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ABSTRACT VOLUME



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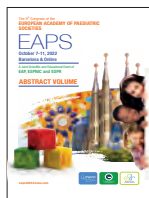
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EP720 / #2582**E-Poster Viewing - Paediatrics AS04-15. Infectious diseases****Development of zinc deficiency in children with a course of community-acquired pneumonia****T. Abdul-Rahman*, A.A. Wireko, V. Horbas**

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BACKGROUND AND AIM

Health represents an unconditional value for every child. However, improper nutrition, lack of sleep and unfavorable environmental situation reduces the quality of life contributing to increase in the number of diseases. Zinc (Zn) is the main trace element that regulates activity of the immune system. It also affects the body's resistance, reproduction processes and death of microorganisms, especially during inflammation. The aim is to study the relationship between trace element of Zn content in blood serum and indicators of immune status in children with pneumonia.

METHODS

Blood content among 55 children diagnosed with community-acquired pneumonia in Sumy Children's Clinical Hospital were analyzed.

RESULTS

Indicators of Zn level in children with pneumonia, regardless of age and severity of the disease, were reduced in both acute and convalescence periods of the disease. Correlative analysis showed that the level of Zn in blood serum during the acute period in children with pneumonia had a negative average correlation with the level of blood leukocytes ($r = -0.442$, $p < 0.05$), and

average positive relationship with the number of lymphocytes in peripheral blood ($r=0.452$, $p<0.05$). The levels of leukocytes and lymphocytes had a clear dependence on severity of the course of the disease. Higher levels of leukocytosis corresponded to a significant decrease in the absolute number of lymphocytes and increased severity of condition of the children.

CONCLUSIONS

The impact of impaired Zn metabolism in the body during pneumonia on development of the body's immune response after antigenic stimulation is of significant importance, which is manifested by significant disintegrating changes in immune homeostasis.