

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**



**МАТЕРІАЛИ**

**106-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького колективу  
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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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were detected in 53 (65.4%) patients, diastema and tremas in 13 (15.9%), crowding of the lower jaw teeth in 12 (14.8%), fan-shaped separation of the upper jaw teeth in seven (8.65%), traumatic occlusion was detected in 77 (95.7%) of the examined. As a result of the examination, a treatment algorithm was developed, which included professional oral hygiene, local therapy in the form of drug applications and hardening dressings, prescription of osteotropic drugs, physiotherapy, selective grinding of teeth according to Jencelson, and adhesive splinting.

**Conclusions.** A multidisciplinary approach to the treatment of patients with periodontal tissue diseases allows to normalize occlusal contacts, stabilize the position of individual teeth, prevent bleeding and the development of frequent relapses.

**Bernik N.V.**

## **INVESTIGATING THE ROLE OF ORAL MICROBIOTA AND IMMUNE STATUS IN REDUCING POSTOPERATIVE COMPLICATIONS IN OUTPATIENT DENTAL SURGERY**

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**Introduction.** Alterations in the quantitative and qualitative composition of the oral microbiota, specifically disturbances in the natural microbial community and colonization by pathogenic microorganisms, can weaken the immune response, increase susceptibility to infectious-inflammatory complications, and become significant contributing factors in their development.

**The aim of the study.** This study aims to explore the mechanisms behind infectious-inflammatory complications in the oral cavity following outpatient dental procedures, with the goal of improving both preventive and therapeutic strategies.

**Material and methods.** A cohort of 81 patients, aged 20 to 65, was selected, all of whom were scheduled for minor oral surgery. Participants were divided into three groups based on the type of surgery they required: 27 patients preparing for dental implants (Group 1), 28 patients with third molar impaction (Group 2), and 26 patients with radicular cystogranuloma (Group 3).

**Results.** Prior to surgery, all participants underwent immune profiling in the oral cavity using flow cytometry with monoclonal antibodies on the laser cytometer Epics XL-MCL (Coulter, France). The microbial flora of the mucous membranes surrounding the surgical sites was examined microscopically. Any isolated bacterial cultures were analyzed for quantitative and qualitative content. The analysis revealed microbial imbalances across all groups. The following periodontal pathogens were identified: *Prevotella intermedia* ( $2.0 \pm 0.19$ ;  $5.7 \pm 0.21$ ;  $3.7 \pm 0.20$ ) and *Fusobacterium* spp. ( $2.7 \pm 0.20$ ;  $5.6 \pm 0.19$ ;  $4.6 \pm 0.20$ ). Additionally, *Actinomyces* spp. ( $3.7 \pm 0.21$ ) was found specifically in patients with third molar impaction in Group 2. Given the presence of periodontal pathogens, it was deemed necessary to initiate pre-surgical antibiotic therapy to reduce the likelihood of infectious-inflammatory complications in outpatient dental surgeries. Further analysis of the immune status revealed decreased immune responsiveness in 58.1% of patients, with normal reactivity observed in 40.9%. Assessment of T-cell subpopulations (absolute and relative counts of T-lymphocytes, T-helpers, T-suppressors, and the immune regulation index) indicated significant differences between patients with decreased versus normal immune function. Specifically, CD3 levels were  $57.6 \pm 3.5$  and  $69.4 \pm 1.8$ ; CD4 was  $29.2 \pm 1.4$  and  $41.9 \pm 1.2$ ; CD8 was  $31.9 \pm 2.3$  and  $30.2 \pm 2.9$ ; and the CD4/CD8 ratio was  $1.1 \pm 0.1$  and  $1.52 \pm 0$ . The immunoglobulin levels (IgA, IgM, and IgG) were consistent across groups. The findings underscore the need for an integrated approach to pre-surgical care. For patients exhibiting reduced immune responsiveness, an adjunct therapy with immunomodulatory agents in addition to antibiotics may help mitigate postoperative infectious-inflammatory risks.

**Conclusions.** Periodontal pathogens and compromised immune reactivity are critical contributors to postoperative complications in outpatient dental procedures. A combined regimen of antibiotics and immunotropic medications may therefore be necessary to effectively prevent infectious-inflammatory outcomes in these patients.