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THE STUDY OF IMMUNITY FEATURES IN CHILDREN WITH CHRONIC NASOPHARYNGITIS

ABSTRACT

Immune status was studied in children with chronic nasopharyngitis. It was revealed that in children with chronic nasopharyngitis the content of IgA, CD25 + lymphocytes, CD4 + was reduced. All examined children underwent therapy with lycopid 1 mg per day for 10 days; a second course was performed after 1 month. It was revealed that lycopid therapy in patients with chronic nasopharyngitis lead to normalization of decreased immune status indicators: an increase in CD3 + and CD25 + content, an increase in IgA concentration.

Keywords: chronic nasopharyngitis, children, immunity, immunocorrector.

Nasopharyngitis is an inflammatory disease of the mucous membranes and pharyngitis. It is up to 80% of cases of acute respiratory viral infection accompanied by nasopharyngitis [1,2] .

There are hypertrophic and atrophic forms of chronic nasopharyngitis. Pathomorphological changes in hypertrophic form are characterized by thickening and edema of mucous and submucous layers of the nasopharynx, so the clinical picture observed increased secretion from the nose light transparent liquid, the feeling of rawness and throat irritation, increased lacrimation, and tickling in the nose. The patient coughs constantly, expectorated and sneezing especially in the morning. Atrophic nasopharyngitis is characterized by thinning of the mucosa, since the affected layer is replaced by connective tissue fibers. Accordingly, the clinic is of a different nature and is manifested by dryness in the throat, difficulty swallowing and bad breath. The child of early age the frequency of appearance of virus infections with nasopharyngitis is caused by immune system dysfunction, increased allergic reactions, the presence of chronic adenoiditis [1, 2].

The **purpose** of the study: to study the characteristics of immunity in children with chronic nasopharyngitis and the effect of drug Likopid therapy.

Materials and methods

The study surveyed a group of children (n=30) aged 3 to 5 years with chronic nasopharyngitis: the common rhinitis, sore throat, nasal discharge. We also surveyed a group of healthy children (n=20), and compare groups of children matched for age. The children underwent examination of immune status (CD3+,CD4+, CD8+, CD16+, CD22+, IgA, IgG, IgM, IgE) on the basis of the RH No.1-National center of medicine RS (Ya). Comparison of mean values was assessed by single-factor dispersion analysis using Student T-test for the evaluation of the equality F-Fisher criterion. The relationship between parameters was assessed using the coefficients of the linear and rank correlation.

The **results** of the study: all children with chronic nasopharyngitis had frequent viral respiratory infections, nasal discharge, excessive sweating, fatigue, adenoiditis. There were examined 30 children.

In the group of all surveyed children we have observed a reduced level of IgA (Table).

Also we revealed a decrease in the content of CD25+ cells, activated T cells, T helper (CD4+). In the treatment of chronic nasopharyngitis in the course of immunomodulator Likopid in the dose of 1 mg (1 tablet) 1 times a day 10 days was used, a second course was conducted in a month. At the end of the second course, immunological studies of all treated children were conducted.

Therapy by drug Likopid led to the normalization of some parameters of cellular and humoral immunity: the increase in the content of CD3+ and CD25+, the increase in the concentration of IgA.

Conclusion

1. In children with chronic nasopharyngitis we revealed the immune dysfunction or failure, affecting cellular and humoral immunity (IgA decrease, the decrease in CD25+ lymphocytes, reduced CD4+).

2. Therapy by likopid patients with chronic nasopharyngitis normalizes reduced immune status indices: increase in the content of CD3+ and CD25+, the increase in the concentration of IgA.

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Table

Indicators of immune status in children of Sakha (Yakutia) in children with chronic nasopharyngitis and healthy children

Indicators	Children with chronic nasopharyngitis (n = 30), M ± m	Healthy children (n = 20), M ± m
CD3+	26,4 ± 1,0	27,2±1,04
CD4+	10,1 ± 0,2*	21,3±0,6
CD8+	11,2 ± 0,5	12,1±2.5
CD16+	12,4 ± 1,4	11,0±1,01
ИРИ	0,8 ± 0,5	1,08±0,02
IgA	1,6 ± 0,1*	2,9±0,6
IgG	18,1 ± 0,2	17,1±0,09
IgM	2,6 ± 0,02	2,2±0,09
CD25+	12,2 ± 1,2*	24,6±0,7
ЦИК	75,1 ± 1,5	70±0,07

*$p < 0.05$ between norms and obtained values in each group.