

Some Aspects Of Acute Bronchitis In Children

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Abstract. The article presents data on the structure of morbidity and features of the modern course of respiratory diseases in children of Andijan. The relevance, place among bronchopulmonary diseases, and features of the course of modern bronchitis in childhood are determined. A brief clinical description is given and the main approaches to the treatment of acute bronchitis are identified. Data from clinical experience with the use of the non-steroidal anti-inflammatory drug fenspiride hydrochloride (Erespal) in children are presented. High anti-inflammatory, bronchodilator, indirect mucoactive and antitussive effects of the drug in the complex treatment of bronchitis in children were noted.

Keywords: respiratory diseases, acute bronchitis, children, complex therapy, fenspiride hydrochloride (Erespal).

INTRODUCTION

Respiratory diseases are one of the most relevant areas of pediatrics and have both medical and social significance. Statistical indicators of morbidity among children in Andijan over the past 20 years of observation indicate the steadily leading position of respiratory diseases (PRD) in the structure of pediatric morbidity. PRD annually accounts for about half of all diseases characteristic of the children's body.

MATERIALS AND METHODS

In the structure of bronchopulmonary pathology among diseases of the lower respiratory tract (RD), the undisputed leader is bronchitis (B), a polyetiological disease based on inflammation of the bronchial mucosa, and the clinical manifestations are cough, sputum formation, and, if small bronchi are affected, shortness of breath.

According to official statistics, the incidence rate of B fluctuates widely, amounting to 14–25 per 1000 average annual child population of the country, i.e. 5% of all childhood diseases and about 30% of PRD [1]. Numerous epidemiological studies in recent years have shown that the prevalence of B is higher among children living in large industrial cities, in poor sanitary and epidemiological conditions, in crowded conditions (children's groups), in regions with a cold, humid climate, significant changes in temperature, humidity, atmospheric pressure during the day.

RESULTS AND DISCUSSION

Interest in problem B among children has increased significantly in recent years. With the improvement of diagnostics and the introduction of modern instrumental techniques, diagnosis B has become more widely used in pediatric practice, and clinical variants of the disease have begun to be diagnosed with a differentiated approach to treatment.

The relevance of problem B in childhood is obvious and is due to:

- high morbidity;
- high frequency of formation of pneumonic process against the background of current B;
- the tendency of the disease to be protracted, recurrent, complicated;
- the ability of B (mainly recurrent) to create the prerequisites for the development of bronchial hyperreactivity with the subsequent formation of obstructive forms of the disease, bronchial asthma (BA);
- high economic costs for treatment (especially recurrent, obstructive, chronic forms of the disease) both directly for the family of the sick child and for the state health authorities as a whole;
- high risk of developing chronic forms of bronchopulmonary diseases: chronic disease (CB), chronic obstructive disease (COPD), and in adulthood - chronic obstructive pulmonary disease (COPD), which steadily leads to disability.

DP are an open circuit to the external environment and are subject to the influence of a wide variety of pathogenic factors that contribute to B.

The most significant factors predisposing to B include, first of all, the pathology of the upper airway: impaired breathing through the nose (narrowness of the nasal passages, changes in the anatomy of the nasal septum, adenoid vegetations, etc.), the presence of foci of infection (rhinitis, sinusitis, adenoiditis, tonsillitis, etc.), carriage of pathogenic microflora.

A violation of the immune response of the child's body is also of great importance for the formation of B: an imbalance in the immune system, including its immaturity in young children, which is typical for frequently ill children; the presence of concomitant allergic diseases (allergic rhinitis, sinusitis, laryngitis, etc.); frequent colds. It should be noted the particular importance of predisposing factors for the formation of unfavorable variants of the course of the disease (protracted, complicated, recurrent, etc.).

B can be classified as a polyetiological disease, and the range of etiological factors that can cause B is extremely wide.

According to the etiology of the disease, three main variants B can be distinguished:

infectious diseases caused by a variety of infectious agents: viruses, bacteria, including atypical microorganisms, fungi, protozoa;

non-infectious B, arising as a result of exposure of the mucous membrane of the DP to various allergens (dust, pollen, etc.); toxic substances (vapors of acids, alkalis, combustion products of gasoline, sulfur dioxide, etc.); physical factors (hot dry or excessively cold air), etc.;

B of mixed etiology – when the cause of the disease is a group of factors of both infectious and non-infectious nature.

Despite the variety of causally significant factors that can cause the disease, infections play a leading role in the etiology of B.

According to modern epidemiological studies, the most common pathogens of B in childhood are viruses and viral-bacterial associations (up to 80% or more).

Viral etiology is characteristic of most acute and recurrent forms of the disease. A high tropism of viruses to the mucous membrane of the DP has been established. When the protective mechanisms of the bronchi are suppressed (in children who are weakened, have a predisposition, or have low health indicators), some viruses acquire the ability to persist for a long time in the epithelial cells of the DP, becoming more active under the influence of unfavorable factors (hypothermia, overheating, infection with another virus, etc.). The range of viruses and their serotypes that can cause B is very wide and reaches more than 200 species. However, the most common cause of B are influenza viruses, parainfluenza, respiratory syncytial viruses (RS), adeno-, rhino-, corona-, rota-, enteroviruses, metapneumoviruses, etc.

The pathogenic role of a viral infection is associated with a negative effect on both the mucous membrane of the DP and the entire body as a whole:

- viruses easily penetrate the epithelium, multiply intensively, disrupt metabolic processes in cells, leading to their death. Moreover, the number of destroyed epithelial cells is proportional to the pathogenicity of the virus. The death of epithelial cells leads to a violation of the integrity of the epithelial layer, and the damaged surface of the epithelium becomes vulnerable to bacterial pathogens, allergens, pollutants, etc.;
- viral infection activates endogenous opportunistic flora;
- viruses play a conductive role in the penetration of bacterial infection (mainly coccal flora) deep into the tissues of the bronchial wall, and the addition of a bacterial infection aggravates the course of the disease and may be the cause of an unfavorable outcome B;
- viral infection has a depressive effect on specific and nonspecific protective factors both at the local tissue and organism levels.

CONCLUSION

Modern anti-inflammatory therapy for B in childhood is the basis for pathogenetic treatment of the disease. Of the known non-steroidal anti-inflammatory drugs, Erespal has the most pronounced effect, suppressing the key links of the inflammatory process in the DP, regardless of the etiology of the bronchopulmonary process. Having a multifaceted effect on the key moments of inflammation, the drug allows you to:

- reduce the medication burden on the patient;
- has an indirect mucoactive and antitussive effect associated with suppression of inflammation and reduction of mucus formation in the DP.

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