

CHANGES IN THE CONDITION OF THE MUCOUS MEMBRANE AND
PROSTHETIC BED DURING THE MANUFACTURE OF VARIOUS TYPES OF
REMOVABLE DENTURES

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Abstract. Conducted scientific studies indicate a decrease in the adaptive capabilities of patients to wearing removable laminar dentures due to the development of inflammatory processes in the tissues of the prosthetic bed.

Key words: mucous membrane, denture bed, removable dentures, inflammation.

ИЗМЕНЕНИЯ СОСТОЯНИЯ СЛИЗИСТОЙ ОБОЛОЧКИ И ПРОТЕЗНОГО ЛОЖА
ПРИ ИЗГОТОВЛЕНИИ РАЗЛИЧНЫХ ВИДОВ СЪЕМНЫХ ЗУБНЫХ ПРОТЕЗОВ

Аннотация. Проведенные научные исследования свидетельствуют о снижении адаптационных возможностей пациентов к ношению съемных пластиночных зубных протезов за счет развития воспалительных процессов в тканях протезного ложа.

Ключевые слова: слизистая оболочка, протезное ложе, съемные зубные протезы, воспаление.

Numerous studies conducted in various countries in the field of problems of orthopedic removable prosthetics and issues related to its complications have revealed the importance and timeliness of a detailed and in-depth study of the etiology and pathogenetic mechanism of their development.

Typical factors that are the causes of this kind of complications are traumatic and toxic-allergic phenomena, which is associated with the presence of residual monomer in the base of the finished prosthesis, the low elastic modulus of acrylic polymer materials, and a sharp decrease in the quality indicators of plate prosthetic structures even at later stages of wearing.

Clinical and laboratory studies in this area, having revealed a very high level of use of acrylic dentures in many countries, also indicate evidence of the influence of the residual monomer (methyl methacrylate) on the functional state of organs and tissues of the oral cavity (lysozyme titer, neutrophil activity, etc.) and cases of irritating and toxic effects of the monomer itself on the body of the prosthetic wearer.

And from this point of view, the development and implementation of new, more advanced base materials that have better properties and, if possible, are devoid of all the above-described disadvantages, improvement of methods of treatment and prevention of complications that arise when wearing acrylic dentures, are the most pressing problems of modern orthopedic dentistry.

And the achievement of dental materials science in this area is the introduction into orthopedic dental practice of prostheses based on injection molded thermoplastics of medical purity.

Based on the results of some laboratory studies, certain conclusions can be drawn about the biological compatibility of the material with tissues and organs of the oral cavity. Taking into account the above, a comparative assessment of the condition of the oral mucosa and prosthetic bed in patients wearing various types of acrylic prostheses and prostheses based on medical-grade thermoplastics was carried out.

Material and methods. Using a developed specialized examination card for orthopedic patients, 620 patients were examined in three age groups: 45-60, 61-70, 71-85; of which 380 patients had acrylic prosthetic structures (fluorax - in 180, ethacryl - in 120, melodent - in 80 patients); 240 patients with prostheses based on medical grade thermoplastics.

Changes in the soft tissues of the prosthetic bed and the oral mucosa when wearing removable lamellar dentures were determined by the degree and size of pathological processes using clinical research methods (visual, instrumental, palpation).

Results and discussion. Conducted clinical studies to identify areas of inflammation of the tissues of the prosthetic bed indicate that focal and diffuse (diffuse) lesions of the mucous membrane in the form of swelling, erosion, hyperplasia of the mucous membrane is most often found in the 1st group of patients we examined - patients with partial and complete removable orthopedic structures made of acrylic plastics.

The large number of elderly and senile representatives in the republic and the identification of factors that reduce the adaptive capabilities of the body to various inflammatory-dystrophic processes in this contingent when wearing acrylic removable dentures became the reason for studying their level and severity in various age groups.

As a result, pronounced focal pathological changes in the mucous membrane of the prosthetic bed were detected in $45.1 \pm 4.08\%$ of patients in group I in the age group of 45-60 years. On the contrary, in group II, where patients used orthopedic structures based on medical-grade thermoplastics, these indicators were almost 3.5 times lower and amounted to $11.7 \pm 2.07\%$.

The incidence of diffuse inflammatory processes, most often within the boundaries of the prosthetic bed, in the form of swelling, redness and erosion, reaches its maximum level when wearing various acrylic plate prostheses in the age group of 45-60 years - $49.6 \pm 4.40\%$.

When differentiating the effectiveness of orthopedic treatment based on clinical research data, it was revealed that the oral mucosa in patients of group II showed minor pathological changes.

In most patients with prostheses based on medical grade thermoplastic, the mucous membrane was practically no different in appearance from normal, except for mechanical injuries in the projection of the boundaries of the prosthetic structures.

Conclusions. Clinical studies conducted among prosthetic wearers have established the functional and biological compatibility of the new base material for partial and complete removable orthopedic structures, which has properties close to ideal in terms of the almost complete absence of clinical manifestations of traumatic and inflammatory-destructive processes in the tissues of the oral cavity.

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