

**THE STUDY OF INDICATORS OF HOLISTIC-HUMORAL IMMUNITY IN  
CHILDREN WITH TYPE 1 DIABETES MELLITUS WITH ACUTE PURULENT  
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One of the important problems of modern otorhinolaryngology is the problem of hearing pathology in children with type 1 diabetes mellitus. Arising in early childhood, acute purulent otitis media (APOM) often becomes recurrent and turns into a chronic form. This is due to the fact that the main indicators of the immune system in children with type 1 diabetes mellitus with APOM at an early age are violated. The purpose of our work is to study the indicators of cellular-humoral immunity in young children suffering from OCD. Under our supervision in the ENT department of the regional children's hospital of Bukhara there were 32 children with APOM: under the age of 6 months -7, from 6 months to 1.5 years - 11, from 1.5 to 3 years -14. was determined by the E-ROCK method, B- lymphocytes by the EFS-ROCK method. The state of humoral immune status: the content of T-lymphocytes was determined by the E-ROCK method, B- lymphocytes by the EFS-ROCK method. The state of humoral immunity was assessed by the level of serum immunoglobulins in blood plasma. For quantitative determination of immunoglobulins of classes A, M, G, in blood serum, the method of simple radial immunodiffusion according to Mancini was used. The phagocytic activity of neutrophils was determined using a latex test. The control group (donors) consisted of 30 practically healthy children of the same age and gender.

The conducted studies showed that the relative number of T-lymphocytes in the control group donors was  $57.3 \pm 2.4\%$ , B-lymphocytes –  $16.4 \pm 1.8\%$ . The phagocytic activity of neutrophils was at the level of  $68.6 \pm 5.3\%$ . Serum immunoglobulin levels (humoral immunity) were as follows: IgA –  $108 \pm 21$  mg%, IgM –  $65 \pm 8$  mg%, IgG- $782 \pm 43$  mg%.

In children with type 1 diabetes mellitus with APOM, there was a violation of the functioning of the cellular link of immunity. The T-cell component of their immune system was reduced to  $31.5 \pm 2.6\%$ , which is 0.5 times lower than the control ( $P < 0.001$ ). A decrease in the intensity of the phagocytic reaction was also revealed – up to  $47 \pm 4.7\%$ . There were no statistically significant changes on the part of B-lymphocytes compared to the norm. The relative value of this parameter was at the level of  $14.1 \pm 2.3\%$  ( $P < 0.05$ ).

The study of the humoral immune response showed that the synthesis of the main classes of serum immunoglobulins increased in young children with APOM. The concentration of IgA increased to  $124 \pm 11$  mg ( $P < 0.001$ ), IgG to  $936 \pm$  mg% ( $P < 0.05$ ).

In children with APOM, there was a 1.2- 1.9-fold increase in the production of IgA, IgM. A noticeable increase in the production of IgM and IgA in children suffering from APOM in postnatal and early age, apparently, is an unfavorable sign indicating intrauterine infection and the severity of the infectious and inflammatory process, which dictates the need for urgent sanitation of the purulent focus in the antrum. In patients with APOM, cellular immunity was significantly suppressed. This was especially true of T-lymphocytes and phagocytic reaction. At the same time, there was an increase in the work of the humoral link of immunity, expressed in an increase in the level of the main classes of serum immunoglobulins, especially IgM. It can be assumed that the tension of the humoral link of immunity develops due to the insufficiency (deficiency) of the cellular link of the immune system.

Probably, disorders in the immune system are a "contributing factor", against which the development of the disease (APOM) and its complications of an inflammatory-septic nature is possible.

Thus, in children with chronic viral hepatitis B, suffering from APOM at an early age, the functioning of the main indicators of the intestinal-humoral link of immunity is disrupted. Deficiency of the cellular link is accompanied by tension of the humoral link of immunity.