

INDICATORS OF IMMUNOLOGICAL IMBALANCE IN POLYPOUS RHINOSINUSITIS

Lutfullaev G. U., Safarova N. I., Ruziev Zh. B., Xamraev F. X.
Samarkand State Medical University, Department of Otolaryngology

Abstract: We examined 30 patients with polypous rhinosinusitis in the ENT department of the multidisciplinary clinic of the Samarkand State Medical University in the period from 2020 to 2023. With polypous rhinosinusitis, an imbalance of humoral links of immunity develops. Signs of humoral immunity were revealed, such as B-lymphocytes, IgA, IgM, IgG. Against the background of a decrease in the relative and absolute values of B-lymphocytes by 25.16%, an increase in immunoglobulins of all classes was determined, especially IgG and IgM 12.42% and 6.08% ($P < 0.05$), and the content of IgA 39.71%, indicating persistent dysimmunoglobulinemia. The use of the immunostimulating drug Derinat makes it possible to significantly increase the effectiveness of treatment, as it reduces the number of relapses, which in turn leads to a reduction in reoperations.

Key words: polypous rhinosinusitis, immune status, humoral link.

Polypous rhinosinusitis is a pressing problem that worries doctors and patients due to the recurrent and progressive nature of the disease [5].

The last decades have been marked by intensive research into the etiology and pathogenesis of PE. All these theories consider disorders in the immune system as an important link in the pathogenesis of the disease. In this regard, many authors currently pay great attention to the issues of immune disorders in PE and various other forms of rhinitis [7].

At the same time, the presented immunological data differ greatly among different authors. In this regard, it is not clear which link of immunity is the leading one in this disease. Determining the impaired link of immunity provides the opportunity to correctly select an immunomodulator that acts primarily on the cellular, humoral link of immunity or the phagocytic link.

Patients and methods

We examined 30 patients with polypous rhinosinusitis in the ENT department of the multidisciplinary clinic of the Samarkand State Medical University in the period from 2020 to 2023.

The state of humoral links of the immune system was assessed in patients with polypous rhinosinusitis who underwent traditional therapy. The comparison group consisted of 10 practically healthy people whose immunological indices were taken as normal.

In patients with polypous rhinosinusitis, increased production of immunoglobulins reflects an increase in the body's immune resistance in response to the inflammatory process. Disturbances in cellular immunity were combined with changes in the humoral link. Against the background of a decrease in the relative and absolute values of B-lymphocytes by 26.74%, an increase in immunoglobulins of all classes was determined, especially IgM (by 66.74%) and IgG (by 23.59%) (Table 1).

Dysimmunoglobulinemia may also indicate a failure in the functioning of the humoral component of immunity in this pathology [4].

Table. Indicators of humoral immunity in patients with polypous rhinosinusitis during traditional therapy (M±m)

Indicators	Norm N=10	Before treatment N=30	After treatment N=30
B-lymphocytes,	14,81±0,92	10,85±0,73 P<0,05	8,12±0,93*
IgM, g/l	0,96±0,03	1,61±0,07 P<0,05	1,41±0,08*
IgG, g/l	10,64±0,71	13,15±0,85 P<0,05	12,35±0,91*
IgA, g/l	1,83±0,38	2,09±0,24 P<0,05	2,92±0,48*#

Note: * - reliability of differences relative to the norm;

- reliability of differences relative to the stage before treatment

Thus, with polypous rhinosinusitis, an imbalance of humoral links of immunity develops. Against the background of T-lymphocytopenia, activation of the humoral adaptive immune response occurs. The suppression of cellular immunity detected in patients, combined with activation of the humoral link, corresponds to the conditions of normal development of the immune response. This is consistent with modern concepts of the principle of polarity in the development of cellular and humoral adaptive immune responses, when one of the mechanisms of adaptive immunity is activated, the other must be inhibited due to the existence of mutually inhibitory influences between them [2].

In our studies, the immunostimulant Derinat was used after the surgical period, which was applied locally, 4 drops 3 times a day for 15 days. The drug is quickly absorbed, spreads through the lymphatic pathways to various organs and tissues. It has a high tropism for the organs of the hematopoietic system, where it can accumulate and exert its stimulating and modulating effect. Traditional therapy had a certain effect on the humoral link of immunity. The relative number of B-lymphocytes decreased, amounting to only 25.16%, amounting to only 54.83% of the norm. The concentration of immunoglobulins M and G decreased by 12.42 and 6.08% (P<0.05), the content of IgA increased by 39.71%, indicating persistent disimmunoglobulinemia. The level of complement changed insignificantly.

Conclusions. Polypous rhinosinusitis leads to immunological imbalance, and all links of immunity suffer, especially humoral immunity. Against the background of traditional therapy, shifts in immunity indicators persist, which indicates the need to include drugs with immunocorrective properties in the treatment complex of this pathology.

Thus, the use of the immunostimulating drug Derinat makes it possible to significantly increase the effectiveness of treatment, as it reduces the number of relapses, which in turn leads to a reduction in reoperations.

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