

PECULIARITIES OF USING POLYOXIDONIUM DRUG IN CHILDREN WITH CHRONIC OBSTRUCTIVE BRONCHITIS

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<https://doi.org/10.5281/zenodo.11394431>

Abstract. *The article includes information on modern approaches to the treatment of children with chronic obstructive bronchitis, current national and foreign protocols for the treatment of obstructive bronchitis. In detail, therapy-based approaches to the oral administration of the tablet form of a polyoxydonium drug are discussed. When polyoxydonium is taken in a dose of 6 mg for 5 days, the period of prolongation of broncho-obstructive syndrome in chronic bronchitis, the duration of treatment in the stationary state can be reduced and the patient's condition can improve faster.*

Keywords: *bronchitis, obstruction, interleukin, ARI, polyoxydonium.*

Significance: The article highlights the urgency of studying the factors and mechanisms of the formation of acute obstructive bronchitis in children due to the rapid growth of respiratory system pathologies in children, the high risk of recurrence of chronic obstructive bronchitis and the high transition to bronchial asthma. In addition, if we look at the rate of infection among children, 70-80% of children who get sick often. (Bulgakova V. A., Balabolkin I. I., Sentsova T. B., 2016).

Researches in recent years have shown that broncho-pulmonary diseases often develop as a result of a violation or decrease in the normal functioning of the immune system, and in some cases, the cases of immune deficiency are primary and secondary.

Therefore, immunotherapy plays an important role in the therapeutic treatment of acute obstructive bronchitis (Lukashova I. V., 2015; Simovanyan E. N., 2018).

Modern literature shows that they do not have perfect information about the correlation of clinical and immunological features in children with acute and chronic obstructive bronchitis. Therefore, the study of clinical and immunological characteristics of acute obstructive bronchitis in children is relevant for the improvement of diagnostic and therapeutic measures, which is considered as the goal of this study.

It should be noted that diseases of the respiratory system make up more than half of the total number of sick children of early age and one third of the total number of sick children of school age [1, 3, 7].

It is known that a quarter of children aged 1 month to 6 years suffer from broncho-obstructive syndrome [2, 8, 28]. In the general population of children, broncho-obstructive syndrome occurs in one third of children [3, 5]. The data on the prevalence of the disease in children in the first years of life is not clear, the studies conducted by most clinicians show that one third of young children have at least once had a bronchoobstructive disease [21, 28, 36, 37].

In the literature, the frequency of bronchial permeability disorders in infants with acute respiratory infections is from 25% to 50% and higher [6, 12, 33], and according to some studies, episodes of bronchial obstruction are acute shows that it is recorded in 50% of patients with respiratory viral infection and is accompanied by broncho-obstructive syndrome of various severity. [28, 30, 38].

Bronchoobstructive syndrome in children with acute respiratory disease was developed by a number of clinicians [13, 19, 28]. However, there is a high need to study the relevance of the infectious factor in the course of the disease.

Acute bronchitis is the most common form of damage to the middle and lower airways in young children, and its prevalence is 15-50 percent [31, 39].

According to some clinicians, the frequency of development of bronchial obstruction in children with various infectious diseases is 5-40% [14, 18, 28].

It has been shown that the spread of acute bronchitis among children is correlated with the structure of the influenza virus [16, 17, 40], according to A.S. Monto and others, more than 90 percent of cases have a viral nature. infections and less than 10% of cases are associated with bacterial infections [14, 24].

Respiratory syncytial virus takes the leading place in the formation of bronchoobstructive syndrome in children of early age, and it is this virus that is the cause of lower respiratory tract infections in children aged 3 months to 5 years, and more than 3 million children are treated in hospital every year [21, 25]. According to recent data, respiratory syncytial virus [13,21, 41] is the main cause of broncho-pulmonary diseases in babies in some countries, causing pneumonia in 50% of cases and bronchiolitis in 80% of cases [1, 18].

According to many literatures, diseases leading to the development of bronchoobstructive syndrome: bronchiolitis, acute bronchitis, in addition to various etiological factors, various infectious agents are identified both separately and in combination. The most common ones are: respiratory syncytial virus, rhinovirus, parainfluenza, influenza viruses, and the rarest ones are bacterial flora [16, 22].

Respiratory syncytial virus takes the leading place in acute bronchiolitis, its importance is confirmed by recent studies [21, 32], Keshishyan E.S. respiratory syncytial virus takes the leading place in the development of bronchiolitis and pneumonia [34, 42].

The distribution of respiratory syncytial virus is global; therefore, this virus is recorded in all continents and climates, and often comes together with seasonal epidemics [9, 16, 20].

Various pathophysiological mechanisms are responsible for the development of broncho-obstructive syndrome, and many authors propose to divide it into two groups:

- renewable functionality;
- to irreversible organic changes [29].

