

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ



**МАТЕРІАЛИ**  
**106-ї підсумкової науково-практичної конференції**  
**з міжнародною участю**  
**професорсько-викладацького колективу**  
**БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ**  
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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treatment of patients with generalized periodontitis involves phased therapy, implementation of general therapy, and a series of local interventions. The selection of a medicament with simultaneous antiseptic and anti-inflammatory properties is extremely important. Decamethoxin, a bis-quaternary ammonium salt derivative of decamethylenediamine, has found wide application in the periodontal tissue diseases treatment. Propolis molecules, with high resistance to environmental physicochemical factors, are capable of sorbing and depositing cations of antimicrobially active compounds, including bis-quaternary ammonium derivatives such as decamethoxin and ethonium.

**The aim of the study** was enhancing the effectiveness of treatment and prevention of periodontal tissue diseases through the use of the proposed composition of medicinal products based on decamethoxin and propolis.

**Material and methods.** To study the therapeutic effect of the proposed composition, we selected 70 patients diagnosed with chronic generalized periodontitis of the first degree (35 individuals made up the main group (A); 35 individuals made up the comparison group (B)) aged 25 to 45 years. For the initial index assessment of the periodontal tissue condition, we used the Periodontal Screening and Recording (PSR) test developed by the American Academy of Periodontology. As supportive therapy, patients in the main group were prescribed the proposed DEPE composition in the form of mouth baths twice a day for 3 minutes each time for 2 weeks. Patients in the comparison group were prescribed rinsing with a 0.12% chlorhexidine bigluconate solution twice a day for 2 weeks.

**Results.** The PSR test scores in the examined subjects of the main group (A) were  $2.04 \pm 0.08$ , while those in the comparison group (B) were  $2.14 \pm 0.07$ . There was no statistically significant difference in the values of this indicator between the observation groups, with  $p(A1-B1) > 0.05$ . According to the Sulcus Bleeding Index (SBI) (Muhlemann, modified by Cowell I.), gingival bleeding in patients of the main (A) and comparison (B) groups indicates the presence of active inflammatory areas in the gingival tissues in cases of chronic periodontitis. Thus, the clinical characteristics of the periodontal tissue condition in the examined individuals of both the main and comparison groups correspond to the diagnosis of chronic generalized periodontitis stage I. No statistically significant difference was found between the results of the initial examination of periodontal tissues in the examined individuals of the main (A) and comparison (B) groups, indicating the objectivity of further research of the proposed treatment scheme effectiveness.

**Conclusions.** The proposed medication combination has proven its effectiveness in treating generalized periodontitis, as evidenced by improvements in clinical indicators, reduction in periodontal pocket depth, and normalization of the oral cavity microbiota in the subjects.

**Sorokhan M.M.**

## **METHOD OF MANUFACTURING OF BRIDGES WITH ADHESIVE FIXATION**

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**Introduction.** Clinical durability of adhesive restorations is largely determined by the quality of marginal adaptation of orthopedic structures to hard tooth tissues. One of the factors that affect the marginal adaptation is the adhesive strength.

In order to improve the mechanical fixation of bridges to the hard tissues of abutment teeth, various irregularities and roughness's (microretention points) formed on the metal surface during its processing in a sandblasting machine are used.

However, all of the above methods require significant preparation of the vestibular part of the tooth, since the retention points have convex outlines outward, so the layer of the facing mass must be of sufficient thickness to prevent the retention points from being visible. In addition, electrochemical etching and coating with a layer of ellipsoidal particles of appropriate dimensions by electroplating does not ensure reliable development of the relief structure at the adhesive-structure interface and, as a result, reliable strength of the adhesive fixation of the orthopedic structure to the hard tissues of the abutment teeth.

**The aim of the study.** To create a reliable method of manufacturing bridges with adhesive fixation to the supporting elements by developing a relief structure at the adhesive-structure area and using the latest fixation material.

**Material and methods.** In accordance with 805 patients (321 women and 484 men) aged 19 to 50 years (mean age  $31.7 \pm 1.13$  years) who applied for prosthetics at the Department of Orthopedic Dentistry of BSMU, Municipal Dental Clinic and the University Clinic from May 2018 to June 2023 were examined. For further study, 157 patients were selected, including 86 women (54.77%) and 71 men (45.23%) aged 29 to 44 years, who underwent replacement of small defects in the anterior and lateral dentition of the upper jaw with adhesive-fixed bridges.

**Results.** Our proposed method of manufacturing adhesive onlays is performed as follows. If the patient did not need preliminary orthodontic preparation of the abutment teeth, we performed a preparation of the oral surface of the abutment teeth with the formation of retention grooves on the oral surface with a depth of 1.0-2.0 mm and an area corresponding to the anatomical shape of the tooth with additional application of a sequential series of depressions to a depth of 0.5-1.0 mm in the area of retention grooves. To create retention points for the abutment sites, a set of burs was used, which consisted of spherical diamond instruments with a diameter of 2 and 3 mm to create grooves for the adhesive prosthesis, thin elongated cone-shaped burs with a grain size of 100  $\mu\text{m}$  for preparation of proximal or oral surfaces, diamond burs with a grit size of 25-50  $\mu\text{m}$  for finishing the cavity margins and contouring the restoration, carbide burs for grinding (with faces from 12 to 32), as well as polishing heads, disks and strips for final processing of the structure.

The results of experimental and clinical studies of the method of manufacturing an adhesive-retained bridge prosthesis showed that, on the one hand, this form of tooth preparation provided an increase in mechanical fixation, and on the other hand, an improvement in the quality of the fixing material.

**Conclusions.** The method of manufacturing a bridge prosthesis eliminates its displacement during placement on the prosthetic bed, allows for even distribution of the adhesive fixation material between the hard tissues of the tooth and the occlusal lining, prevents the formation of pores in the fixation material and destruction of the hard tissues of the tooth, increases the service life of the prosthesis, and allows for better polymerization.

**Tkachyk S.V.**

## **THE ROLE OF ORAL HYGIENE IN THE TREATMENT OF MANDIBULAR FRACTURES**

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**Introduction.** The treatment of patients with mandibular fractures can be improved by means of early prognostication, prevention of purulent-inflammatory complications, and optimization of local therapy.

**The aim of the study.** To improve the efficacy of treatment of patients with mandibular fractures due to implementation of preventive oral hygiene measures considering somatic features of the oral and facial structures of the patient.

**Materials and methods.** General clinical, radiological and anthropometric methods of facial examination were applied in order to find available dentition defects, fixed and removable orthopedic constructions. While taking the patient past history, the dentists asked about frequency and duration of tooth brushing. To control the oral hygiene, Fedorov-Volodkina and Silnes-Low indices were used.

**Results.** During 2022-2024 at the Department of Maxillofacial Surgery at Chernivtsi Regional Clinical Hospital, we examined 58 patients (56 men, 2 women) with mandibular fractures. Their average age was 34 years. To perform conservative treatment of the mandibular fracture the patients with sufficient number of teeth were included in the sample.

During the first day of inpatient treatment, all the patients underwent local anesthesia with fixation of S.S. Tigerstedt dental splints and hooks.