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Improving the Treatment Tactics of Obstructive Bronchitis Due to Myocarditis in Children

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Abstract: Obstructive bronchitis is the most common disease among the child population, occupying not the last place in the structure of morbidity among children. The relevance of chronicity, disability and mortality from this morbidity remains. Purpose of the study: to study the effectiveness of nebulizer inhalation with nebutamol and oral levocarnitine for obstructive bronchitis in children against the background of myocarditis. Materials and methods of research. 80 children aged 1 to 10 years with obstructive bronchitis secondary to myocarditis were observed.The patients were divided into 2 groups: Group I 40 patients – children with obstructive bronchitis due to myocarditis, Group II 40 patients – children with obstructive bronchitis. Patients with children with obstructive bronchitis due to myocarditis were divided into 2 subgroups: subgroup Ia of 20 children who received standard therapy and subgroup Ib of 20 children who received nebulizer inhalations of nebutamol and levocarnitine in addition to standard therapy.

Keywords: Obstructive bronchitis, myocarditis, children, treatment.

Relevance. Respiratory diseases that occur with broncho-obstructive syndrome are among the most common, and the importance of this pathology is steadily increasing, which is associated with an increase in the number of frequently ill children, increased survival of newborns with severe respiratory tract lesions, and exposure to various premorbid and unfavorable environmental factors [1, 4.6]. At the present stage of science, the concept of "broncho-obstructive syndrome" is collective and can accompany various nosological forms of respiratory pathology, including a symptom complex of specifically defined clinical manifestations of bronchial obstruction, based on narrowing or occlusion of the airways. [7,9,11,12]. Detection of difficulty, wheezing requires an in-depth examination and an individual program to eliminate risk factors to prevent and progress the disease [2,5,14]. The course of broncho-obstructive syndrome in children often becomes protracted and recurrent in nature with various concomitant pathologies, and often the severity of the disease depends on the degree of involvement of cardiovascular pathology in the body. [3,8,10,13]. In this regard, it seems relevant to study the course of broncho-obstructive syndrome in children with myocarditis, to improve both diagnostic and therapeutic measures, which will serve as the purpose of this study.Myocarditis is an infectious and inflammatory disease that occurs under the influence of various agents,

characterized by inflammatory infiltration of the myocardium with myocyte fibrosis, necrosis or degeneration [15,16]. The true frequency of myocarditis in children is unknown due to the lack of uniform diagnostic criteria for the disease, even taking into account pathomorphological data and the extreme diversity of clinical symptoms of the disease, as well as the lack of clearly established studies.

Purpose of the study: to study the effectiveness of nebulizer inhalation with nebutamol and oral levocarnitine for obstructive bronchitis in children against the background of myocarditis.

Materials and methods of research. Under our supervision were 80 children aged from 1 to 10 years with obstructive bronchitis due to myocarditis, who were hospitalized in the pediatric departments of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care. The patients were divided into 2 groups: Group I 40 patients – children with obstructive bronchitis due to myocarditis, Group II 40 patients – children with obstructive bronchitis. Patients with children with obstructive bronchitis due to myocarditis were divided into 2 subgroups: subgroup Ia of 20 children who received standard therapy and subgroup Ib of 20 children who received nebulizer inhalations of nebutamol and levocarnitine.Nebutamol-salbutamol is a selective beta 2-adrenergic receptor agonist and bronchodilator. The onset of action of the drug occurs 4-5 minutes after inhalation, the duration of action is 4-6 hours. reduces the secretion of bronchial glands, prevents narrowing of the bronchi. When used inhalation, it has virtually no resorptive effect. The inhalation solution was used for children - 2.0-2.5 mg 3-4 times a day through a nebulizer. Levocarnitine is a drug related to B vitamins, which has anabolic, metabolic, antihypoxic, antithyroid effects, stimulates regeneration, increases appetite, and activates fat metabolism. The drug was prescribed to children under 1 year old, 10 drops 3 times a day as an additive to sweet drinks, 1-6 years old, 14 drops, children from 6 to 10 years old, 1/4 teaspoon 2-3 times a day. The course of treatment is 1 month. The effectiveness of the drugs was assessed based on a study of the dynamics of the general condition of children, clinical manifestations, and laboratory and instrumental data.

Results of work: The results of studies before treatment showed that 28 (70%) patients of the 1st group and 30 (75%) patients of the second group had hyperthermia and signs of intoxication. Paroxysmal cough was observed in 57 (95%) and 36 (90%) patients in groups 1 and 2. 12 (20%) and 8 (20%) patients had shortness of breath and tachycardia.On the 4th day from the start of treatment, 21 (70%) children of group 1 and 24 (80%) of group 1b showed positive clinical dynamics of the disease: manifestations of intoxication decreased, body temperature decreased. In 17 (56.6%) children in group 1a and in 23 (76.6%) in group 1, cough decreased and appetite increased; antibiotic therapy was continued. By the 5-6th day of treatment, 24 (80%) children in group 1a and 28 (93.3%) in group 1b had a disappearance of cough, shortness of breath, and wheezing in the lungs. On the 10th day of treatment, positive dynamics of hematological parameters were noted.On the 10-12th day of therapy, the disappearance of the focus of pneumonic infiltration was observed during an X-ray examination of the chest organs in 23 (76.6%) sick children of group 1a and in 27 (90%) - group 1b.

Conclusions: Thus, the established effectiveness of nebulized inhalation of salbutamol, oral use of levocarnitine for obstructive bronchitis in children with myocarditis will improve treatment tactics and reduce the duration and number of complicated forms of the disease

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