



Організація наукових  
медичних досліджень  
«Salutem»

Збірник матеріалів міжнародної  
науково-практичної конференції

**ВІТЧИЗНЯНА ТА СВІТОВА МЕДИЦИНА:  
ВИМОГИ СЬОГОДЕННЯ**

**12–13 жовтня 2018 р.**

**м. Дніпро**

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**ЗБІРНИК МАТЕРІАЛІВ**

**МІЖНАРОДНОЇ НАУКОВО-ПРАКТИЧНОЇ  
КОНФЕРЕНЦІЇ**

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**НАПРЯМ 4. ФАРМАЦЕВТИЧНА НАУКА:  
СУЧАСНІСТЬ ТА МАЙБУТНЄ**

COMPARATIVE EVALUATION OF CHEWING PRESSURE  
BY COMPLETE REMOVABLE DENTURES ACCORDING  
AN ADHESIVE MATERIAL APPLICATION

**Yanishen I.V., Grishanin G.G., Movchan O.V., Andriyenko K.Yu..... 104**

## **НАПРЯМ 4. ФАРМАЦЕВТИЧНА НАУКА: СУЧАСНІСТЬ ТА МАЙБУТНЄ**

### **COMPARATIVE EVALUATION OF CHEWING PRESSURE BY COMPLETE REMOVABLE DENTURES ACCORDING AN ADHESIVE MATERIAL APPLICATION**

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Abstract. Functional characteristics of organs of the dentoalveolar system are closely interconnected and determined by age of patient, psychosomatic state, degree of workout masticatory muscles and periodontium, the state of reflex regulation of muscular effort by periodontal baroreceptors and the mucous membrane of the prosthetic area, anatomical features, in cases of use of removable dentures – degree of their fixation and stabilization on the prosthetic area [1; 2]. In orthopedic dentistry, the term «chewing pressure» is used to evaluate the

dentoalveolar system, which means the force that occurs in the case of reducing the masticatory muscles for biting and chewing food and acting on different parts of the dental arc. In prosthetic dentistry clinic we use a number of materials and activities aimed at improving the functional efficiency of removable dentures [4]. One of them is considered to be methods of improving the fixation and stabilization of removable dentures using adhesive (stabilizing) materials [3].

Purpose of the investigation is to compare the assessment of the force of chewing pressure of patients with orthopedic treatment with complete removable dentures, depending of adhesive material.

Methods. To compare the evaluation of the strength of the chewing pressure of patients with the use of adhesive materials to improve the quality of fixation of removable dentures and chewable efficacy, as well as to reduce the period of adaptation of clinical use of dentures, stabilizing materials «Stomafix 1» (dimethyl-carbadecyloxymethyl-AMDC adhesive material) and «Korega» (adhesive material based on carboxy-peptidase – AMKP). Measurement of indicators of chewing pressure was carried out with the help of computer neurophysiological diagnostic system «M-TEST».

Results. The comparative characteristic of the changes in chewing pressure among patients with edentulous jaw, which orthopedic treatment was performed using stabilizing material AMDK (1n1P = 10, the first group) and AMKP (1n1U = 11, second group) showed that in general, in all sections of the prosthetic areas in the first In the group of patients, the increase in chewing pressure was significantly ( $t = 2.09$ ;  $p < 0.050$ ) higher and, accordingly, was  $(16.9 \pm 1.6)\%$  and  $(12.0 \pm 1.7)\%$ . An analysis of

changes in chewing pressure among patients in the first and second groups with edentulous upper jaw showed that in all zones of prosthetic areas in the first group of patients, the increase in chewing pressure was significantly higher ( $t = 3.45$ ;  $p < 0.001$ ) and, accordingly, was  $(17.2 \pm 0.5)\%$  and  $(10.1 \pm 2.0)\%$ . Thus, irrespective of the clinical variants of the edentulous jaws, the generalized increase in chewing pressure with the use of stabilizing material AMDK is significantly higher ( $t = 2.1$ ;  $p < 0.050$ ) and is  $(16.6 \pm 1.5)\%$ , whereas in case of use of the material AMCC –  $(11,4 \pm 2,0)\%$ .

Conclusion. Under the influence of orthopedic treatment of patients with various variants and types of adentia, a redistribution of chewing pressure is observed, its expressiveness depends on the types of toothless jaws and classes of mucous membranes of prosthetic lids. Namely, the increase in chewing pressure in the anterior sections of the prosthetic area was oscillating and its absolute values were the largest in patients with edentulous upper jaw. The effectiveness of orthopedic treatment of patients with complete removable dentures with different types and variants of edentulous jaws was characterized, as well as increased chewing pressure in the left lateral portions. To improve the fixation and stabilization of removable dentures, it is advisable to recommend the use of adhesive (stabilizing) materials, which reduce pain sensations in the time of adaptation, reduce the period of adaptation, and also shown in cases of thinning of the mucous membrane, atrophy, narrow and thin alveolar processes, after surgical interventions within the framework of the dental series, is recommended for patients who are first time used.

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**ЗБІРНИК МАТЕРІАЛІВ**

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