Inflammation takes a leading place in the pathogenesis of the development of bronchoobstructive syndrome, it leads to excessive production of mucous secretion, infiltrative swelling of the respiratory epithelium in the terminal bronchi, which causes a violation of bronchial permeability and deterioration of mucociliary apparatus. [23, p. 78-79].

Acute obstructive bronchitis is classified by symptoms of high expiratory gasps and acute shortness of breath. An increase in percussive sound is noted on percussion, and on auscultation - in all segments of the lungs, mainly expiratory diffuse, wet and crepitation wheezes are present, as a result of which expiratory wheezing is observed. Bronchial obstruction lasts up to 2-3 weeks [6].

The purpose of the study: to study the risk factors that cause acute obstructive bronchitis in children, the specific features of its course, to determine the amount of interleukin-6, 10 in the blood by the immunoenzyme method, to study the effectiveness of using polyoxidonium drugs in children with this disease.

Research methods and materials:

To solve the aim and task, we studied children with acute obstructive bronchitis from 1 to 10 years old, and all patients were examined for general blood analysis, blood biochemistry and the number of interleukins 6,10 in the blood.

The studies were conducted in the pediatric departments and pediatric intensive care unit of the Samarkand branch of the Republican Emergency Medical Research Center. 160 children were examined.

Among them:

Group I (main group) – children with acute obstructive bronchitis (80 patients).

Group II– (comparison group) - children with chronic obstructive bronchitis (80 patients).

All patients were divided into 2 groups.

Group I is a group of 80 children who received standard therapy, of which 24 (28.3%) had severe disease, 32 (51.6%) had moderate disease, and 14 (20.0%) had mild disease.

Group II consisted of 80 children, of which 35 (29.1%) had severe disease, 30 (50.0%) had moderate disease, and 15 (20.8%) had mild disease.

In addition to the standard treatment therapy, children in the II group were used to drink the tablet form of the polyoxidonium drug in the following dosage regimen:

3mg/milk for 1-5 years

6mg/milk up to 5-10 years

Research results and their discussion:

As a result of the research, it should be mentioned that in the conducted studies, there are significant changes in the inflammatory response and immunological indicators in patients, which are manifested by the violation of the immunological and anti-inflammatory response reactions that determine the nature of the disease.

As a result of the data obtained from the examination of a group of patients suffering from chronic obstructive bronchitis, the need to search for new therapeutic and preventive measures has appeared. For this, our study investigated the effectiveness of using Polyoxidonium in patients with chronic obstructive bronchitis.

Group II included 80 children with chronic obstructive bronchitis - they were divided into 2 subgroups of IIa and IIb. 80 children with chronic obstructive bronchitis, subgroup IIa received standard therapy with Polyoxidonium drug, subgroup IIb for chronic obstructive bronchitis received standard treatment, all according to established disease management protocols.

Physical changes in the lungs, which are the most prominent clinical signs of obstructive bronchitis, normalized percussive changes in the lungs - 4.2 ± 0.2 and auscultatory - in patients with chronic obstructive bronchitis treated with polyoxydonium 5.1 ± 0.2 days in patients, which was 1.1 and 1.2 days ahead of disease dynamics in patients of subgroup Ib ($P < 0.05$; $P < 0.05$).

In our observations, the duration of respiratory failure with conventional therapy in patients of group IIb was 5.2 ± 0.2 , cough was 7.4 ± 0.3 , which was much longer compared to the indicators of subgroup IIa ($P < 0.01$; $P < 0.001$).

The duration of inpatient treatment of patients with chronic obstructive bronchitis was significantly higher in subgroup Ib patients compared to subgroup Ia (5.1 ± 0.2 vs. 6.7 ± 0.2 bed-days; $P < 0.01$).

It should be mentioned that the obtained results show that the use of modern methods in the diagnosis of broncho-obstructive syndrome in children with chronic obstructive bronchitis is

of high importance, it is reasonable to use these tests to predict the course and outcome of the disease, and it is necessary to treat the patient. confirms. The study found that the polyoxidonium drug has a high clinical efficiency in the treatment and prevention of repeated bronchial obstructions in chronic obstructive bronchitis, which allows recommending this method for practice.

Summary: Chronic obstructive bronchitis is accompanied by a more pronounced and long-term manifestation of broncho-obstructive syndrome, which is reflected in a significant increase in the duration of treatment in the inpatient setting (an average of 1.3 bed days). In children with chronic obstructive bronchitis, a 1.3-1.5 times increase in IL-10, IL-6 immunological indicators was found. It was found that the use of polyoxidonium drug in a dose of 6 mg (tablets) per day significantly reduces the duration of inpatient treatment (by 1.5 bed days) in children with chronic obstructive bronchitis.

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