

OPTIMIZATION OF TREATMENT OF ATYPICAL PNEUMONIA DUE TO HYPOXIC-ISCHEMIC ENCEPHALOPATHY IN NEWBORNS

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Abstract: Acute respiratory pathology occupies a leading place in the structure of morbidity in children. The leading place among them belongs to pneumonia, which is characterized by a high prevalence in the early age group, severity of the course, and the possibility of transition to severe forms. The purpose of the study is to develop new systems for complex therapy and rehabilitation of newborns with atypical pneumonia against the background of hypoxic-ischemic encephalopathy. Materials and methods of research: Group I – 40 children who received traditional treatment, of which 28 had a moderate-severe form and 12 had a severe form. Group II – 45 children who received, in addition to traditional treatment, cytochrome C, immunomodulin and of these, 32 are moderately severe and 13 are severe.

Keywords: atypical pneumonia, newborns, hypoxic-ischemic encephalopathy, treatment.

ОПТИМИЗАЦИЯ ЛЕЧЕНИЯ АТИПИЧНЫХ ПНЕВМОНИЙ НА ФОНЕ ГИПОКСИКО-ИШЕМИЧЕСКОЙ ЭНЦЕФАЛОПАТИИ У НОВОРОЖДЕННЫХ

Аннотация: Острая патология органов дыхания занимает ведущее место в структуре заболеваемости детей. Ведущее место среди них принадлежит пневмониям, которые характеризуются высокой распространенностью в ранней возрастной группе, тяжестью течения, возможностью перехода в тяжелые формы. Целью исследования является разработать новые системы комплексной терапии и реабилитации новорожденных с атипичной пневмонией на фоне гипоксико-ишемической энцефалопатии. Материалы и методы исследования: I-я группа – 40 детей, получавших традиционное лечение, из них со средне-тяжелой формой – 28 и тяжелой формой - 12. II-я группа – 45 детей, получавших дополнительно к традиционному лечению цитохром-С, иммуномодулин и из них с средне-тяжелая форма – 32 и тяжелая форма - 13.

Keywords: atypical pneumonia, newborns, hypoxic-ischemic encephalopathy, treatment.

RELEVANCE

A number of researchers have identified a connection between damage to the central nervous system and the development of bronchopulmonary pathology. Particular difficulties arise in the diagnosis of atypical pneumonia in young children with hypoxic-ischemic encephalopathy. To date, prognostic criteria for the development and outcomes of pneumonia in children with hypoxic-ischemic encephalopathy have not been developed. Despite the obvious successes of modern medical science and practice aimed at reducing the incidence of damage to the central nervous system in young children, improving the treatment and rehabilitation of patients, it can be stated that this pathology remains a complex and largely unsolved problem [1,3,6]. The pathogenetic role of the totality of environmental hazards in the development of

atypical pneumonia against the background of hypoxic-ischemic encephalopathy in these children and other negative premorbid factors requires clarification. In particular, the pathogenetically significant complex of ecopathobiological influences for these diseases, place of residence, negative technological working conditions with their adverse effects on immunity, metabolism for parents and their children. [2,4]. A list of the main factors of pathogenic premorbid soil for the active identification and timely treatment of children at risk has not been determined.

These factors can be associated with the not decreasing, but in some areas growing, prevalence of damage to the central nervous system in young children in general, including encephalopathy. Moreover, their severe cases and forms that are resistant to conventional pharmacotherapy, with subsequent complications of the disease, are becoming more frequent. [5,8,9]. In addition, in young children with hypoxic-ischemic encephalopathy and the "risk" group, the pathogenetic role of hereditary factors and a regionally significant set of ecobiological influences has still not been studied.

Insufficient attention is paid to such an aspect of the premorbid and pathogenic soil as the family genealogical background, which influences the general morbidity, its nature, forms and frequency of pathological processes, including those of the central nervous system. [7]. At the same time, on the basis of a comprehensive dynamic clinical and immuno-biochemical study of these aspects, it is possible and should organize a system that provides for the active identification of the development of atypical pneumonia among young children at risk for the development of atypical pneumonia against the background of hypoxic-ischemic encephalopathy, predicting the characteristics of its course, introducing appropriate modifications into the principles of treating patients, including the development of new approaches to the organization of therapy, rehabilitation and prevention. In particular, the therapeutic and preventive prospects of using composite pharmacological correction and low-intensity laser effects on the body and damaged parts of homeostasis have been practically not studied. [10,11]. Therefore, we consider it necessary to just pay attention to numerous facts indicating the presence of significant difficulties in pharmacotherapy for atypical pneumonia, against the background of hypoxic-ischemic encephalopathy in young children, due to a variety of reasons. The main therapeutic method of treating atypical pneumonia against the background of hypoxic-ischemic encephalopathy in young children to this day remains antihypoxic, antioxidant, and immunomodulatory therapy.

