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**The meaning of contamination degree of the mucous membranes of the nasopharynx and oropharynx by streptococcus in the formation of cellular immunity in children with infectious mononucleosis.**

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Infectious mononucleosis (IM) is a widespread, acute lymphoproliferative disease, Epstein-Barr (EBV) virus etiology, characterized by fever, tonsilopharyngitis, lymphadenopathy, hepato- and splenomegaly.

The specific tropism of the Epstein-Barr virus to immunocompetent cells, systemic damage to internal organs, a wide range of clinical forms of the disease, as well as the absence of specific prophylaxis, has been the subject of research by many scientists. Today, infectious mononucleosis is regarded as a disease of the immune system. Active proliferation of the virus in all lymphoproliferative organs leads to structural changes that affect all parts of the immune system (cellular and humoral).

Many scientists believe that the main point of the formation of the clinical picture is not only EBV, but also bacteria, that are located at the site of the primary virus infection. Thanks to recent studies, it was found that streptococcus is sown in 60-85% of healthy children from their mucous membranes of the nasopharynx and oropharynx.

Various violations of the development, differentiation of immunocompetent cells, lead to impaired immunological reactions, and as a result, to a change of the clinical picture of the disease, its course and outcomes. Therefore, in clinical practice it is important to determine the number of cells: CD3 +, CD4 +, CD8 + and CD22 + .

The aim of the study was to determine the value of different stages of streptococcal contamination of the mucosa of the nasopharynx and oropharynx in the formation of the cellular link of the immune response in children with IM.

To achieve this goal, 61 children from three to seven years old with infectious mononucleosis were examined who were treated at the Regional Children's Infectious Clinical Hospital in Kharkiv. The diagnosis of IM was verified on the basis of positive results of markers for this disease by ELISA (anti-EBV IgM and IgG) and PCR (detection of EBV DNA in the blood). The immune status of patients was assessed by indicators of the relative content of CD3 +, CD4 +, CD8 +, CD16 +, CD19 + cells in their blood (monoclonal antibody method). In 31 children (first group), Streptococcus pyogenes at concentrations of 10-5 and higher was isolated during bacteriological examination of the mucosa of the nasopharynx and oropharynx. 30 (second group) - 10-4 degrees or less. As a comparison, we took the corresponding indicators of 30 healthy children of the same age and gender.

As a result of the study, we found that in the acute period, patients of both groups showed significant changes in cellular immunity, compared to the control group, characterized by a decrease the levels of CD3 +, CD4 + CD8 + and an increase the content of CD22 +. The increase in blood CD22 + was more significant in children of the first group. During the period of early convalescence in children of the second group, the levels of CD3 +, CD4 +, CD8 + cells approached the data of the control group, which indicated a tendency to normalize the cellular immunity of patients. In children of the first group, the content of CD3 +, CD4 +, CD8 + increased during IM convalescence compared with the acute period, but was significantly lower compared to the control group. CD22 + levels in both observation groups decreased by the convalescence period, but remained high compared to the control group.

As a conclucion, the presence of streptococcus in high concentration on the mucous membrane of the nasopharynx leads to the development of partial cellular immunodeficiency at the initial stage of the manifestation of the pathological process. The immunological differences identified as a result of the study can serve as an additional sign for predicting the duration of the disease and the choice of treatment , which will reduce the percentage of adverse outcomes of the disease and outline ways to improve the treatment of patients.