

## IMMUNE STATUS IN CHILDREN WITH OBSTRUCTIVE BRONCHITIS ON THE BACKGROUND OF ATOPIA

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**Introduction.** In recent years, in different countries of the world, there has been an increase in the rate of obstructive bronchitis (OB) in children developing against the background of atopy, including atopic dermatitis. Atopic dermatitis (AD) occupies one of the leading places in the general structure of allergic diseases (75.0%). In such children, pathological processes have significant features and the main cause of which is considered to be the immunological deficiency of the body, since repeated exposure to various infections and trigger factors leads to sensitization to allergens of viral and bacterial origin.

**The aim** of the study was to study the immune status in children with obstructive bronchitis against the background of atopy.

**Material and methods.** Under our supervision were 40 children aged 7 to 11 years, suffering from obstructive bronchitis. The clinical diagnosis of AB and AD was made on the basis of anamnesis, clinical and laboratory, immunological parameters, functional research methods, and BP markers according to the SCORAD index. The control group consisted of 25 practically healthy children of the same age. In children, the state of the cellular link of immunity and the production of interleukin-2 (IL-2) were studied.

**Results.** According to the results of immunological studies, immunopathological changes in the body of sick children were revealed, which are characterized by a deficiency of the cellular link of immunity, in the form of a decrease in T-lymphocytes (DM3), T-helpers (DM4), T-suppressors (DM8) ( $P < 0.001$ ), phagocytic activity of neutrophils (FAN), hyperimmunoglobulinemia E (IgE) ( $P < 0.001$ ) and hyperproduction of IL-2 ( $P < 0.01$ ), which remain preserved even in the period of remission of the disease.

**Conclusion.** IL-2 produced by activated T-cells (Th2) exerts its action by binding to specific receptors expressed on cell membranes, which increases the proliferative

activity of T and B lymphocytes, and is also a necessary component for the production of IgE. In obstructive bronchitis against the background of atopic dermatitis, there is an increased synthesis of pro-inflammatory chymase of skin cells and mucous membranes, which is accompanied by its hyperreactivity and a decrease in barrier function. The damaged areas are dominated by activated T-helper cells with the Th2 lymphocyte phenotype, which contribute to the production of an increased amount of IgE by B-lymphocytes. Hyperproduction of IL-2 and hyperimmunoglobulinemia of IgE are a criterion for early immunodiagnosis in obstructive bronchitis against the background of atopic dermatitis in children.