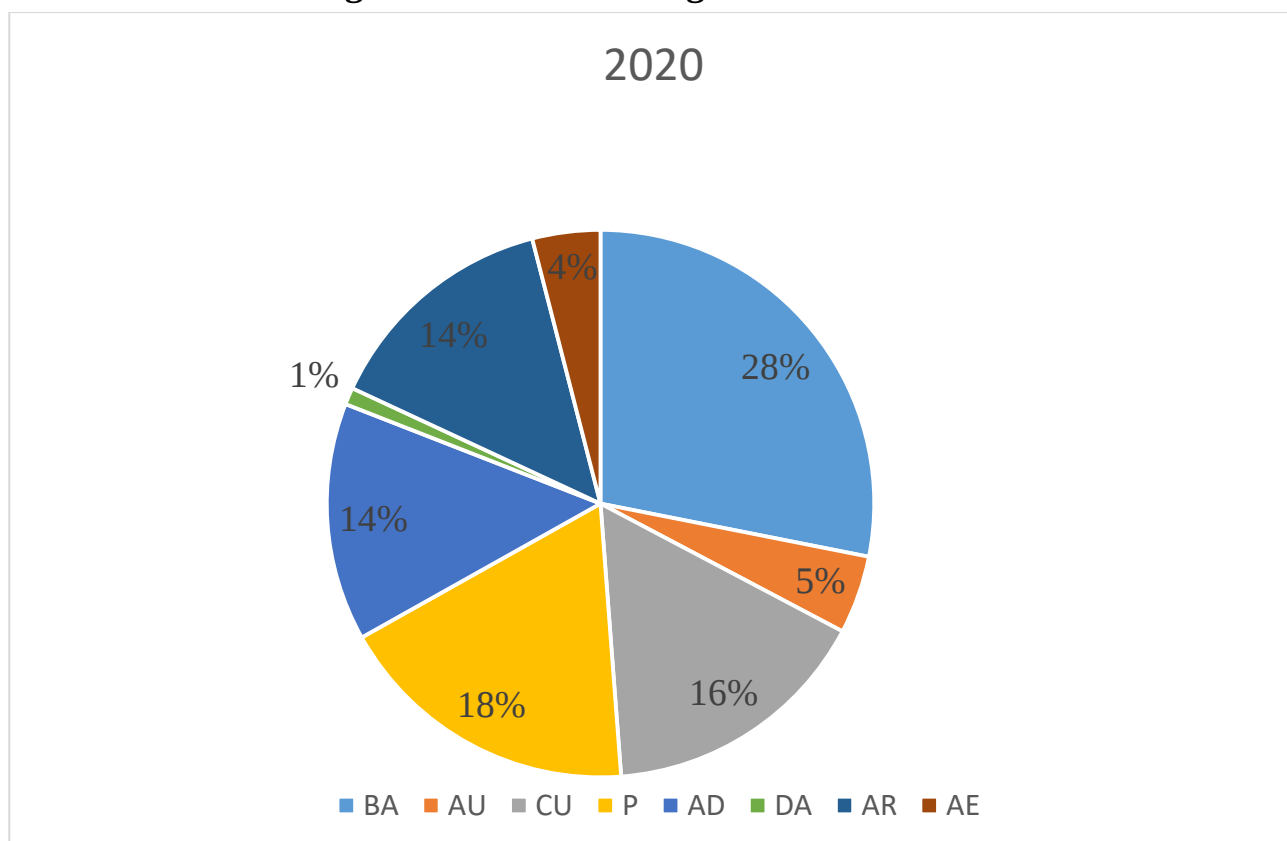


Fig. 4. Incidence of allergic diseases in 2020

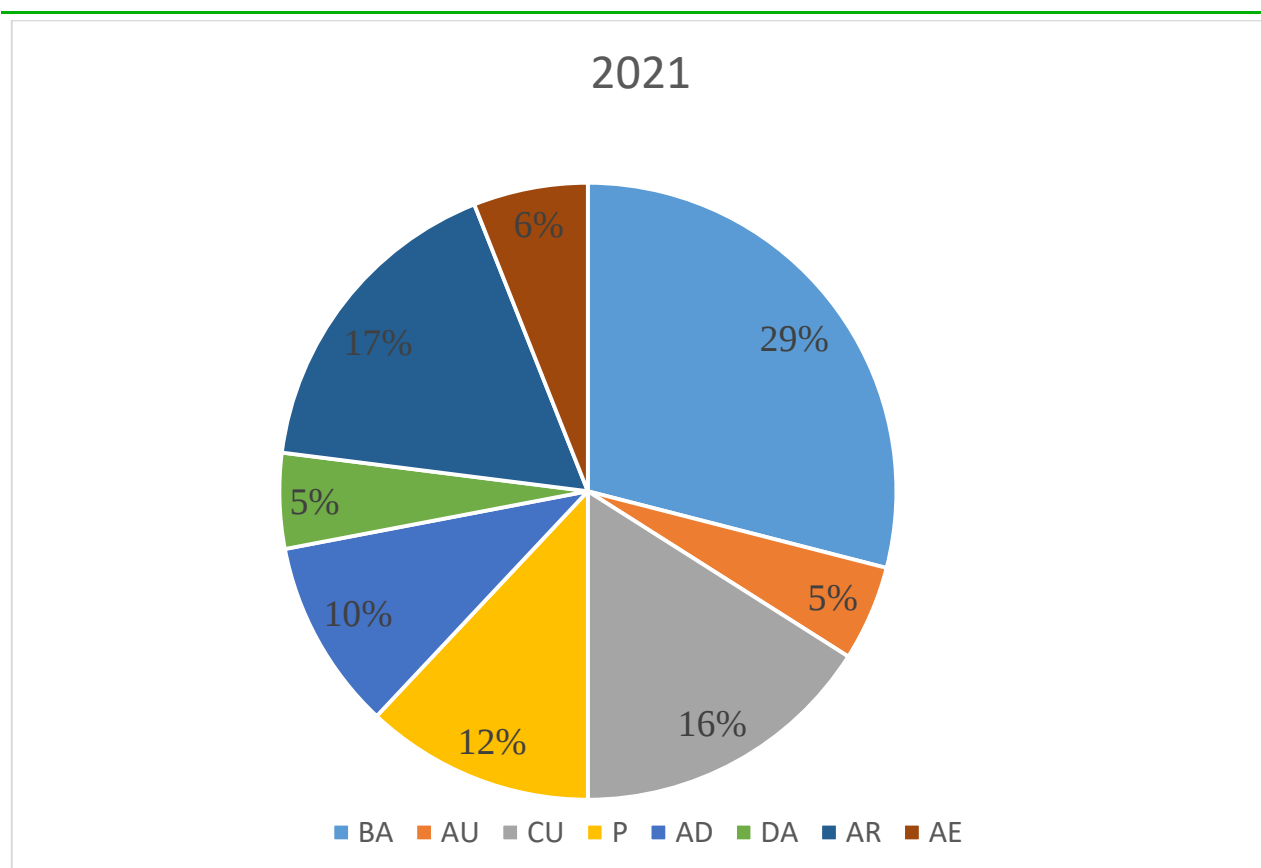


Fig. 5. Incidence of allergic diseases in 2021

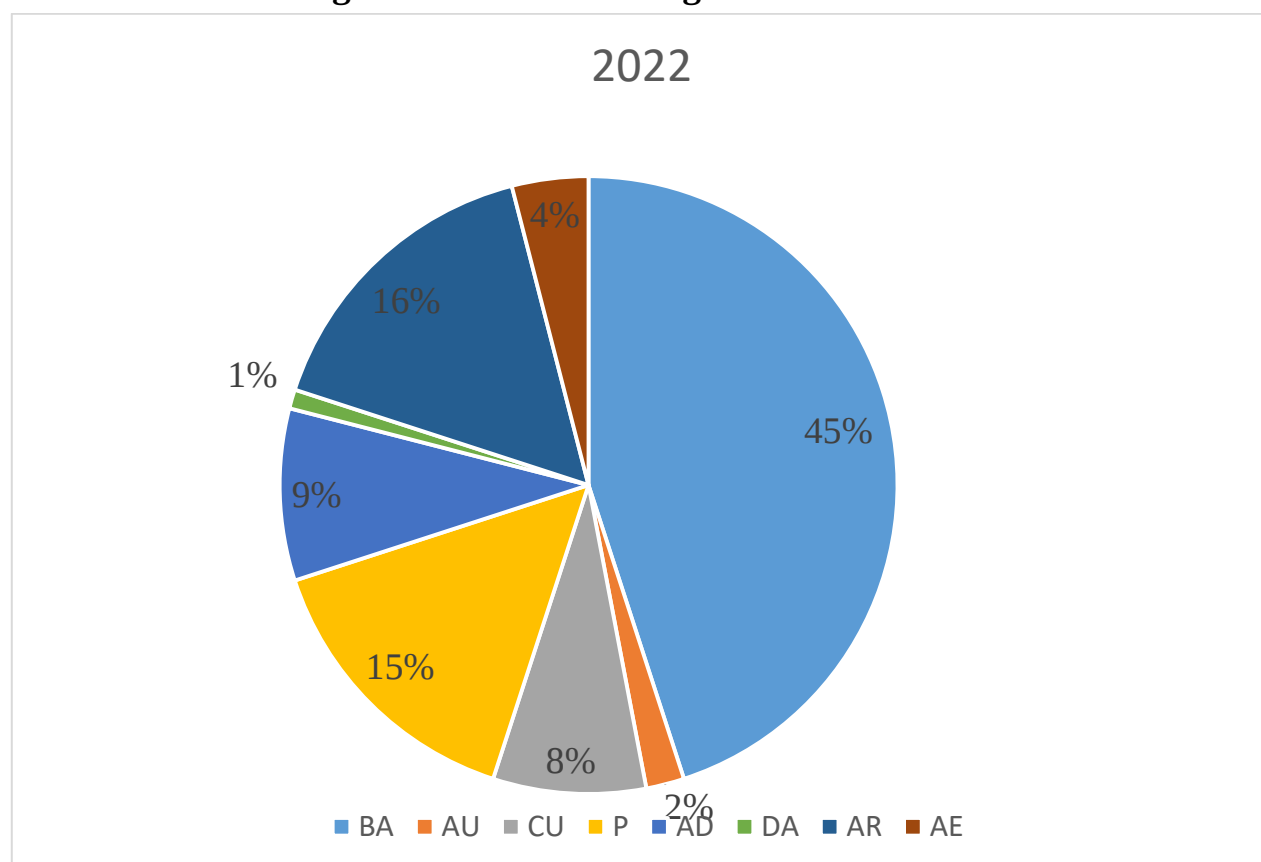


Fig. 6. Incidence of allergic diseases in 2021

Allergic rhinitis (AR) is one of the common human diseases affecting 10 to 50% of the general population. In Russia, from 12 to 24% of the population suffer from allergic rhinitis and more than 600 million people in the world. The wide prevalence, widespread increase in morbidity, negative impact on the quality of life of patients and the cost of therapy define AR as a medical, social and economic problem [1].

Pollinosis is a frequently recorded allergopathology in the Republic of Sakha (Yakutia), which is also confirmed in our data: 218 cases during the period under review. Pollinosis is a risk factor for the formation of bronchial asthma (BA) and precedes its development in 32-64% of cases [3].

Allergic diseases, in particular BA, in our region also remain an urgent problem. Among allergic diseases, bronchial asthma (BA) is among the most common. According to epidemiology data, over the past 10 years, among 4-10% (about 300 million people) of the world's population suffer from this disease. BA is widespread in all countries of the world to varying degrees, which is associated with factors such as climate, geographical location, vegetation, degree of air pollution, urbanization and level of population culture. [5]. When studying the quality of life, a high degree of influence of allergic diseases (AD) on the level of emotional, social, mental functioning was revealed, which significantly affects the social adaptation of a person suffering from an allergic disease. [2]

