

Local Immunity Factors in Patients with Cras

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Abstract: The article investigated the condition of local immunity in the oral cavity in 48 patients with chronic recurrent aphthous stomatitis (CRAS). Patients with CRAS showed a decrease in the level of lysozyme and sIgA in the oral liquid (OL), which is an unfavorable prognostic criterion in patients with CRAS. This undoubtedly affects the course of the pathology in patients with CRAS. Low values of lysozyme and sIgA can lead to impaired microbiocenotic status and reduced functioning of the oral mucosa (OM) in patients with CRAS.

Keywords: chronic, aphthous stomatitis, oral liquid, local immunity, lysozyme, immunoglobulins.

Introduction.

Considerable attention is paid to the problem of prevention and treatment of chronic diseases (CD) of the oral mucosa (OM) due to an increase in the negative impact on the human body of environmental factors, a wide and not always justified use of medicines with antibacterial properties. CRAS is considered to be one of the most frequent diseases of the oral mucosa. A significant role in the pathogenesis of chronic inflammatory processes is assigned to the microbiocenotic status of OM [1–3].

Purpose of the study: to study the local immunity factors in the oral cavity (OC) in patients with CRAS.

Material and methods

During the period from 2016 to 2018, 48 patients with CRAS aged from 21 to 46 years old were examined at the Department of Therapeutic Dentistry of the Bukhara State Medical Institute. At the same time, clinical symptoms of CRAS, allergological and laboratory examinations were taken into account.

The control group consisted of 14 somatically healthy individuals with intact periodontal age from 20 to 39 years.

The concentration of lysozyme in the oral liquid (OL) of the OC was investigated by diffusion in an agar gel.

The concentration of immunoglobulin classes sIgA, IgA and IgM was studied on a Cobas-411 Immunoassay Analyzer (Roche, Switzerland), using the sets from the same company. The research results are processed using Student criterion.

Results and discussion

In patients with CRAS on the surface of aphthae, ulcers an extremely diverse micro flora is defined, including representatives of almost all types of microorganisms.

Basically microorganisms were represented by 2 groups: microaerophilic Streptococcus and obligate anaerobes, facultative anaerobes.

On the surface, aphthae in the majority (56%) were coccal flora, much of which (44%) was accounted for by strict anaerobes (Peptostreptococcus, Peptococcus). At the same time, Bacteroids accounted for 15%, Actinomycetes - 13%, Leptotrichia and Clostridia 4% each.

Patients with CRAS showed a significant decrease in lysozyme level in the OL (Table 1).

Table 1. The content of lysozyme in patients with OL of patients with CRAS.

Groups	Quantity of patients	Lysozyme (mkg/ml)
Healthy individuals	14	198,76 ± 9,58
Patients with CRAS	48	113,24 ± 8,67*
Note: * - significance of differences at p<0.05 and above.		

The parameters of humoral immunity in the OL in patients with CRAS are presented in table. 2. It is known that sIgA, which is part of the OL and saliva, plays an important role in local immunity. In addition, the composition of saliva in small quantities contains Ig classes A and G [5].

Patients with CRAS have a lower sIgA content in the OL, in contrast to the control. Significant deficiency in the content of sIgA in patients with CRAS in OL reflected on the production spectrum of two other Ig: IgA and IgG (Table 2).

Their levels were higher than similar values of the control group.

Apparently, a low level of sIgA, which is more responsible for local immunity, can lead to impaired microbiocenosis and impaired functioning of the OM, which may well be one of the unfavorable factors leading to the development of CRAS in patients [4, 5].

Table 2. The content of immunoglobulins in the OL in patients with CRAS

Groups	The amount of sIgA mg/ml	The amount of sIgA mg/ml	The amount of sIgA mg/ml
Healthy individuals, n = 14	43,78 ± 3,07	103,70 ± 2,55*	48,24 ± 4,61
Patients with chronic recurrent aphthous stomatitis	24,54 ± 1,98*	148,12 ± 9,43*	72,31 ± 5,03*
Note: * - significance of differences at p < 0.05 and above.			

The obtained results indicate that the prescription of CRAS can affect the secretory level and serum Ig entering the OL and thereby aggravate the degree of the disease, as indicated by the periodic exacerbations of the inflammatory process in the OM [4, 5].

Conclusion.

Thus, in patients with CRAS, a decrease in the parameters of local immunity was revealed, exactly, the amount of lysozyme and sIgA in OL. This undoubtedly affects the course of the pathology in patients with CRAS. In the future, we plan to conduct immune corrective therapy in order to eliminate the identified violations of the parameters of local immune reactivity and improve the condition of patients with CRAS.

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