

Course of Community-Acquired Pneumonia in Children of Primary School Age

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Annotation: Most children were admitted to the hospital without fever, but even in those cases when the increase in temperature persisted at the time of admission, the main complaint in both groups was cough: in group 1 in 56% and in group 2 in 24% of patients. Frequent wet cough occurred in children with biofeedback 2 times more often than without biofeedback. Dyspnea of a clearly expiratory nature was observed in 40% of the observed children; in the rest it was of a mixed nature, but with a predominance of difficulty in exiting. However, wheezing occurred in all children with bronchial obstruction. Dyspnea was present in 35% of children in group 1. The average duration of dyspnea was 5.25 ± 3.4 days. Impaired nasal breathing was detected in 53.9% of children in group 1. In dynamics, the duration of nasal breathing disturbance was: 6.25 ± 2.9 .

Keywords: Bronchopulmonary pathology, children, primary school age.

Relevance. In children of preschool and primary school age, the incidence of broncho-obstructive syndrome remains high and ranks high among pathological syndromes that complicate the course of respiratory diseases. Broncho-obstructive syndrome (BOS) is a complex of identical clinical symptoms of various origins with different pathophysiological mechanisms of development, based on a violation of bronchial obstruction. Despite numerous publications on biofeedback in children of primary school age, especially in recent years, the severity of the problem of bronchial obstruction remains. This is due to both the increase in the frequency of cases of biofeedback among frequently ill children with acute viral (ARVI) and bacterial diseases of the respiratory tract, and the difficulty of differential diagnosis, primarily with bronchial asthma and some congenital and hereditary diseases of the bronchopulmonary system [1,4,7]. In the general population of children, according to O.I. Lasitsa (2004) using the international research methodology ISAAC (International Study of Asthma and Allergies in Childhood), bronchial obstruction occurs in 30% of children. Allergies, family history and respiratory tract infections are the most common causes of biofeedback in this group. In almost every third of them, with acute respiratory viral infections and lower respiratory tract infections, the clinical picture shows one or another degree of severity of bronchial obstruction. At the same time, the course of biofeedback against the background of acute respiratory viral infection and bacterial infection can mask the manifestations of the underlying disease [5,8]. Thus, in children, bronchial asthma can occur under the guise of ARVI and bacterial infections with biofeedback in 30–50% of cases. Other reasons for the development of biofeedback in children should be noted: congenital and hereditary pathology of the respiratory system, bronchial malformations, respiratory distress syndrome, primary immunodeficiency conditions, congenital heart defects, bronchopulmonary dysplasia, aspiration of foreign bodies, gastroesophageal reflux, migration of round helminths, increased intrathoracic lymph nodes, tumors [9, 10].

Considering the variety of causes of BOS itself and the many diseases of various etiology and pathogenesis, in which one of the leading symptoms in the clinical picture is bronchial

obstruction, it is not possible to draw up an etiopathogenetic classification. From a practical point of view, diseases in children occurring with bronchial obstruction syndrome can be grouped taking into account their connection with the leading pathogenetic mechanisms. Target. To study the features of the course of community-acquired pneumonia in children of primary school age, occurring with biofeedback. Materials and methods. We observed 96 patients aged 6-11 years with a diagnosis of community-acquired pneumonia. It should be noted that of these, in 45 children (47.0%) the disease occurred with severe broncho-obstructive syndrome. We divided all patients into 2 groups: Group 1 included children with community-acquired pneumonia occurring with broncho-obstructive syndrome (BOS) - 45 patients (47%); in group 2 - children with community-acquired pneumonia without biofeedback - 51 patients (53%).

