

## IMMUNOHISTOCHEMICAL ASSESSMENT OF SIGNS OF INFLAMMATION OF NASAL AND PARANASAL SINUSES IN ALLERGIC RHINITIS

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### Abstract

In this article, the nose and nasal passages in allergic rhinitis about the immunohistochemical evaluation of inflammatory markers of cavities information is provided. Although allergic rhinitis is rarely diagnosed, the incidence rate is stable with the beginning of kindergarten and education begins to rise steadily.

**Keywords:** allergiya, rinit, ekologiya, epidemiologik, populyatsiya.

### Introduction

Allergic rhinitis is an acute or chronic inflammatory disease of the mucous membrane of the nose, which occurs due to an overactive immune system response to allergens that are inhaled. Allergens that cause this disease include dust, animal dander, mold spores, plant dust, etc. Allergic rhinitis is the most common type of rhinitis and is associated with other allergic conditions such as conjunctivitis, atopic dermatitis, or asthma [1]. Patients have symptoms such as stuffy nose, runny nose and sneezing. Allergy symptoms may worsen during certain seasons or when allergens are inhaled. Allergic rhinitis is usually diagnosed based on clinical symptoms. Various allergy tests are used to determine the causative agent of allergic rhinitis or when there is doubt in the diagnosis. Initial treatments include allergen avoidance, topical corticosteroids, and antihistamines. If the above treatments are not sufficient, allergen immunotherapy can be considered.

Symptoms of allergic rhinitis include persistent sneezing, stuffy nose, runny nose, itchy nose and throat, and sometimes hyposmia (diminished sense of smell). In 50-70% of patients with allergic rhinitis, due to allergic conjunctivitis (inflammation of the mucous membrane of the eye), additional eye redness, itching, and tearing may be observed. Hyperpigmentation and swelling are observed on the patient's lower eyelids. Also, when patients have allergic rhinitis, they wipe their nose from bottom to top. Because, in this way, they can reduce the itching in the nose. This condition is called allergic firework in medicine.

Allergic diseases, especially allergic rhinitis and bronchial asthma in childhood, have attracted the attention of researchers for many years. The wide scale of the disease made it not only a medical but also an acute social problem. Allergic rhinitis (AR) remains a serious problem due to the annual prevalence of the disease, frequent complications, as well as a sharp decrease in the patients' work abilities and quality of life. According to the WHO, mainly children and adolescents, as well as the population of adults of working age, are prone to allergic diseases, which requires the search for new solutions to reduce the disease and disability of the child contingent on our planet. In developed countries, allergic rhinitis is diagnosed at any age, including infants. Older children, especially 13-14 years old, have a higher incidence of allergic rhinitis.

About 80% of patients diagnosed with allergic rhinitis develop symptoms by age 20. If boys are more likely to develop AR in childhood, then the opposite trend is observed in adulthood, and therefore the incidence rates do not differ between men and women in the adult population. Most of the patients with allergic rhinitis are between the ages of 3 and 15-16, which is the period of greatest mobility, boys are more affected than girls. According to medical statistics in different countries of the world, the prevalence of allergic diseases has increased significantly in recent years, and no country has observed a decrease or stabilization of the growth of this pathology. Currently, allergic diseases are increasing in children, among which AR prevails. According to the results of a number of epidemiological studies conducted in different regions of Russia, the prevalence of AR in the children's population reaches 22%. This disease limits children's life activities, reduces their social and physical activity, as well as quality of life and general well-being. Disruption of nasal breathing for a long time, first of all, leads to hypoxia in the brain, which significantly reduces cognitive functions and affects the ability of schoolchildren to read and learn. AR can eventually progress to bronchial asthma (BA), which can sometimes be disabling.

Allergic rhinitis is caused by allergen exposure, which causes allergic inflammation of the nasal mucosa. The results of epidemiological studies conducted in the European regions of the world show that allergic rhinitis occurs in 4% to 30% of the general population [14,16,18]. According to the results of statistical studies in Asian countries, from 10 to 20% of the population suffers from allergic rhinitis. Over time, 40% of people with allergic rhinitis develop bronchial asthma.

Unfortunately, to date, there are no unified approaches to determine the prevalence of allergic rhinitis among the population. Its prevalence is often estimated by analyzing the number of visits to medical institutions, but the experience of most researchers shows that the data obtained in this way are often inaccurate. According to the global classification, allergic rhinitis should be understood as a disease of the nasal mucosa, which is an IgE-mediated inflammation of the mucous membrane of the nasal cavity and at least one of the following symptoms occurs every day for an hour or more characterized by the presence of two: nasal congestion (obstruction), runny nose (rhinorrhea), sneezing, itching in the nose. There are two types of allergic rhinitis: seasonal and perennial.

The main danger of this disease is that simple sprays only eliminate runny nose, and the main enemy, allergy, has a negative effect on the body. Long-term use of drop drugs leads to the formation of cysts and the appearance of polyps. Only a comprehensive approach to the treatment of the therapy selected by an experienced doctor-otolaryngologist will serve to completely cure our patients from this serious disease.

How is the diagnosis made?

Endoscopy is a modern method that allows to distinguish allergic rhinitis from other diseases in the nasal cavity.

Allergy control is the main weapon in the fight against colds.

After the examination, an individual treatment method is selected, including:

- Treatment with medication
- Cleaning the nasal cavity
- Vacuum cleaning
- Physiotherapy

Allergic rhinitis is a chronic inflammation of the nose, according to statistics, 25 percent of the population suffers from this disease.

The main symptoms of allergic rhinitis:

- Clear and copious discharge from the nose.

- Sneezing, itchy skin, sore throat.
- Runny nose.
- Burning sensation in the eyes
- The duration is more than 1-2 weeks.
- Low temperature.
- Rashes.
- Indigestion.
- Getting nervous
- Fatigue quickly.

Along with prescribed treatment for allergic rhinitis, a hypoallergenic diet should be followed. Hazelnuts and other nuts, peanuts, pears, bananas, kiwi, celery, red fruits, red apples, carbonated drinks, less frequent meals, etc. to diet

With the help of proper prevention, it is possible to reduce the likelihood of attacks or at least reduce the manifestation of allergy symptoms.

Our recommendations include:

- walk outside early in the morning or after rain;
- it is better to refuse to walk in windy weather;
- use air conditioning and wear a mask at home and in the car during the period of active flowering of plants;
- wet cleaning the house as often as possible without using household chemicals;
- when you come from the street, you should change your clothes, wash your hands, wash your nose;
- feather pillows are replaced with the best synthetic hypoallergenic ones.

Remember not to self-medicate, as this can lead to serious complications.

Seasonal rhinitis occurs in spring and autumn, is characterized by an acute onset of the disease, accompanied by a lot of runny nose and nasal congestion. During the rest of the year, there is no runny nose. Redness and itching of the eyes, lacrimation (allergic conjunctivitis) are common. Seasonal rhinitis lasts until the flowering period of hay. When a susceptible person inhales grass, flower, or tree pollen, an allergic reaction begins in his nose or bronchi. AR symptoms are often confused with acute respiratory infections. If the symptoms of respiratory disorders persist for more than two weeks against the background of normal body temperature, as well as there are other signs of the allergic nature of the disease, AR should be excluded.

## CONCLUSION

The analysis of the literature showed that there is no information on the distribution and identification of the factors of the occurrence of allergic rhinitis, the distribution and clinical characteristics of periodic and permanent forms of AR, the laboratory-cytological parameters of the distribution of allergic rhinitis, the analysis of children based on gender and age.

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