

BRONCHIAL HYPERREACTIVITY AND BRONCHIAL ASTHMA DIFFERENTIAL DIAGNOSIS AND TREATMENT THE SUPERVISOR

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Abstract

This article discusses the problems of differential diagnosis, diagnostic approaches, and treatment principles between bronchial hyperreactivity and bronchial asthma. Bronchial hyperreactivity is an oversensitivity of the bronchi in response to various factors, which can cause symptoms similar to bronchial asthma. Therefore, it is important to properly isolate, diagnose and treat them. This article describes modern methods of diagnostics, including spirometry, bronchoprovocation tests, allergy tests, and methods to distinguish between these two conditions by identifying inflammatory markers. Patients will also be provided with detailed information on effective approaches and treatment strategies. The results of the study show that it is possible to significantly improve the quality of life of patients by using the correct diagnosis and appropriate therapy methods.

Keywords: Bronchial hyperreactivity, bronchial asthma, differential diagnosis, spirometry, treatment.

INTRODUCTION

Bronchial asthma and bronchial hyperreactivity are broad types of lung diseases, and their differential diagnosis plays an important role. Bronchial hyperreactivity is hypersensitivity in the bronchi to various pathogens, and this condition may have clinical signs similar to bronchial asthma. That is why it is of great importance to identify them and choose the right treatment strategy [1].

Bronchial asthma is a chronic inflammatory disease that can develop under the influence of a variety of factors, including allergens, infections, physical activity, and environmental pollution. Bronchial hyperreactivity, on the other hand, is not an independent disease, but a syndrome that occurs as a result of different pathological processes. It may not always cause asthma, but it can be a sign of a susceptibility to respiratory problems in patients [2,10].

Today, various diagnostic methods are used to timely detect bronchial asthma and bronchial hyperreactivity. In particular, spirometry, bronchoprovocation tests and allergic tests play an important role in the differentiation of these diseases. Therefore, this article discusses the main





differences between bronchial hyperreactivity and bronchial asthma, diagnostic methods and effective treatment approaches. Bronchial asthma clinic in children [3,13].

Bronchial asthma in children has typical clinical signs, in contrast to adult ones. The main symptoms include: 1. Episodic wheezing, shortness of breath – often occurs after physical activity or contact with an allergen. 2. Persistent or recurrent cough – manifests especially at night or early in the morning. 3. Wheezing associated with bronchospasm – a whistle-like sound is heard when exhaling. 4. Associations with allergic rhinitis or atopic dermatitis – in most cases, asthma in children is accompanied by other allergic diseases. 5. Exacerbation of symptoms after infections – bronchial asthma can get worse after viral infections. 6. Physical activity-related asthma – In some children, exercise can trigger asthma [4,11].

Symptoms at an early age – bronchial asthma in childhood – can manifest itself in infancy and can change over time. Detection and treatment of asthma in children can help better manage the disease and prevent complications [5,12].

Clinical differences between bronchial hyperreactivity and bronchial asthma. Bronchial hyperreactivity is not an independent disease, but rather a symptom that occurs in a variety of pulmonary diseases. Bronchial asthma, on the other hand, is a chronic inflammatory process, manifested by episodic shortness of breath, bronchospasm and coughing [6,9].

- Bronchial hyperreactivity is not an independent disease, but rather a symptom that occurs in a variety of pulmonary diseases.

- Bronchial asthma, on the other hand, is a chronic inflammatory process, manifested by episodic shortness of breath, bronchospasm, and coughing.

- Bronchial asthma is often caused by allergic mechanisms, while bronchial hyperreactivity can be caused by infections, physical influences, or chemicals.

- Bronchial asthma is of a variable nature in which the patient's condition changes throughout the day or under different conditions, while bronchial hyperreactivity occurs depending on specific factors [7,8].

Differential Diagnosis

- 1) Spirometry and bronchoprovocation tests – these methods are important in determining bronchial hyperreactivity. In particular, testing with bronchodilators helps to more accurately diagnose bronchial asthma.

- 2) Allergic tests – bronchial asthma often develops through allergic mechanisms, so skin tests and IgE counts are important. If the patient has a tendency to allergies, it may indicate asthma.

- 3) Measurement of exhalatory flow rate (PEF monitoring) – patients with bronchial asthma observe variability around the clock. Differences in the rate of expiratory flow in the morning and evening are a hallmark of asthma.

- 4) Bronchial biopsy and markers of inflammation – epithelial damage and an increase in eosinophils are observed in patients with bronchial asthma, while in bronchial hyperreactivity, such changes are rare.

Treatment methods. Bronchial hyperreactivity: It is important to identify and avoid a specific cause. For example, in bronchial hyperreactivity caused by infection bronchitis or contact with chemicals, the underlying cause must be eliminated. Inhaled beta-2 agonists and anticholinergics





are used as short-term symptomatic relief. Physiotherapy is also recommended to protect the respiratory tract and strengthen the immune system.

Bronchial asthma: Inhaled corticosteroids are the main anti-inflammatory drugs. They are used to prevent disease exacerbation and to reduce symptoms. Bronchodilators – beta-2 agonists and anticholinergics are used to relieve asthma. Allergen-immunotherapy – this method is important for the control of bronchial asthma due to an allergic component, helping to adjust the patient's immune system to the allergens helps. Biological therapy – anti-IgE and anti-IL-5 drugs may be effective for patients with elevated eosinophilic inflammation.

Breathing exercises and physiotherapy treatments can help reduce asthma symptoms.

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

Although bronchial hyperreactivity and bronchial asthma have similar symptoms, their pathogenesis and treatment methods differ. Bronchial hyperreactivity is not an independent disease, but a syndrome caused by various factors, the mechanisms and course of its development differ from bronchialastism. Therefore, it is important to establish the correct diagnosis. With modern diagnostic methods, including spirometry, bronchoprovocation tests, and the identification of biological markers, the differences between these two conditions can be more accurately distinguished. Each patient should be selected for therapy based on an individual approach, taking into account the severity of the disease and etiological factors. Proper diagnosis and appropriate treatment can improve the quality of life of patients and help prevent disease.

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