



FEATURES OF THE COURSE OF ATYPICAL PNEUMONIA IN CHILDREN AGAINST THE BACKGROUND OF MYOCARDITIS.

Shavazi Nurali Mamedovich

Professor, Doctor of Medical Sciences, Head of the Department № 1 Pediatrics and Neonatology of the Samarkand State Medical University.

Ibragimova Marina Fedorovna

PhD, acting assistant professor, Department №1 Pediatrics and Neonatology of Samarkand State Medical University.

Shavkatova Zilola Shobiddin kizi

Master of the 1st year of study of the Department № 1 Pediatrics and Neonatology Samarkand State Medical University.

Annotation. At present, despite the regular introduction of new diagnostic methods, improvement of preventive and therapeutic measures, the results have not yielded significant success and atypical pneumonia remains a leading cause of morbidity and mortality in children. Myocarditis is an inflammatory lesion of the layers of the myocardium caused by various etiologies: infectious, toxic, infectious-allergic, autoimmune. The aim of the study was to study the features of the course of atypical pneumonia in children against the background of myocarditis. Materials and methods of research: 64 children aged from 1 to 14 years old with pneumonia were treated in the departments of emergency pediatrics and the department of pediatric resuscitation on the basis of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care. Of these: Group I - 32 patients with severe atypical pneumonia on the background of myocarditis. Group II - 32 patients with mild and moderate course of atypical pneumonia against the background of myocarditis. Analysis of the data showed that pneumonia in children is manifested not only by respiratory, but also by cardiovascular insufficiency, the cause of which is pathogenetically determined circulatory disorders, overload of the pulmonary circulation that occurs when organs are damaged.

Key words: atypical pneumonia, children, myocarditis.

Relevance. Currently, ideas about the etiology of pneumonia in children differ significantly: for example, according to some authors, the main causative agents of bacterial pneumonia are *S. pneumoniae* and *H. influenzae b*, and it is indicated that the largest number of severe cases of pneumonia in children is attributed to the disease caused by these etiological factors [1,3].

The etiological structure of CAP in children often includes *Streptococcus pneumoniae*, *Mycoplasma pneumoniae*, relatively rare *Staphylococcus Aureus*, *Chlamydia pneumoniae*, *Chlamydia trachomatis*, *Bordetella pertussis*, and rarely *Haemophilus influenzae*, *Streptococcus*

pyogenes, Streptococcus agalactiae and Escherichiacoli infectious agents [2,5].

When studying the etiological structure of atypical pneumonia, it was revealed that it has age-related features. Thus, the main causative agent of pneumonia is Streptococcus pneumoniae, a certain role is assigned to atypical pathogens, such as Mycoplasma pneumoniae and Chlamydia pneumoniae, the role of viruses in them. The authors point out that the etiological agents of the development of atypical pneumonia in children depend on the geographical region, the calendar of preventive vaccinations and antibiotic therapy of the disease. [4]. Most often, myocarditis is of a viral nature. At the same time, if earlier the group of Coxsackie viruses was in the first place in terms of the frequency and severity of the lesion, now parvovirus B19, herpes virus type 6 and the Epstein-Barr group are more often determined. Currently, cardiotropic viruses include enteroviruses, adenoviruses, polioviruses, herpes viruses types 1 and 6, and some types of influenza virus [6,7].

The most common cause of myocarditis in children is Coxsackie enteroviruses and ECHO. Currently, when using polymerase chain reaction, an increase in the frequency of parvovirus (PVV19), herpesvirus (HHV6), and up to 25% of cases reveal the combination of two or more different pathogens (PVV19 and HHV6) in myocarditis. [1,2,5].

But until now, the characteristics of the course of community-acquired pneumonia in children with myocarditis have not been revealed in detail, which requires us to conduct research.

Purpose of the study: to study the features of the course of atypical pneumonia in children against the background of myocarditis.