Children of both groups underwent the following laboratory and instrumental studies: X-ray, immunological with determination of the level of immunoglobulin M (herpes, CMV, mycoplasma pneumonia, chlamydia pneumonia), total immunoglobulin G to Giardia and roundworms, immunoglobulin E, assessment of external respiratory function, ultrasound examination of internal organs, electrocardiography, and general blood, urine and stool tests. The diagnosis of pneumonia in both groups was established on the basis of anamnestic, clinical, and radiological data: febrile fever for more than 3 days, catarrhal phenomena, local shortening of percussion sound in the lungs, crepitating rales in the shortening zones, the presence of shortness of breath and intoxication. The determination of biofeedback was based on characteristic clinical symptoms: shortness of breath with signs of obstruction, wheezing, the presence of distant wheezing and percussion sound over the lungs with a boxy tint. In most patients, changes were observed in the clinical blood test in the form of leukocytosis with a shift to the left, increased ESR. Results and its discussion. In our study, we analyzed risk factors for biofeedback in children with community-acquired pneumonia. It was revealed that every third child of the first group, according to the mother, was born from a pregnancy that occurred with toxicosis in the first half, in the second group - every fourth. 62.2% of children in the first group received early artificial feeding, and 47.1% in the second group (Fig. 1). A family history of atopy and its manifestations, in the form of atopic dermatitis, food, dust and pollen allergies, was found in 68% of cases in children of the first group, and in 38% of observed children in the second group (Fig. 2). Analysis of anamnestic data made it possible to establish that 35% of the patients we observed had previously suffered from acute respiratory viral infections, acute respiratory infections, viral hepatitis, and 45% of children were classified as frequently ill[6,7,8].

Among children of both groups, there was a high incidence of unfavorable background conditions: anemia - 32.5%, motor hyperactivity syndrome - 26.5%, malnutrition (protein - energy deficiency grade 1-2) - 9.5%, ENT pathology - 22.5%, helminthiasis - 12.5%, paratrophy - 10.3%. A very important indicator was the timing of admission to the hospital, since the effectiveness of inpatient treatment directly depended on this. The average was 8.3 ± 0.71 days, with almost half of the visits occurring within 4 to 8 days (43.1%) in both groups. In total, in 1 case the call took place on the first day of illness (1%) and in 2 cases 18 days after the appearance of the first complaints (2%). Focal segmental (55.3%) and polysegmental forms (34.7%) of pneumonia were most often diagnosed according to X-ray studies of patients in both groups. In 10% of cases, radiological data indicated an interstitial form of pneumonia. As criteria for severity, the severity of symptoms of intoxication, dysfunction of external respiration, respiratory and cardiovascular phenomena, artificial feeding, natural feeding, mixed feeding, radiological manifestations of the disease, and dysfunction of other organs were used[9]. Most of the children were admitted to the hospital without fever, but even in cases where the increase in temperature persisted at the time of admission, the main complaint in both groups was cough: in group 1 in 56% and in group 2 in 24% of patients. Frequent wet cough occurred in children with biofeedback 2 times more often than without biofeedback [3, 4].

Dyspnea of a clearly expiratory nature was observed in 40% of the observed children; in the rest it was of a mixed nature, but with a predominance of difficulty in exiting. However, wheezing occurred in all children with bronchial obstruction. Dyspnea was present in 35% of children in

group 1. The average duration of dyspnea was 5.25 ± 3.4 days. Impaired nasal breathing was detected in 53.9% of children in group 1. In dynamics, the duration of nasal breathing disturbance was: 6.25 ± 2.9 . Intoxication syndrome, manifested by asthenia, loss of appetite, headache, loss of strength, emotional stress or apathy, was detected to varying degrees in the analyzed children in both groups and amounted to 66%. In the data of the general blood test, moderate eosinophilia (6–8%) was noteworthy, which was observed in children of the first group in 35% of cases, in children of the second group - in 16%. 3. Percentage of occurrence of eosinophilia in peripheral blood among the examined children. According to our data, chlamydia monoinfection in both groups ranged from 15–20%, and in combination with other pathogens - in 30% of cases. Conclusion. Thus, for children of primary school age, the typical course of community-acquired pneumonia was of the focal-segmental, polysegmental and interstitial forms. For the development of biofeedback, a very important role was played by an unfavorable premorbid background, which was observed in both groups, but was higher in the first: anemia - 32.5%, motor hyperactivity syndrome - 26.5%, malnutrition (protein-energy deficiency grade 1-2) - 9.5%, ENT pathology - 22.5%, helminthiasis - 12.5%, paratrophy - 10.3%. Factors contributing to the development of BOS included early artificial feeding and a family history of atopy and its manifestations in the form of atopic dermatitis.

In children of the first group, community-acquired pneumonia with BOS was more severe, which requires differential diagnosis with BA and recurrent bronchitis with BOS and timely bronchodilator and anti-inflammatory therapy.

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