

COMMUNITY- ACQUIRED PNEUMONIA IN CHILDREN WITH MYOCARDITIS: GENERAL CHARACTERISTICS OF PATIENTS

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Abstract. *In the article, the anamnestic, clinical, traditional laboratory and special examination methods of 80 out-of-hospital pneumonia children aged 1 to 6 years, emergency pediatrics and child resuscitation II of the Samarkand branch of the Republican Emergency Medical Research Center in 2020-2023 The results of 40 patients with myocarditis admitted to the hospital are presented.*

Key words: *pneumonia outside the hospital, children, myocarditis, ECG.*

ВНЕБОЛЬНИЧНАЯ ПНЕВМОНИЯ У ДЕТЕЙ С МИОКАРДИТОМ: ОБЩАЯ ХАРАКТЕРИСТИКА БОЛЬНЫХ

Аннотация. *В статье рассмотрены анамнестические, клинические, традиционные лабораторные и специальные методы обследования 80 детей с внебольничными пневмониями в возрасте от 1 до 6 лет, экстренной педиатрии и детской реанимации II Самаркандского филиала Республиканского научного центра скорой медицинской помощи в г. 2020-2023 гг. Представлены результаты лечения 40 больных миокардитом, поступивших в стационар.*

Ключевые слова: *внебольничная пневмония, дети, миокардит, ЭКГ.*

Enter. For several decades, severe bronchopulmonary diseases remain one of the urgent problems of modern medicine, because despite the use of new principles and methods of treatment, the number of patients increases and the death rate is constantly high [3 ,4]. The possible reason for this is delayed diagnosis and, as a result, late initiation of treatment, as well as the inability to adequately assess the effectiveness of therapy. Diagnosis of bronchopulmonary diseases in

children is often difficult, especially if symptoms of respiratory failure have developed against the background of ARVI. The problem of acute myocarditis is related to its prevalence, especially in childhood.

Myocarditis is an infectious, toxic-infectious, infectious-allergic, autoimmune and toxic etiological inflammatory injury of the heart muscle. This disease mainly occurs in children and young people, but the disease can develop at any age. Any viral or bacterial agent, as well as non-infectious factors, can be the cause of myocarditis. The most common cause of the disease is viruses. In 6-8% of cases, myocarditis develops during or shortly after various sporadic or epidemic viral infections [1].

The purpose of the study. Determining the general characteristics of patients in the course of pneumonia in children against the background of myocarditis.

Research materials and methods. The patients in the 1st stage of the study were divided into 3 groups: 40 children without myocarditis, with community-acquired pneumonia, were included in group I. 40 patients with mild to moderate severity of community-acquired pneumonia against the background of myocarditis were included in group II. All patients traditional clinical, laboratory and instrumental examinations, as well as special research methods were carried out. In stage 2 (patients were taken from stage 1 of the study), patients were divided into 2 subgroups: subgroup Ia (20) received traditional therapy. Subgroup Ib (20) received differential corrective treatment in addition to traditional therapy. Control group consisted of 20 almost healthy children.

Exclusion criteria from the study were patients with chronic (hereditary) diseases of the pulmonary bronchial system and congenital heart defects that naturally occur with changes in the cardiovascular system.

Checking the diagnosis of pneumonia was carried out in accordance with the classification of the main clinical forms of pulmonary-bronchial diseases in children approved at the meeting of the XVIII National Congress on Respiratory Diseases [5].

We used the classification of myocarditis in children of the working group of the Russian Association of Pediatric Cardiologists (2016) [2].

Most patients are hospitalized 1 to 4 days after the onset of illness; after admission, all patients were prescribed the same basic etiotropic, pathogenetic and symptomatic therapy for pneumonia and myocarditis according to generally accepted treatment schemes [3].

Research results. The discharge of sick children from the hospital was carried out in accordance with the specifics of the work of the emergency medical service, which cannot be delayed according to the standards of diagnosis and treatment, in which the recommended period of inpatient treatment was 9 days for pneumonia outside the hospital. During the retrospective

analysis, observation and treatment of patients continued until the main symptoms of the disease were resolved.

After recovery or improvement of the underlying disease, the children continued to be followed up for 1 month to 3 years, which was terminated when all studied parameters normalized or changes were noted that did not require continued therapy. In all children included in the study the etiological diagnosis of the main disease was fully investigated by clinical analysis of blood and urine. Analysis of patients by gender showed that boys (58.7%) were more affected than girls (41.3%). Myocarditis and myocarditis were mostly diagnosed in boys, most often myocarditis occurred against the background of myocarditis in children aged 1-3 years (68.3%), on the contrary, most cases of myocarditis were observed in children under 1 year (87.0%).

Among the examined patients, the largest share was 3-4-year-old children - 81 (54.0%), 1-2 years old - 47 (31.2%), and 5-year-old children - 22 (14.7%) less, which indicators can be compared with literature data on the incidence of pneumonia.

A study of 80 children with pneumonia and myocarditis outside the hospital showed that the clinical signs correspond to the main manifestations of the disease, and the clinical manifestation of the disease is characterized not only by pathological changes in the lungs, but also by other vital organs. It is also manifested by its frequent involvement in the pathological process.

