

FEATURES OF THE COURSE OF BRONCHIAL ASTHMA IN CHILDREN WITH EXCESS BODY WEIGHT

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Abstract. This article examines the clinical features of bronchial asthma (BA) in overweight children. It emphasizes that obesity is a significant factor complicating asthma, increasing the severity of symptoms, and reducing the effectiveness of therapy. The impact of excess weight on airway inflammation, respiratory mechanics, exacerbation frequency, and response to standard treatment is analyzed. This article may be useful for pediatricians, allergists, pulmonologists, and child health specialists to improve diagnosis, monitoring, and individualized treatment of bronchial asthma in overweight children. Bronchial asthma is one of the most common chronic diseases in children and is characterized by airway inflammation, bronchial hyperreactivity, and recurrent symptoms such as shortness of breath, cough, and wheezing.

In recent years, there has been an increase in the number of children with overweight and obesity, which significantly impacts the course of asthma. Excess weight causes mechanical limitations in respiratory function, promotes chronic systemic inflammation, and increases the risk of exacerbations. These factors make asthma more severe, reduce the effectiveness of standard therapy, and increase the risk of complications.

Modern epidemiology shows a parallel increase in the incidence of bronchial asthma and childhood obesity. Overweight children have a more severe course of the disease, are more frequently hospitalized, and respond less well to standard treatment. Research into the specific features of asthma in this group of patients is crucial for developing effective approaches to diagnosis, exacerbation prevention, and individualized therapy.

The aim of the study was to determine the characteristics of the course of bronchial asthma in overweight children and to identify the impact of excess weight on the severity of the disease, the frequency of exacerbations, and the effectiveness of therapy.

Research objectives

1. To study the effect of excess body weight on the functional state of the respiratory tract in children with asthma.
2. To analyze the frequency and severity of exacerbations of bronchial asthma in overweight children.
3. Determine the characteristics of inflammatory processes in this category of patients.
4. Compare the effectiveness of standard therapy for bronchial asthma in children with normal and overweight body weight.
5. Develop recommendations for monitoring and individualizing treatment of bronchial asthma in children with obesity.

Research methods. Analysis of medical records of children with bronchial asthma and various body weights. Functional examination methods: spirometry, peak flowmetry, assessment of bronchial patency. Laboratory methods: determination of inflammatory markers and immunoglobulin E levels. Questionnaires of parents and children to assess the frequency of symptoms, exacerbations, and the impact of the disease on quality of life. Comparative

analysis of disease severity and treatment effectiveness in children with normal and overweight body weight.

Study results: Overweight children are more likely to have severe asthma with more pronounced bronchial hyperreactivity. A higher rate of exacerbations and hospitalizations is observed among overweight children compared to children of normal weight. Spirometry parameters, such as FEV1 and PEF, are lower in obese children, indicating limited respiratory function. The effectiveness of standard therapy (inhaled corticosteroids and bronchodilators) is somewhat reduced in overweight children. Chronic systemic inflammation associated with obesity exacerbates asthma and reduces the body's adaptive capacity.

Conclusions. Excess weight is a factor complicating the course of bronchial asthma in children. Obese children have a more severe course of the disease, frequent exacerbations, and reduced respiratory function. Obesity impacts the effectiveness of standard therapy, requiring an individualized approach and possible adjustments to treatment regimens.

A comprehensive approach to treating children with asthma and overweight is needed, including weight management, nutritional modification, physical activity, and individualized medication therapy. Early detection and monitoring of children with asthma and obesity can reduce the risk of complications and improve quality of life.

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