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RECURRENT STOMATITIS IN CHILDREN

This article is devoted to the actual problem of recurrent aphthous stomatitis in children. The authors studied the features of the course of recurrent aphthous stomatitis in children and the effectiveness of the use of Imudon in the treatment of this disease.

We surveyed 100 children with recurrent aphthous stomatitis, within a year at the age of 7 to 12 years on the basis of the Consultative Clinic RH №1- National center of medicine (Yakutsk). All children were examined by a pediatrician and profile specialists: an endocrinologist, a hematologist, an otolaryngologist, and a dentist. General blood and urine tests, biochemical studies (CRP, ASLO), blood sugar levels, a study of the level of immunocompetent cells in peripheral blood and the level of immunoglobulins A, M, G were examined in all children. Then a group of 50 children with recurrent stomatitis was identified, all of them except of local therapy (cauterization of ulcers by the stomatofit) received treatment with Imudon (the group under study). A group of children (50 people) received only local treatment (the control group). All children showed a decrease in immunity, changes in the general blood test. In the treatment of recurrent stomatitis, in addition to local treatment, treatment with Imudon is recommended, which leads to a reduction in clinical symptoms, normalization of immune status indicators and a general blood test.

Keywords: stomatitis, aphthae, children, immunity, ulcers, therapy, Imudon.

Stomatitis is a disease of the oral mucosa. Pathogens are more often streptococci. Stomatitis is most often caused by a failure of the immune system or a number of diseases of various organs (diabetes mellitus, kidney disease, blood deficiency disease, vitamin deficiency).

In children, aphthous form of stomatitis is more common. Aphthae appear as small white or yellowish plaques of various sizes, surrounded by a red rim, on the mucous membrane of the cheeks, gums, lips or tongue. Characterize by a sharp pain when eating and symptoms of intoxication. Their outcome is often favorable, after 6-8 days the process subsides, aphthae heal, erosion epithelialized. Sometimes stomatitis becomes chronic and tends to recur.

As a result of treatment with antiseptic agents of the oral cavity, aphthae heal, but new ones appear. The process can last for years, affecting the patient's quality of life; children try to eat liquid food in order not to injure the oral mucosa. In the process of the disease, children lose weight, are stunted in growth and psychomotor development [1,2].

Objective: To study the peculiarities of the course of recurrent aphthous stomatitis in children and the effectiveness of the use of Imudon in the treatment of this disease.

Materials and methods. We surveyed 100 children with recurrent aphthous stomatitis for a year, aged from 7 to 12 years based on the Consultative Clinic RH №1- National center of medicine. All children were examined by a pediatrician and profile specialists: an endocrinologist, a hematologist, an otolaryngologist, and a dentist. General blood and urine tests, biochemical studies (CRP, ASLO), blood sugar levels, a study of the level

of immunocompetent cells in peripheral blood and the level of immunoglobulins A, M, G were examined in all children. Then a group of 50 children with recurrent stomatitis was identified, all of them except of local therapy (cauterization of ulcers by the stomatofit) received treatment with Imudon (the group under study). A group of children (50 people) received only local treatment (the control group).

All the data obtained were subjected to thorough statistical processing: the numerical data were calculated as the arithmetic mean and standard error of the mean $M \pm m$; differences were considered significant at $p < 0.05$. Comparisons of mean values were performed by single-factor analysis of variance using Student's t-test to assess the equality of the averages of the Fisher's F-test to assess the equality of the variance. The relationship between the parameters was estimated using linear and rank correlation coefficients.

Results. A survey of 100 children with recurrent stomatitis by specialists revealed

that 15 (15%) people had iron deficiency anemia, 70 (70%) children had chronic tonsillitis, 50 (50%) children had caries.

Then we decided to study the main symptoms in children with recurrent stomatitis: 90 children (90%) had a burning sensation and soreness of the oral mucosa when eating, 65 children (65%) had a weight loss of 1 to 3 kg during the year, 30 % growth retardation, 60 (60%) decrease in appetite, 90% weakness, fatigue.

All patients with recurrent stomatitis had a general blood count.

According to the results of a general blood test in patients with stomatitis, the level of erythrocytes, platelets, hemoglobin and erythrocytes is reduced (Figure 1).

All patients with recurrent stomatitis were examined for their immune status. The following results were obtained: a decrease in the content of CD4 + lymphocytes, that is, activated T-cells, a decrease in the number of natural killer cells (CD16 +), T-helper cells (CD4 +), cytotoxic T-lymphocytes (CD8 +), and an increase in IgM (Table 1).

