

SCI-CONF.COM.UA

**MODERN RESEARCH
IN WORLD SCIENCE**



**PROCEEDINGS OF VIII INTERNATIONAL
SCIENTIFIC AND PRACTICAL CONFERENCE
OCTOBER 29-31, 2022**

**LVIV
2022**

MODERN RESEARCH IN WORLD SCIENCE

Proceedings of VIII International Scientific and Practical Conference

Lviv, Ukraine

29-31 October 2022

Lviv, Ukraine

2022

THE ISSUE OF CHILDREN'S NUTRITION WITH NO-HOSPITAL PNEUMONIA IN SCHOOLCHILDREN UNDER THE CONDITIONS OF THE STATE OF WAR

Ternovoy Denis Stanislavovich

3rd year student

Horbas Victoriia Anatolyivna

Doctor of Medical Sciences, docent

Sumy State University

Educational and Scientific Medical Institute

Department of Pediatrics

Sumy, Ukraine

Introduction. Health is an absolute value for every child, but poor nutrition, lack of sleep, adverse environmental conditions are constant. Mental fatigue reduces the quality of life and contributes to the increase in the number of diseases and the development of metabolic disorders and allergies.

When drawing up a personal diet, the basic diagnosis, the body's need for energy, proteins, fats, and carbohydrates are taken into account. In addition, special attention is paid to vitamins and microelements, which are necessary to get with food, and especially to the growing body and during the period of illness. It has been proven that trace elements affect all links of innate and acquired immunity.

Aim. We conducted a study of the relationship between the microelement composition of zinc in the blood serum of children with pneumonia and indicators of immune status in today's conditions.

Materials and methods. To determine the impact of the trace element zinc on the functioning of the immune system, we analyzed the correlations of this trace element zinc and indicators of immune status according to their levels in blood serum.

Results and discussion. Our research revealed a significant decrease in the level of zinc in blood serum. Zinc levels in children with pneumonia, regardless of age and severity of the disease, were low both in the acute period and in the convalescence period. In the acute period of the disease, the level of zinc in sick children decreased by

almost 2 times (by 41.4%) in relation to the similar indicator in healthy children.

Correlative analysis showed that the level of zinc in blood serum during the acute period in children with pneumonia had a negative average correlation with the level of blood leukocytes ($r=-0.442$, $p<0.05$), an average positive relationship with the number of lymphocytes peripheral blood ($r=0.452$, $p<0.05$). The levels of leukocytes and lymphocytes had a clear dependence on the severity of the course of the disease - leukocytosis and a significant decrease in the absolute number of lymphocytes, and the level of zinc was the lower, the more severe the condition of the child, and, according to the literature, one of the first manifestations of zinc deficiency in a person is a decrease in the level of lymphocytes peripheral blood.

Conclusions. Thus, the influence of impaired zinc exchange in the body during inflammatory processes, including pneumonia, is of significant importance for the development of the body's immune response, which is manifested by significant disintegrating changes in immune homeostasis. The development of a zinc-deficiency state during inflammatory processes in children can be both a consequence of impaired absorption of zinc in the gastrointestinal tract, and a consequence of its redistribution from blood to tissues under the action of hormonal substances that synthesize leukocytes.

Therefore, such children, especially during the height of the disease and in such a difficult situation, which is now in Ukraine under martial law, should include in the diet products that contain the greatest amount of vitamins, trace elements, mainly zinc. These are foods such as apples, figs, peanuts, nuts, onions, garlic, egg yolk, rabbit meat, green tea, beef liver, oatmeal and barley flour. Some fruits can be used to make fresh juices. And all this in combination with drug therapy, physiotherapy procedures helps to increase the immune and protective reactions of the body and thereby a speedy recovery, and especially with regard to the children's population. And let all the children of Ukraine be healthy, let a healthy and strong nation grow in us. Let's put all our efforts together and together to victory.