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SEASONAL ALLERGY IN CHILDREN: CAUSES AND MODERN TREATMENT METHODS

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Abstract
Seasonal allergy is a common allergic reaction in children, mainly observed in summer and spring. Its main causes are allergens in the external environment, in particular, plant dust, blue mold fungi and other factors. This article analyzes the causes, clinical symptoms and treatment methods of seasonal allergies.

Keywords: Seasonal allergy, allergy in children, plant dust, clinical symptoms, antihistamines, prevention, treatment methods.

INTRODUCTION

The prevalence of seasonal allergies in children is increasing year by year. This condition occurs as a result of hypersensitivity of the immune system, causing various inconveniences in children. Allergies negatively affect not only the physical condition of the child, but also his overall quality of life. Every year in the spring and summer, allergic reactions increase, which leads to the appearance of symptoms such as breathing problems, skin rashes and watery eyes in children of different ages. Such situations cause great concern not only for the child, but also for his parents and family members [1].

Due to the widespread prevalence of seasonal allergies, it is important to identify their causes, pay attention to their clinical signs, and develop effective treatment methods. This article provides information about the main causes, clinical manifestations, and effective treatment methods of seasonal allergies. At the same time, preventive measures and ways to protect children from allergies are also analyzed [2].

Seasonal allergies are mainly caused by exposure to natural allergens in the external environment. These allergens are considered too dangerous by the human immune system and cause an allergic reaction[3]. Below are the main causes of seasonal allergies in detail:

Plant dust (Pollinosis)– In spring and summer, dust from trees, flowers, and grasses can trigger allergic reactions in children. The most potent allergens include juniper, fir, clover, plane, dogwood, and linden. During the flowering season, dust increases in the air, gets into the respiratory tract, and causes allergic diseases [4].

Pollinosis (allergy to pollen) is one of the most common seasonal allergic diseases among children. Its effects are not limited to the respiratory tract and eyes, but also reduce the child's general

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condition and quality of life[5]. Below is detailed information about the effects of pollinosis on children:

1. Impact on the child's daily activities

Children with pollinosis have difficulties in daily activities and school studies:

- Due to constant redness and itching in the eyes, it becomes difficult to concentrate on reading.
- Nasal congestion and breathing problems make it difficult to sleep well at night, which leads to fatigue, inattention, and irritability during the day.
- Active games and sports may be limited, as physical activity can aggravate the allergic reaction[6].

2. Effects on respiratory tract

Pollinosis can damage the respiratory tract and cause the following diseases:

- Allergic rhinitis - runny nose, sneezing and congestion of the respiratory tract.
- Tendency to bronchial asthma – If hay fever is left untreated for a long time, it can increase the sensitivity of the respiratory tract and lead to asthma.
- Sinusitis and otitis - is one of the complex conditions caused by allergic rhinitis, which not only makes it difficult to breathe, but can also impair hearing[7].

3. Effects on the immune system and nervous system

- Decreased immunity – As the body constantly fights allergens, the overall immune system becomes weakened, and the child may become more susceptible to viral and bacterial infections.
- Nervousness and mood swings - sleep disorders and constant discomfort due to allergies have a negative effect on the nervous system. Children may experience irritability, lack of attention, and rapid fatigue.

4. Effects on the digestive system

- Children with hay fever sometimes have an increased tendency to develop food allergies, especially when consuming foods that are associated with pollen (such as fruits and vegetables).
- Intestinal discomfort, nausea and even dysbacteriosis can be observed.

5. Decreasing the general quality of life

Pollinosis also affects the social life and development of children:

- They may avoid participating in games and sports.
- The ability to study in school may decline, which may affect future academic performance.
- Allergy-prone children may have an increased risk of developing other atopic diseases (atopic dermatitis, asthma) in the future.

Pollinosis has a serious impact not only on the physical health of children, but also on their mental and social well-being. Therefore, it is important to identify it in a timely manner and take effective treatment and prevention measures. Parents and doctors should work together to take measures to improve the quality of life of children.

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Mold spores– Especially on rainy and humid days, spores of this fungus multiply in the air. They are found not only in the outdoor environment, but also in the home and can cause allergic reactions. Mold and Aspergillus species are the main fungi that cause allergies.

Animal hair and dust- In hypersensitive children, animal fur, skin fragments and secretions can aggravate seasonal allergies. Microscopic allergens from pets can fly in the air and enter the respiratory tract.

Daily dust and environmental factors- Air pollution, which increases in autumn and spring, can aggravate allergies. Domestic plant dust and car gases increase the sensitivity of the respiratory tract in children.

Insects and their waste– Some children are allergic to insects, especially small woodlice and ants found in the forest. Biological substances released by them can enter the body through the skin or respiratory tract and cause an allergic reaction. Allergy to insect bites is a very common condition in children, which is caused by the immune system reacting too strongly to the venom or saliva produced by insects. Such allergies are especially common in summer and spring, when playing in nature or in the yard. Its severity can range from a mild rash to anaphylactic shock.
The main insects that cause allergies to insect bites. Allergic reactions are more common in children when bitten by the following insects:
Bees and wasps - their stings cause a strong allergic reaction, especially if the child is sensitive to their poison.
Ants - Some types of ants (eg, red stinging ants) can cause a severe rash, redness, and swelling in children.
Mosquitoes and fleas - a mosquito bite causes immediate redness and itching. In some children, a large swelling and a drop in blood pressure can be observed.
Lice and ticks bite the skin of children and release various substances into the blood. This can lead to itching, skin rashes and even secondary infections.
Cockroaches - when bitten by them, a strong allergic reaction can develop, especially if the child is sensitive to them.

Air temperature and climate change– Factors that affect diet and the immune system can aggravate seasonal allergies. For example, strong sunlight in the summer or rapid warming in the spring can make it difficult for the body to adapt to the external environment and increase allergic reactions.
Clinical signs. The main clinical signs of seasonal allergies can manifest themselves in children to varying degrees. Most of them are related to the respiratory tract, skin, and eyes:
1) **Redness and itching of the eyes (allergic conjunctivitis)** – Redness, itching, watery eyes and sensitivity to light appear around the eyes.
2) **Runny nose and sneezing (allergic rhinitis)** - Children experience runny nose, sneezing, red and itchy inner part of the nose.

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3) **Cough and difficulty breathing**- Allergens can cause coughing and in some cases, asthma-like breathing difficulties.

4) **Skin rashes and itching (allergic dermatitis)**- Redness of the skin, roughness, rashes and severe itching may be observed.

5) **General weakness without fever**- Children may experience drowsiness, fatigue, irritability, and loss of appetite.

If these symptoms persist or become severe, it is necessary to consult a doctor.

Treatment and prevention measures. Pharmacological methods:

- **Antihistamine drugs**- drugs such as loratadine, cetirizine, fexofenadine reduce the allergic reaction.
- **Glucocorticoids**- in complicated cases, it is recommended to reduce swelling and normalize the immune response.
- **Nasal sprays and eye drops**– used to combat the symptoms of allergic rhinitis and conjunctivitis.

Natural and preventive methods:

— Avoid allergens - keep doors and windows closed during the blooming season.
— Use of special curtains and air filters.
— Drink more water and eat a balanced diet.
— Taking vitamins to strengthen the body.

Conclusion

Seasonal allergies in children are caused by an inappropriate response of the immune system to the external environment. Correct diagnosis and a comprehensive approach are important for its effective treatment. It is possible to improve the quality of life of children by reducing exposure to allergens, taking medical and preventive measures in time. Also, strengthening the children's immune system and early detection of allergies will help prevent future complications.

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