Table 1

Indicators of the immune status in children of RS (Ya) in children with recurrent stomatitis and healthy children, $M \pm m$

Indicator	Children with recurrent stomatitis (n = 100)	Health children (n = 2000)
CD3+	18.1 ± 1.03*	27.2 ± 1.04
CD4+	16.2 ± 0.5*	28.3 ± 0.6
CD8+	15.9 ± 0.8*	24.1 ± 2.5
CD16+	10.1 ± 1.2*	22.0 ± 1.01
IRI	0.7 ± 0.6	1.08 ± 0.02
IgA	1.1 ± 0.1*	2.9 ± 0.6
IgG	18.2 ± 0.7	17.1 ± 0.09
IgM	1.0 ± 0.08*	2.2 ± 0.09
CD25+	13.9 ± 1.2*	24.6 ± 0.7
CIK	186.2 ± 1.5 < 0.05*	70 ± 0.07

Note. In the Tables 1-2 * $p < 0.05$ between standards and indicators in each group

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Table 2

Indicators of the immune status in children with recurrent stomatitis of the examined and control groups after therapy, $M \pm m$

Indicator	Children of the examined group after therapy (n = 50)	Children of the control group (n = 50)
CD3+	27.1 ± 1.1	22.1 ± 1.03
CD4+	21.6 ± 0.9	18.9 ± 0.5
CD8+	18.2 ± 0.2	16.9 ± 0.8
CD16+	20.3 ± 1.0	$13.1 \pm 1.2^*$
IRI	1.9 ± 0.1	0.7 ± 0.6
IgA	2.6 ± 0.1	$1.8 \pm 0.1^*$
IgG	18.9 ± 0.2	18.2 ± 0.7
IgM	2.4 ± 0.2	$1.2 \pm 0.08^*$
CD25+	20.1 ± 1.2	13.9 ± 1.2
CIK	172.1 ± 1.0	$186.2 \pm 1.5 < 0.05$

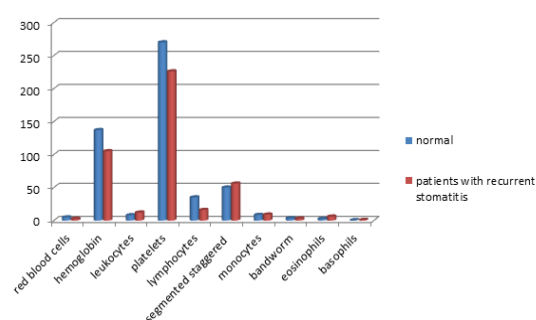


Fig. 1. General blood count in patients with recurrent stomatitis compared with normal values

Standards of immune status indicators were developed by the team of the Immunology Laboratory of the Medical Institute in 2018 based on a survey of 2,000 healthy children aged 5 to 10 years (Table 1).

Treatment of recurrent stomatitis was carried out jointly with the dentist. Within 1 month, 50 children of the examined group with recurrent stomatitis received the drug Imudon 1 tablet 3 times a day. Patients from the control group of 50 children received only antiseptic treatment with stomatofit, cauterization of aphthae.

During the therapy and after the treatment, the aphthosis did not appear in the

examined group in children during the month, the symptoms of the children in the control group remained the same.

Thus, as a result of the treatment carried out in the examined group of children (local antiseptic treatment and imudon), there was a positive dynamics of clinical manifestations in comparison with children of the control group who received only local antiseptic treatment.

In the examined group of children, there was a positive trend in the indicators of the general blood test (Figure 2).

All children were examined for immune status in the control and survey groups. It was revealed that the immune indices improved in the group of children with recurrent stomatitis after therapy (local treatment and imudon): an increase in cellular and humoral immunity: the level of normal killer CD16 + and the level of IgA, IgM (Table 2). These changes are significantly higher than the immune sta-

tus in children of the control group who received only topical antiseptic treatment of stomatitis.

Thus, there is a positive dynamics of indicators of immune status, clinical manifestations of recurrent stomatitis of children of the examined group as a result of the treatment.

Conclusion. In the treatment of recurrent stomatitis, in addition to local antiseptic treatment, treatment with Imudon is recommended, which leads to a reduction in clinical symptoms, normalization of immune status indicators and a general blood test.

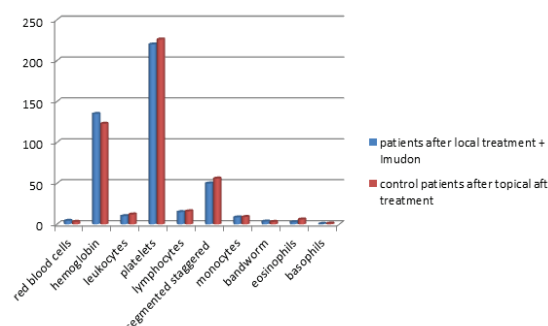


Fig. 2. Dynamics of changes in the general blood count in children with recurrent stomatitis of the examined and control groups after the treatment

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