COMPLEX TREATMENT COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN WITH MYOCARDITIS: EXPERIENCE WITH LEVOCARNITINE

Kardzhavova Gulnoza Abilkasimovna
PhD., assistant of the department 1-pediatrics and neonatology,
Samarkand State Medical University
Samarkand Uzbekistan

Urunova Manzura Allamuradovna
Resident physician Samarkand branch
of the Republican Center for Emergency Medical Care
Samarkand Uzbekistan

Abstract: *We examined 150 children aged 1 to 7 years with pneumonia, which we divided into 4 groups. The results proved that against the background of community-acquired pneumonia in children, all the symptoms of acute heart failure are masked, the cause of which in most cases is acute coronary insufficiency, a change in the heart muscle in this pathology in children increases the risk of severe unwanted complications from the heart, which should be included in the future in complex therapy, the drug levocarnitine.*

Key words: *acute myocarditis, community-acquired pneumonia, levocarnitine, children.*

Relevance. Over the past few decades, severe pneumonia has remained one of the urgent problems of modern medicine due to the steady upward trend in the number of patients and consistently high mortality, despite the use of new principles and methods of treatment [5,7,8]. One of the main causes of acute myocarditis today is acute respiratory viral infections (ARVI), which remain the most common and global diseases in children [10]. Cardiovascular insufficiency is typical of

pneumonia, especially in young children. It develops rapidly, already in the early stages of the disease. In an uncomplicated course of the disease, clinically hidden heart failure occurs, which is diagnosed using instrumental studies such as ECG, echocardiography [9, 11].

Hypoxia, pathogenetically occurring in pneumonia, and even more so in pneumonia with myocarditis in children, is a powerful stress factor contributing to the development of secondary mitochondrial dysfunction, disruption of cellular energy metabolism, and may be associated with L-carnitine deficiency. When cellular metabolism is disturbed, the most energy-dependent organs and systems suffer, including the respiratory and cardiovascular systems [4].

Currently, clinical experience has been accumulated on the use of levocarnitine in pediatrics, recommendations have been developed for its dosage in various pathologies and conditions in children [1].

Taking into account the nature of the identified disorders in children with CAPM, we chose Elkar®, the active substance levocarnitine, as the optimal drug with a metabolic effect. The drug was used at a dose of 100 mg/day in 2 oral doses, during the entire period of treatment of patients.

Target. To evaluate the effectiveness of treatment with levocarnitine for community-acquired pneumonia with myocarditis in children.

Materials and research methods. The results of complex treatment of 150 sick children with community-acquired pneumonia on the basis of I and II children's departments and intensive care units of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care were analyzed. The results of anamnestic, clinical, generally accepted laboratory, microbiological, virologic, instrumental and special methods of examination in 150 children with community-acquired pneumonia aged from 1 month to 7 years, including 120 patients with concomitant myocarditis, were studied.

When analyzing the effectiveness of various therapeutic approaches at the 2nd stage of the study, 120 children with community-acquired pneumonia with

myocarditis (patients from groups B and C from the 1st stage of the study) were divided into 4 groups:

In group I, 30 patients with community-acquired pneumonia with myocarditis received standard therapy.

In group II, 30 patients with community-acquired pneumonia with myocarditis received pentoxifylline in the complex of standard therapy.

In group III - 30 patients with community-acquired pneumonia with myocarditis who received levocarnitine in the complex of standard therapy.

Group IV included 30 patients with community-acquired pneumonia with myocarditis who received pentoxifylline and levocarnitine as part of standard therapy.

The control group consisted of 30 practically healthy children.

Verification of the diagnosis of pneumonia was carried out according to the classification of the main clinical forms of bronchopulmonary diseases in children, approved at the meeting of the XVIII National Congress on Respiratory Diseases [3]. We used the classification of myocarditis in children of the working group of the Association of Pediatric Cardiologists of Russia [6].

Upon admission, patients were prescribed identical basic therapy for pneumonia and myocarditis in accordance with currently used protocols and clinical guidelines [2,6].

Analysis of patients by sex differences showed that boys (58.7%) were predominantly ill in comparison with girls (41.3%).

