



The State of Microcirculation and Local Immune Hemostasis of the Mucous Membrane of the Prosthetic Bed in Patients with Type 2 Diabetes Mellitus

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Resume: Diabetes mellitus leads to disruption of all types of metabolism, affects various human organ systems, including cardiovascular, immune, nervous, digestive and others., " The state of microcirculation and local immune hemostasis of the mucous membrane of the prosthetic bed in patients with type 2 diabetes mellitus."

Relevance. Diabetes mellitus leads to a violation of all types of metabolism, affects various systems of human organs, including cardiovascular, immune, nervous, digestive and others. The pathological process in diabetes mellitus has its own manifestations and in the oral cavity. Disorders in the microcirculatory bed, local immunity, hyposalivation, hyperglycemia lead to dysbiosis of the oral cavity with the prevalence of pathogenic and conditionally pathogenic microorganisms, such as greening Streptococcus, Staphylococcus aureus, yeast fungi of the genus Candida. Pathological changes in the oral cavity contribute to the development of various dental diseases. An increase in the frequency of periodontal diseases, carious lesions of the teeth is the reason for the increased appeal of patients with diabetes mellitus for dental care. According to R. I. Runge (2014) 53.7% of diabetic patients need orthopedic dental treatment.

Dentures even for patients without general somatic pathologies have a number of side effects. Removable dentures have the greatest impact on the organs and tissues of the oral cavity. Violation of the microcirculation of the tissues of the prosthetic bed, the function of salivation and factors of local immunity of the oral cavity contributes to the formation of dental deposits, which entails a change in the microflora of the oral cavity both quantitatively and qualitatively. There is evidence of the effect of removable dentures on the factors of general immunity. It was revealed that among the partial removable prostheses used for orthopedic dental treatment of patients, partial removable plate prostheses and partial removable prostheses with a solid metal base are most often used. The side effect of removable dentures in patients with diabetes mellitus is enhanced by the presence of a general somatic disease [1.3.5.7.9.11.13.15.17].

The microbiocenosis of the oral cavity of such patients is affected not only by the general factor, diabetes mellitus, but also by a local denture, which increases the likelihood of developing dysbiosis of the oral cavity and, as a consequence, prosthetic stomatitis. Rehabilitation of diabetic patients undergoing orthopedic dental treatment is a complex problem in modern dentistry. The issues of the state of the oral microflora and indicators of general immunity in patients with diabetes mellitus remain insufficiently studied under the influence of partial removable dentures with a metal base made of cobalt-chromium alloy (CCS) and partial removable plate prostheses most often used for orthopedic dental treatment. The search for the most effective methods for normalization of dysbiotic processes in the oral cavity is relevant.

The purpose of the study: Improving the quality and effectiveness of removable prosthetics in patients with diabetes mellitus based on the analysis of local cellular immunity of the mucous membrane of the prosthetic bed.

Materials and methods of research

- 1) To study the indicators of local cellular immunity of the oral mucosa, characterizing its condition in dental patients suffering from diabetes mellitus before the start of orthopedic treatment.
- 2) To identify the features of the influence of materials and designs of removable acrylic prostheses on the indicators of local cellular immunity of the oral mucosa in patients with diabetes mellitus.
- 3) To characterize the features of changes in the indicators of local cellular immunity of the oral mucosa during prosthetics with removable acrylic prostheses in patients with diabetes mellitus when using an immune modulator.
- 4) Develop recommendations for prosthetics with acrylic removable prostheses in patients with diabetes mellitus based on indicators of local cellular immunity of the oral mucosa.

The indicators of local cellular immunity of the oral mucosa characterizing the state of local cellular immune homeostasis of the prosthetic bed in dental patients of various age groups against the background of diabetes mellitus were studied. The analysis of the proliferative activity of the structures of the oral mucosa depending on changes in the indicators of local cellular immunity of the oral mucosa after prosthetics in patients with diabetes mellitus was carried out. For the first time, when using prostheses made of acrylic plastics, indicators of local cellular immunity of the oral mucosa, proliferative activity of prosthetic bed structures in patients suffering from diabetes mellitus were obtained.

For the first time, the influence of dental prosthetic structures made of acrylic plastics on the components of the morphological substrate that ensure the maintenance of local cellular immunity of the oral mucosa in patients with diabetes mellitus was evaluated.

The significance of indicators of local cellular immunity of the oral mucosa in clinical manifestations when using removable dental orthopedic structures in patients suffering from diabetes mellitus has been proved.

For the first time, the correlation between the indicators of local cellular immunity of the oral mucosa and the proliferative activity of the structures of the prosthetic bed of the oral mucosa in dental patients suffering from diabetes mellitus when using removable acrylic prostheses was investigated.

Changes in the parameters of local cellular immunity of the oral mucosa in patients with diabetes mellitus were studied when using the immunomodulator "Imudon" before, as well as in dynamics after prosthetics with acrylic removable structures.

Result

The significance of the work is due to the fact that the methods used to study and modulate the state of the parameters of local cellular immunity of the oral mucosa can improve the quality of dental care in patients with diabetes mellitus. The data contained in it can serve as a basis for the development of pathogenetic therapy of periodontal pathology in patients suffering from diabetes mellitus. The results of studying the parameters of local cellular immunity of the oral mucosa, the features and nature of the proliferative activity of structures in the prosthetic bed area during removable prosthetics in patients with diabetes mellitus justify the use of immunomodulators and are aimed at further improving the provision of effective orthopedic care to the population.

Development of an algorithm for the management of dental patients suffering from diabetes mellitus and in need of removable prosthetics, which really contributed to improving the quality of orthopedic care and the effectiveness of the work of an orthopedic dentist using the immunomodulator "Imudon". A comprehensive model of periodontitis prevention in patients with concomitant DM is

presented, pathogenetic principles of using morphological indicators of local immune homeostasis of SOD underlying this concept are discussed [2.4.6.8.10.12.14.16.17].

In particular, pathogenetically substantiated mechanisms of immunomodulating the processes of physiological regeneration of SOD were identified, which give dynamic stability to the effectiveness of dental prosthetics. It is possible to determine and explain the patterns that affect the stabilization, disruption and restoration of the system of interaction of cells involved in the stabilization of physiological regenerative processes in SOD, which contributes to the improvement of the strategy for controlling and modulating periodontal protection from the development of pathological processes in patients with concomitant DM.

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