Purpose of the study: to develop new systems for complex therapy and rehabilitation of young children with atypical pneumonia against the background of hypoxic-ischemic encephalopathy.

Materials and methods of research. The observed children were distributed as follows:

Group I – 40 children who received traditional treatment, of which 28 had a moderate-severe form and 12 had a severe form.

Group II - 45 children who received, in addition to traditional treatment, cytochrome C, immunomodulin, and of them with a moderate-severe form - 32 and a severe form - 13.

Cytochrome - C at a dose of 5-10 mg intravenously in the following course doses: for moderate-severe forms, from 5 to 8 injections daily and for severe forms, from 7 to 10 injections.

Immunomodulin is used in the following course doses: for moderate-severe form - from 5 to 8 injections daily; and for severe cases - from 7 to 10 injections in age-appropriate doses.

RESULTS

In terms of the clinical results studied, a comparative analysis of the effectiveness of the modified method of treating the observed children of groups I and II would not be complete without an analysis of the characteristics of the clinical course of various forms of the disease.

As can be seen from the presented material, there is complete agreement with the facts established above about the close relationship between the degree of premorbid burden of different nature and the severity of the clinical manifestations of the disease. Analysis of the data obtained, presented in tables, from which the conclusion clearly follows that, against the background of traditional therapy of group I patients, almost all of the analyzed symptoms of atypical pneumonia, against the background of hypoxic-ischemic encephalopathy in children, persisted for a longer period of time than in group II groups that received the modified therapy methods we developed.

Table 1. Dynamics of clinical symptoms in children with pneumonia against the background of hypoxic-ischemic encephalopathy of groups I-II against the background of modified treatment

Clinical symptoms	the group of observed children	
	I group	II group
Improvements in general condition	6,5 ± 0,4	6,8 ± 0,4
Restoring sucking activity	10,9 ± 0,7	11,1 ± 0,5
Restoration of motor activity	9,9 ± 0,6	9,9 ± 0,5
Restoring muscle tone	10,4 ± 0,5	9,7 ± 0,3
Disappearance of fontanelle tension	5,3 ± 0,4	5,5 ± 0,4
Disappearance of seizures	4,7 ± 0,3	4,6 ± 0,3
Restoration of physiological reflexes	11,1 ± 0,6	10,5 ± 0,8
Bed days spent	13,7 ± 1,0	14,4 ± 1,1

A dynamic analysis of the clinical symptom complex of pneumonia against the background of hypoxic-ischemic encephalopathy in children in group I, in whom its therapeutic correction was used, convincingly testifies to the greatest optimality of the modification in group II with daily use of cytochrome c and immunomodulin.

In dynamic terms, within the groups receiving modified methods of therapy, the course of the disease was observed in group I compared with group II, a “delay” in the disappearance of symptoms of each of the symptom complexes from group to group approximately: in the moderate-severe form - 1-2 days and in the severe form -2-3 days.

When comparing the average time for normalization of the main clinical manifestations of atypical pneumonia, against the background of hypoxic-ischemic encephalopathy in young children in group II, an acceleration of normalization was revealed by an average of 2-3 days, with a moderately severe form and by 3-5 days with a severe form compared with groups of children who did not receive the modified method of therapy. The differences turned out to be statistically significant. By the end of the individual course of antioxidant immuno-metabolic correction in these groups of patients, the clinical manifestations of the disease were completely eliminated in 95.2% of them, while in the rest, with traditional therapeutic measures - only in

69.8% of patients. In addition, it can be noted that against the background of modified therapy, there was a significantly less severe course of the disease with a very clear phenomenon of a “break” in the dynamics in the progression of the leading symptom described above. In patients of this group, the symptoms of general intoxication disappeared more quickly; and the less severe nature of the disease made it possible to reduce the duration of pharmacotherapy. At the same time, a protracted course of the disease was observed in only 2.1% of them (only three children), and with traditional treatment of patients in 15.7%.

CONCLUSION

The inclusion of cytochrome C, immunomodulin in the complex treatment of sick children with atypical pneumonia against the background of hypoxic-ischemic encephalopathy improves its final results so effectively that it becomes strictly mandatory.

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