Among the examined patients, the majority were children aged 3-4 years - 81 (54.0%), from 1 to 2 years - 47 (31.2%) and less often in children aged 5 years - 22 (14.7%), which is comparable with the literature data on the incidence of pneumonia.

The discharge of sick children from the hospital was carried out taking into account the specifics of the work of the EMC service according to the standards of diagnosis and treatment, in which the recommended terms of inpatient treatment are

11 days for community-acquired pneumonia. In the future, if necessary, monitoring and treatment of discharged patients.

Research results. The dynamics of clinical indicators) showed an improvement in symptoms in patients treated with levocarnitine in comparison with traditional treatment from 0.6 to 1.9 days. Improvement in the general condition in patients of group III occurred on day 6.4±0.3, cyanosis of the nasolabial triangle disappeared on day 6.6±0.3, temperature normalization on day 6.4±0.4, normalization of auscultatory data in the lungs on 8.4±0.5 days, disappearance of respiratory failure on 7.2±0.3 days, normalization of the heart boundaries was detected on 9.0±0.6 days, disappearance of systolic murmur on 10.7±0.5 days, but statistically insignificant in comparison with group I ($P>0.1$, $P>0.2$, $P>0.5$).

Only the disappearance of acrocyanosis at 7.9±0.5 days and tachycardia at 8.0±0.4 days showed a significant effectiveness of the effect of levocarnitine on the course of the disease ($P<0.05$, $P<0.01$). However, according to the duration of inpatient treatment (11.6 ± 0.6 days), there was no significant clinical benefit of levocarnitine in the treatment of CAPM in children, in comparison with traditional therapy ($P> 0.1$).

Conclusions. Thus, the inclusion of levocarnitine in the complex therapy of community-acquired pneumonia with myocarditis has a positive effect on the dynamics of clinical symptoms, contributes to the normalization of echocardiography data, the state of coagulation hemostasis and cardiospecific enzymes, allowing us to conclude that metabolic drugs are appropriate in the complex therapy of the disease in children.

Literature

1. Brin I. L., Dunaikin M. L., Lisitsina S. V. Problems of dosing carnitine preparations in childhood // Russian Bulletin of Perinatology and Pediatrics. - 2014. - T. 59. - №four.

2. Community-acquired pneumonia in children. Clinical guidelines. - M .: Original layout, 2015. - 64 p.

3. Geppe N.A., Rozinova N.N., Volkov I.K., Mizernitsky Yu.L. Working classification of the main clinical forms of bronchopulmonary diseases in children // Russian Respiratory Society. - M., 2009. - P.18.

4. Kalinina M. A., Kozlovskaya G. V., Kremneva L. F. Levocarnitine in pediatric practice // Russian Medical Journal. Medical review. - 2018. - Vol. 2. - №10. - S. 40-44.

5. Kardzhavova G.A.2 , Lim M.V., Urunova M.A. The etiological structure of community-acquired pneumonia in children with myocarditis // Journal of cardiorespiratory research -2021 №4.

6. Myocarditis in children. Clinical guidelines. Union of Pediatricians of Russia. M. 2016. 44 p.

7. Shavazi N.M.1 , Kardzhavova G.A.2 , Lim M.V.3 , Lim V.I., Gaibullaev Zh.Sh. // Clinical characteristics of acute myocarditis in children against the background of community-acquired pneumonia-Zh.

8. Shavazi N.M., Lim M.V., Karimova G.M. "The state of cardiac hemodynamics according to echocardiographic studies in young children with pneumonia complicated by infectious toxic shock". Bulletin of emergency medicine. №3, 2013. C. 289-290.

9. Shavazi N.M.1, Kardzhavova G.A. Diagnostic value of cardiac markers in children with myocarditis against the background of community-acquired pneumonia //Zh. Problems of biology and medicine - 2022. №2 (135).

10. Shavazi N.M., Kardzhavova G.A., Lim M.V., Gaybullayev ; a;J.Sh. Monitoring the etiological aspects of community-acquired pneumoniya in children //J. Problems of biology and medicine– 2021. №3 (128).

11. Shavazi N.M., Kardzhavova G.A., Lim M.V., Atayeva M.S. // Features of the course of community-acquired pneumoniya in children with miocardites// J. Questions of science and education-2020. №33(117).