Materials and methods of research:

64 children aged from 1 to 14 years with pneumonia were treated in the departments of emergency pediatrics and the department of pediatric resuscitation on the basis of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care. Of these: Group I - 32 patients with severe atypical pneumonia on the background of myocarditis. Group II - 32 patients with mild and moderate course of atypical pneumonia against the background of myocarditis. Patients were collected anamnestic data, examined by conventional clinical, laboratory and instrumental, as well as special methods. To establish the atypical genesis of pneumonia, the polymerase chain reaction method was used, which detects and identifies bacteria. Highly diagnosed with accuracy to detect atypical bacteria. They took a smear from the mucous membranes, blood, sputum. If there was a positive result for one of the atypical pathogens, the etiology was considered established. Detection of IgM antibodies by enzyme immunoassay simultaneous detection of mycoplasma and chlamydial infections and a positive result of the polymerase chain reaction increases the reliability of the diagnosis of atypical infectious agents and allows more accurate identification of the pathogen in the case of seropositive variants simultaneously for mycoplasma and chlamydial pneumonia.

Research results and discussion:

Examination of 64 children with atypical pneumonia and pneumonia with myocarditis showed that the clinical symptoms basically correspond to the main manifestations of the disease, while the clinical manifestations of the diseases are characterized not only by pathological changes in the lungs, but also by the frequent involvement of other vital organs and systems in the pathological process.

The condition of patients upon admission to the hospital was assessed from moderate to extremely severe. Moderate forms of the disease accounted for a smaller proportion (19.4%) and were observed mainly in patients with pneumonia without myocarditis, the severe course of the disease was in the majority of children (78.3%). Extremely severe forms (2.3%) were observed mainly with late admission to the hospital of patients with pneumonia with myocarditis.

A comparative analysis of clinical symptoms and syndrome complexes showed that an increase in body temperature was characteristic of 83.3% of patients with pneumonia against the background of myocarditis. Complaints about fatigue and loss of appetite were mainly presented by children with pneumonia against the background of myocarditis compared with patients with community-acquired pneumonia (68.4% and 46.7%).

Cyanosis of the skin and mucous membranes was observed much more often in patients with pneumonia against the background of myocarditis.

Data in the group of patients with atypical pneumonia on the background of myocarditis showed that tachycardia developed more often by 3 times, bradycardia by 2.8 times, arrhythmia by 3.1 times, an increase in the boundaries of the heart by 4.9 times and systolic murmur by 2 times compared with patients without myocarditis and only the frequency of muffled heart sounds was almost the same - 68.4% and 66.8%.

The study showed that in 89% of cases of typical pneumonia, the level of Procalcitonin was 0.5 ng / ml, C reactive protein up to 35 mg / l. In atypical pneumonia, the concentration of C-reactive protein did not exceed 20 mg/l in 72% of cases, and in the remaining 28%, the indicator ranged from 21 to 70 mg/l. The level of procalcitonin in these patients did not exceed 0.5 ng/ml in 96% of cases. Based on the foregoing, a low level of markers helps in the diagnosis of atypical pneumonia flora in the early stages of the disease.

Conclusions: Thus, the analysis of the data showed that pneumonia in children is manifested not only by respiratory, but also by cardiovascular insufficiency, which are caused by pathogenetically caused circulatory disorders, overload of the pulmonary circulation that occurs when the respiratory and cardiac systems are affected.

References:

1. Fedorovna I. M. The influence of risk factors on the development of atypical



- pneumonia in young children //Asian journal of pharmaceutical and biological research. – 2022. – T. 11. – №. 2.
2. Ibragimova M. F. Diagnostic criteria for pneumonia of atypical etiology in children //British Medical Journal. – 2022. – T. 2. – №. 5.
 3. Mamedovich S. N., Fedorovna I. M. Efficacy of vilprafen and resistol in community-acquired pneumonia with atypical etiology in children //Thematics Journal of Applied Sciences. – 2022. – T. 6. – №. 1.
 4. Shavazi, N., Kardzhavova, G., Lim, M., & Ibragimova, M. (2021). Features of the current of acute myocarditis in children on the background of community-acquired pneumonia. Journal of Hepato- Gastroenterological Research,2(3.2), 143-145.
 5. Diagnosis and treatment of myocarditis. Tereshchenko S.N., Zhirov I.V., Masenko V.P., Narusov O.Yu., Nasonova S.N., Samko A.N., Stukalova O.V., Sharia M.A. Eurasian Journal of Cardiology, 2019. p.4-33
 6. Myocarditis in children: problems and solutions. Nikitina I.L., Vershinina T.L. Medical Council №. 1, 2017. p.238-245
 7. Myocarditis. Melekhov A.V., Ostrovskaya Yu.I. Myocarditis. News of cardiology №. 2, 2018. p.32-38