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Optimization Of Prevention Measures And Treatment Approaches To Oral Infectious Diseases In Patients Using Dental Protesis

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Abstract: Orthopedic dental treatment is now widespread. This is due to a large number of patients with dental diseases: increased tooth wear, wedge-shaped teeth defects, partial loss of teeth, caries, anomalies of the dentition. Currently, in dental practice, strict requirements are imposed on all materials for the manufacture of prostheses: the absence of allergenic and blastomogenic properties, tissue tolerance, and chemical and galvanic inertness. At the same time, there are reports of the adverse effect of prostheses causing galvanism, chronic intoxication, paresthesias, allergic stomatitis, candidiasis, which requires further study.

Keywords: Prevention, oral cavity, denture, dental diseases.

Introduction: An analysis of the literature data showed that treatment failures were often associated with a one-sided approach to therapy, which consisted in prescribing drugs without taking into account sensitivity to them, the presence of microbial associations with increased pathogenic potential against the background of a decrease in local immunological resistance. In view of this, the main tasks in solving these problems still remain, such as decontamination of pathogenic microorganisms, restoration of indigenous species, normalization of specific and nonspecific local and systemic immunity. Orthopedic treatment of patients with complete and partial absence of teeth occupies a leading place in modern dental practice [9]. Removable dentures are widely used to replace defective dentitions [17]. With partial adentia, the most common type of orthopedic treatment is the use of non-removable

dentures [12]. Due to the presence of orthopedic structures in the oral cavity, microbial ratios and immunological parameters of the oral fluid change [4, 18, 21]. The degree of these changes can vary significantly depending on the type of orthopedic structure and the material used as the base [1, 20]. Despite this, a violation of the composition of the normal microflora of the oral cavity, leading to the activation of periodontopathogenic microflora and the development of inflammatory diseases, is recorded in people using both removable and non-removable dental prosthetics [2, 16, 22]. In this regard, careful hygienic care of orthopedic structures remains the main measure for the prevention of infectious complications [17, 19]. This predetermined the goal — to study the qualitative composition and quantitative content of microorganisms, to assess the viability and functional status of neutrophils in the oral fluid of patients using prosthetics, depending on the type of orthopedic structure and the method of its hygienic cleaning.

Goal. Improving the effectiveness of prevention and treatment of infectious processes of the oral cavity in people using dentures.

METHODS

The most effective are prebiotic oligo- and polysaccharides, such as the natural polysaccharide k-carrageenan, which has a positive effect on the detoxification, immune and metabolic systems of the body. It has been established that this polysaccharide and its organomineral nanocomposite increase the main indicators of the growth activity of microbes of the beneficial microflora of B. subtilis by 1.5–5.7 times. The arsenal of tools designed to correct microbiocenosis includes synbiotics, represented by a combination of pro- and prebiotics. One of the representatives of this product is the Normoflorin biocomplex, prepared on the basis of strains of lactobacilli L. acidophilus and bifidobacteria B. bifidum and B. longum. The probiotic effect of Normoflorin biocomplexes is associated with the reproduction of 38 lactobacilli, bifidobacteria and synthesized vitamins, amino acids, enzymes, as well as the prebiotic lactitol and trace elements in the intestine. It has been determined that the Normoflorin biocomplexes have pronounced antibacterial activity against S. epidermidis, S. aureus, C. albicans, and Enterobacter inhabiting the oral mucosa.

RESULTS

Most of the negative results when using prebiotics are mainly associated with excessive doses and violation of general recommendations for taking medications. Side effects are reflected in the instructions for the use of specific drugs. The main negative phenomena include individual intolerance, allergies, bloating, flatulence, cramping pains in the intestines and others. Thus, today there is a wide variety of chemical and biological agents for the correction of microbiocenosis, but the effectiveness of the action is not achieved in all cases of the use of these drugs. This is due to the fact that microorganisms in biofilms are protected from the action of chemicals. In this regard, methods based on physical phenomena, such as ultrasonic vibrations and electromagnetic fields, have appeared. Currently, in dentistry, otorhinolaryngology, purulent surgery, obstetrics and gynecology, the technique of treatment with cavitated low-frequency ultrasound with solutions of antibiotics and antiseptics, including chlorhexidine, is widely used to correct microbiocenosis.

In recent decades, electromagnetic fields and radiation of man-made origin have begun to play a significant role in the process of maintaining the homeostasis of macro- and microorganisms. To date, it has been proven that the natural electromagnetic background is almost completely suppressed by radiation of man-made origin. The main sources of electromagnetic pollution in the microwave wavelength range are: radio transmission centers for communication and navigation, mobile and cellular communications, radar stations and wireless computer networks, microwave ovens and others. The intensity of the radiated energy is continuously increasing. According to various estimates, it exceeds up to tens of thousands of times the intensity level of the natural electromagnetic background in the microwave frequency spectrum. In this regard, a promising scientific direction has emerged to study the current problems of interaction of organisms with microwave EMR. This area is connected with the research of foreign authors, which is based on the statement about the determining controlling role of the natural electromagnetic factor of exogenous origin in wildlife. At the same time, the excess of the intensity of the technogenic microwave background over the natural EMR should be minimal.

CONCLUSION

Thus, the analysis of scientific publications in the field of microbiology on the effects of low-intensity EMR on microorganisms, similar to natural and man-made, indicates the lack of results of systematic studies taking into account the diversity of electromagnetic radiation and various strains of microorganisms.

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