Table 2.1

Frequency of clinical signs in patients with pneumonia and myocarditis outside the hospital

Clinical signs	Group I (n=40)		Group II (n=40)	
	abs	%	abs	%
General condition				
Medium heavy	5	12,5	15	37,5
Heavy	33	82,5	24	60
Very heavy	3	7,5	1	2,5
temperature 37.0-38.5oC	14	35	13	32,5
temperature >38.5oC	19	47,5	17	42,5
Fatigue quickly	22	55	5	12,5
Lack of appetite	29	72,5	19	47,5
hepatomegaly	10	25	3	7,5
Cyanosis of the skin and mucous membranes				

Not available	4	10	9	22,5
Oral cyanosis	32	80	28	70
Acrocyanosis	11	27,5	3	7,5
Degree of shortness of breath				
NYe I degree.	2	5,0	8	20
NYe II level.	33	82,5	31	77,5
NYe III degree.	5	12,5	1	2,5
Physical signs of the lungs				
Lung sound dulling	33	82,5	32	80
Shortness of breath	27	67,5	25	62,5
Wheezing without crepitation	16	40	17	42,5
Wet wheezes	23	57,5	20	50
Heart activity				
Muffled tones	27	67,5	27	67,5
Dull tones	2	5	0	0
Tachycardia	28	70	11	27,5
Bradycardia	4	10	1	2,5
Arrhythmia	9	22,5	3	7,5
Expansion of heart borders	20	50	4	10
Systolic murmur	14	35	7	17,5

The condition of hospitalized patients was graded from moderate to severe. Moderate forms of the disease are less common (18.7%) and mainly observed in patients with pneumonia without myocarditis, severe course of the disease is the majority of children (77.3%). Severe forms (4.0%) were mainly caused by children with pneumonia and myocarditis, who were hospitalized late.

A comparative analysis of clinical symptoms and syndrome complexes showed that an increase in body temperature was characteristic of 83.3% of patients with myocarditis, and in most cases (48.3%) the temperature was higher than 38.5 ° C, Temperature reaction as a less characteristic sign in children who came with STP - 76.6%, there were a number of cases (43.3%) with a temperature higher than 38.5 °C. Complaints of fatigue (54.2%) and loss of appetite (73.3%) were observed mainly in children with myocarditis and in patients with pneumonia outside the hospital (13.3% and 46.7%).

Cyanosis of the skin and mucous membranes was observed more often in patients with ShTP, therefore, the frequency of perioral cyanosis was almost the same in the observed groups - 79.2% and 70.0%, while the frequency of acrocyanosis in myocarditis with ShTP (26.7% and 6.7%) was 4 times more.

Patients with STP are characterized by mild respiratory disorders in the body, in this regard, acute respiratory failure of the first degree (20.0%), while in patients with STP with myocarditis, acute respiratory failure of the II degree (82.5) manifested and observed more than III degree (12.5%).

Differences in the data of percussion and auscultation during the examination of respiratory organs were almost not noted in the compared groups of patients.

Pneumonia in children is manifested not only by breathing, but also by cardiovascular insufficiency, the cause of which is a pathogenetically determined blood circulation disorder, an overload of blood circulation in the lungs that occurs when organs are damaged.

The analysis of the frequency of development of clinical signs reflecting the state of the cardiovascular system showed that in the clinical presentation of pneumonia outside the hospital in children, during auscultation of the heart, muffled heart sounds are heard in 66.7% of cases, tachycardia is heard in 26.7% of cases, bradycardia in 3.3% of cases and expansion of cardiac boundaries was detected in 10.0% of cases.

The data in the group of patients who came on the background of myocarditis with STP showed that tachycardia increased 2.6 times, bradycardia 3 times, arrhythmia 3.5 times, heart limits increased 5 times and systolic noise increased 2 times, heart tones were muffled. the frequency of heart failure was almost the same - 68.3% and 66.7%.

In an ECG study of all 80 hospitalized patients, sinus tachycardia - 29 (19.3.7%), sinus bradyarrhythmia - 10 (6.7%), extrasystole - 14 (7.3%), complete No blockade is detected. A decrease in the amplitude of the QRS complex was observed in 12 (8.0%) and 23 (15.3%) patients with right bundle branch block.

When analyzing the frequency of the above ECG changes depending on the nosological form of the disease (in patients with pneumonia outside the hospital and patients with myocarditis), a significant difference was found for almost all the studied parameters

Debate. Studies have shown that at present, the criteria for early detection of heart pathology in patients with bronchopulmonary diseases have not been developed sufficiently. Since the number of cardiac pathologies at autopsy significantly exceeds its lifetime detection, the problem of early diagnosis of cardiovascular pathology and risk factors for its development in patients with bronchopulmonary diseases remains an urgent problem of clinical medicine [6].

Among the pulmonary and extrapulmonary complications of bronchopulmonary diseases, damage to the cardiovascular system takes an important place [7,8]. According to many authors [9,10], the dysfunction of the cardiovascular system is an almost constant companion of bronchopulmonary diseases and develops from the first hours, while circulatory disorders are often associated with broncho-pulmonary diseases. determines the prognosis and outcome.

Summary. Thus, in patients with myocarditis, the frequency of sinus tachycardia decreased by 3.4 times, sinus arrhythmia by 2 times, blockade of the right bundle of Hiss by 2.8 times, and the amplitude of the QRS complex by 5.5 times, and extrasystole by 11 times, compared to patients with STP. It decreased by 7%, then this condition was not observed in the group of patients with STP, respectively.

Determining the importance of electrocardiographic indicators in patients with myocarditis compared with pneumonia outside the hospital revealed a number of indicators with different degrees of reliability.

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