

INFLAMMATORY MYOCARDIAL DAMAGE IN PRESCHOOL CHILDREN AGAINST THE BACKGROUND OF RESPIRATORY DISEASES

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Abstract. *Myocardial diseases of inflammatory genesis are one of the common heart pathologies in children. Infectious diseases are the most common pathology of childhood, against which the cardiovascular system is involved in the pathologic process. Approximately 1-5% of patients with acute viral infection may have myocardial lesions. Inflammatory myocardial lesions can cause almost all known infections. Clinical manifestations of the disease are generally nonspecific. Myocarditis manifestations may vary from mild forms without signs of heart failure to clinical picture of severe circulatory failure, complex rhythm and conduction disorders.*

Keywords: *inflammatory myocardial damage, electrocardiogram, echocardiogram, cardiotropic enzymes.*

The aim is to determine etiology and factors contributing to the development of myocarditis in children against the background of respiratory infections, peculiarities of clinical symptomatology of inflammatory myocardial lesion in preschool children depending on age. Material and methods of research. During the observation of patients undergoing inpatient treatment in the 4 City Children's Hospital of Tashkent with diagnoses of acute respiratory diseases (acute bronchitis, acute pneumonia, acute tonsillopharyngitis, etc.), changes in the cardiovascular system were detected, which in most cases were functional in nature, which was confirmed by laboratory and instrumental studies. The study included 68 children aged 1 to 7 years who were diagnosed with non-rheumatic carditis. In the group of observed children of early age (1-3 years old) there were 38, children of adolescence (3-7 years old) - 30 people, observation was carried out for 2 years.

Results. In 8 (16.5%) cases of young children the diagnosis of myocarditis was established upon admission to the hospital with the diagnosis of acute respiratory disease, acute pneumonia on the background of acute manifestations of the main disease, in 20 (62.5%) children the signs of myocardial damage were diagnosed in 10-14 days during the period of recollection after the acute respiratory disease, in 10 (21%) children - in 15-20 days after the disease. In preschool children, myocarditis was diagnosed in 20 (75%) cases in 15-20 days after the transferred diseases, in 9 (22.5%) cases in 20-30 days after the transferred disease, only in 1 case (2.5%) myocardial damage was diagnosed during the period of acute respiratory disease. Serologic blood tests in 45 (51%) children confirmed the presence of specific immunoglobulins to herpes simplex virus, cytomegalovirus, adenovirus, respiratory syncytial infection, of which 2 pathogens were detected in 5 children. In the remaining children (49%) acute respiratory infection was of unspecified etiology. Chronic foci of infection (chronic tonsillitis, sinusitis, dental caries) were diagnosed in 36 children (41%), of whom 10 (21%) were under the age of 3 years, the remaining 26 (65%) children were aged 3 - 6 years. Bacteriologic examination of mucus from the pharynx and nose revealed *Staphylococcus aureus* in 16.7% of infants and 20% of adolescents, *Streptococcus*

hemolyticus in 4.3% and 45% of cases, respectively. All children had a history of repeated respiratory infections and 20 (23%) children had allergies (exudative diathesis, eczema, food and drug allergies).

Clinical manifestations of the disease are generally nonspecific. Children become lethargic, restless, moaning at night, decreased appetite, sometimes nausea and vomiting. Often there is a compulsive cough, intensifying when changing the position of the body. Cyanosis, dyspnea. The boundaries of the heart in acute diffuse carditis in most cases are moderately dilated. The apical tremor is weakened. At auscultation is noted muffled or deafness of the I tone at the apex, the more enlarged the heart, the deeper the I tone. II tone over the pulmonary artery is amplified. Gallop rhythm is more often heard in cardiomegaly. Systolic murmur is not characteristic, heard in half of children with acute carditis, is functional. Rhythm disturbance in the form of tachycardia, less often bradycardia.

In young children myocarditis was severe in 2 (4%) cases, in the remaining 36 (96%) cases - medium, and in preschool children in the majority of children 15 (50%) - medium, in 1 (2,5%) child - severe, and in 14 (47,5%) children - mild.

ECG changes were characterized by ST-segment and T-type changes in standard or thoracic leads (V4-6), with a certain dynamics during the course of the disease. In the first days of the disease there was a decrease in ST segment with simultaneous decrease in amplitude or flattening of the T tooth (sometimes these changes quickly disappeared). From the 2nd, 3rd week of the disease negative, often pointed T teeth appeared. Subsequently, ECG changes gradually normalized, but sometimes persisted for several months. In 18 (20%) children extrasystoles (from single to bi- and trihymenia) were registered, which disappeared in the dynamics of treatment. In 8 (9%) cases intraventricular conduction disorder of the type of incomplete Hiss bundle branch blockade was detected. In case of suspicion of heart rhythm disturbances not registered at rest, it is necessary to perform its daily monitoring.

Echocardiography provides information about the size of heart cavities, increase in end-diastolic and end-systolic dimensions of the left ventricle, myocardial hypokinesia, decreased ejection fraction and shortening of the left ventricle. Echocardiography reveals concomitant pericarditis, a differential diagnosis can be made with similar diseases (valve malformations, cardiopathies, etc.).

In myocarditis of severe and moderately severe forms, the activity of lactate dehydrogenase of the first type - LDH1 and the MB fraction of creatine phosphokinase - CPK was increased, respectively.

Conclusions. The etiologic cause of non-rheumatic carditis was viral, viral-bacterial infections, the frequency of transferred diseases, the presence of chronic foci of infection and allergic disposition of the organism played a major role.

In young children, *Staphylococcus aureus* was more frequently isolated in chronic foci, and in adolescent children - *Streptococcus hemolyticus*. In young children non-rheumatic carditis develops earlier: in the acute period of the main disease or in the period of early convalescence, runs in medium and severe forms with signs of heart failure.

In adolescent children signs of heart failure are detected in 15-20 days, in some cases within 1 month after the disease and only in isolated cases in the acute period of respiratory disease, runs in the medium and mild forms.

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