The coronavirus disease that broke out in December, 2019 in Wuhan, COVID-19, provoked a very difficult epidemic situation, becoming a worldwide problem. The periods we studied - 2020 and 2021 are marked by this very situation, which has made its own adjustments in the detection, spread and diagnosis of allergic diseases. During these periods, most allergist's offices took patients within the framework of the epidemiological situation, special attention of allergists was directed to the fight against the pandemic. The number of requests and receptions has decreased. In 2020, there is a decrease in the number of requests compared to other years.

Accordingly, the increase in the incidence of allergic diseases such as bronchial asthma and drug allergies increased after the pandemic. This is probably due to specific respiratory damage. Numerous studies have published information that demonstrates that BA is relatively common in patients with COVID-19. For example, according to New York data (USA), the frequency of BA was 9% of 5700 examined with COVID-19. In COVID-19, the laryngeal epithelium, airway fibrillation epithelium, type I and II alveolocytes with the development of diffuse alveolar injury and respiratory distress syndrome are most often affected [4], which proves our hypothesis. On the one hand, bronchial asthma can be a protective factor in COVID-

19, since one of the reasons for this is a special type of inflammation that all allergy sufferers have, Th-2-mediated. Perhaps it is the polarization of the immune response in this direction that protects patients with allergic asthma from severe course and death. [6]

Possible causes of drug allergies are associated with the use of many antiviral, immunostimulatory, vasodilator drugs during COVID-19. After all, it is these groups of drugs that contain a number of side effects. The likelihood of developing a drug becomes higher with intramuscular administration, with intravenous administration the risk level increases to the maximum.

Allergic rhinitis, on the contrary, has decreased in 2020. This is possibly due to the fact that everyone observed the anti-epidemic regime, used the means of individual protection of the respiratory system as much as possible. Thus, protection was also carried out against allergic stimuli on the mucous membrane of the nasal cavity and sinuses.

Conclusion. Thus, we can conclude that the frequency of allergic diseases is closely related to COVID-19. The new coronavirus infection has affected all medical activities, the incidence of all organs and systems. It made it's own adjustments in the frequency of manifestation of allergic diseases. It provoked the frequency of allergic reactions to drugs, as well as to the appearance of threatening complications, in the form of anaphylactic shock. The most vulnerable in this regard were patients with bronchial asthma. In all likelihood, this is due to the low quality of life, when a pandemic is added to natural, socio-economic factors.

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