

BRONCHIAL ASTHMA IN CHILDREN: DIFFICULTIES IN DIAGNOSIS AND TREATMENT

Bazarova Sabina Zafarovna,
Student of Samarkand State Medical University

Haydarova Haticha Ramizovna,
Scientific Supervisor: Assistant of the Department of Pediatrics of the
Medical Faculty of Samarkand State Medical University

ABSTRACT

Bronchial asthma in children is an relevant problem in the world and in Uzbekistan asthma is the most common chronic disease of the lower respiratory tract in childhood. Diagnosis of bronchial asthma in children, especially in children of the first five years of life, often causes difficulties. Experts of the Global Strategy for the Treatment and Prevention of Bronchial Asthma (Global Initiative for Asthma, GINA) attribute difficulties in diagnosis to the widespread occurrence of episodes of wheezing in the chest, mainly at the age of less than 3 years; limited possibility or impossibility of testing lung function. The therapeutic and preventive methods used also have age specificity [1]. In this regard, the main attention of specialists is paid to new methods of diagnosing this pathology and developing an optimal treatment regimen for the disease.

Keywords: bronchial asthma, pediatrics, obstructive bronchitis, Global Initiative for Asthma (GINA), diagnosis, therapy.

INTRODUCTION

Asthma is the most common chronic disease of childhood, representing an important health problem. In general, AD affects from 5 to 10% of the child population, two thirds of all patients become ill in the first 3 years of life. In 50-80% of children with asthma, the first symptoms appear at the age of less than 5 years [2]. However, it often takes a long time before a diagnosis of asthma is made. The leading cause of late diagnosis of asthma in children is the widespread occurrence of wheezing in this age group.

In pediatrics, the most difficult is the differential diagnosis between repeated episodes of obstructive bronchitis and asthma, since in 30-85% of children, asthma attacks provoke respiratory infections, which are the most important triggers of exacerbations of asthma in children. In addition, obstructive bronchitis, phenotypically difficult to distinguish from an attack of asthma, is a risk factor for the development of asthma in children [3].

Anamnesis collection is of great importance in the diagnosis of asthma, as well as other allergic diseases. It is necessary to determine the duration of the symptoms, the relationship of their onset with the time of year, the change of place of residence, the appearance of a pet in the house, possible flooding of the apartment (mold fungi), such provoking factors as allergens acting seasonally or year-round, nonspecific irritants (cigarette house, cold air, chemical vapors, pungent odors, emotions). Cesarean section due to abnormal bacterial colonization of

the newborn is currently considered an additional risk factor for atopic diseases, especially with an uncomplicated family history [4].

To diagnose asthma, according to the recommendations of the Global Strategy for the Treatment and Prevention of Bronchial Asthma (GINA), it is also necessary to assess the frequency of episodes of wheezing (for example, more than once a month), the presence of cough or wheezing caused by physical exertion; cough, especially at night, outside viral infections; lack of seasonal variation in the occurrence of wheezing [5].

Bronchial asthma is possible in children with skin allergic manifestations in the first year of life, the development of the first episode of bronchial obstruction over the age of 1 year, with high levels of specific IgE or positive results of skin allergy tests, peripheral blood eosinophilia, having parents (more often the mother) and to a lesser extent other relatives with atopic diseases who have suffered 3 or more episodes of bronchial obstruction, especially without an increase in body temperature and after contact with non-infectious triggers [6]. In this regard, not a few important examinations in the diagnosis of asthma are: functional lung examination (spirometry with bronchodilation test is preferable compared to pycnometry, which can be used with limited resources), allergy examination (injection skin test or determination of the level of specific immunoglobulins, studies to exclude alternative diagnoses (for example, chest X-ray) assessment of markers of respiratory tract inflammation (nitric oxide, sputum eosinophilia), assessment of respiratory tract hyperreactivity (nonspecific bronchial provocative tests, for example, with methacholine, physical activity) [7,8].

The goal of bronchial asthma treatment is to achieve stable remission and high quality of life in all patients, regardless of the severity of the disease. The approach to the treatment of AD is currently focused mainly on the degree of disease control and is based on limiting contact with allergens (a set of elimination measures), therapy for exacerbation of the disease and basic anti-inflammatory therapy. The same classes of drugs are used to treat asthma in children as in adults. However, the use of existing drugs in children is associated with certain limitations regarding both the treatment of acute asthma (exacerbation of the disease) and basic (controlling) therapy. Vascular therapy affects the chronic allergic inflammatory process in the bronchi, thereby reducing the likelihood of bronchial obstruction and the formation of irreversible structural restructuring of the bronchial wall [8,9]. The means of basic therapy include: glucocorticosteroids (inhaled and systemic); leukotriene receptor antagonists; prolonged β_2 agonists in combination with inhaled glucocorticosteroids; cromones (cromoglycic acid, sodium nedocromyl); prolonged theophylline. The volume of basic therapy is determined by the severity and level of control of bronchial asthma, the age of patients, and the nature of concomitant pathology [10,11].

Thanks to modern scientific achievements, the understanding of the pathogenesis of bronchial asthma has reached a new level, and its effective treatment has become possible. In recent years, in most countries of the world and in our country, highly active, effective and pathogenetically sound drugs and means of their administration have been introduced into clinical practice, which largely allow us to solve the problem of controlling the course of bronchial asthma and maintaining the quality of life of patients at a sufficiently high level.

CONCLUSION

BA in children is characterized by epidemiological and clinical peculiarities. The complexity of its diagnosis is primarily due to the high frequency of wheezing, the need to exclude a large number of acute and chronic diseases associated with bronchoobstructive syndrome. For a pediatrician, allergist, immunologist and pulmonologist, a certain diagnostic alertness is necessary in relation to this disease, the formation of which can be facilitated by a detailed and targeted collection of anamnesis and a criteria-based approach to the diagnosis of pediatric asthma.

Significant progress in the treatment of bronchial asthma has been achieved with the introduction of a basic (control) therapy that affects the chronic allergic inflammatory process in the bronchi, thereby reducing the likelihood of bronchial obstruction and the formation of irreversible structural restructuring of the bronchial wall.

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