

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



## **МАТЕРІАЛИ**

**105-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького персоналу  
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ  
присвяченої 80-річчю БДМУ  
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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connective tissue (electrostimulation methods, the active factor is pulsed electric currents, defibrotic methods, the active factor is ultrasound, ultraphonophoresis, electrophoresis. Physical methods of action on the peripheral nervous system (anaesthetic techniques, neurostimulatory techniques, trophostimulatory methods). Physiotherapy for jaw fractures. The following physiotherapy treatments are prescribed (general franklinisation, local hypotherapy, ultrasound therapy in continuous mode at an intensity, uv-irradiation in an erythema dose, massage of the collar area. In addition, in facial surgery, physical therapy methods are used at various stages of complex therapy and prevention.

**Conclusions.** Physical rehabilitation programs are developed individually depending on the disease and characteristics of the patient's body. Physiotherapy methods are included in the physical rehabilitation program. A professionally developed individual rehabilitation program has a positive effect on the patient's condition and accelerates the recovery and recovery process.

**Godovanets O.I.**

### **ENVIRONMENTAL ASPECTS OF PERIODONTOPATHIES AMONG CHILDREN LIVING IN REGIONS WITH HIGH NITRATE CONTENT IN DRINKING WATER**

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**Introduction.** The most common environmental pollutants, along with heavy metals and pesticides, are nitrates. In many countries of the world, nitrate-nitrite pressing is a real threat to public health. In Ukraine, the level of nitrates in well water in some places exceeds 480 mg/l, with the maximum permissible concentration – 45 mg/l.

**The purpose** of our work was to study the prevalence of the main dental diseases in children living in areas with high nitrate content in drinking water and to identify the peculiarities of their course.

**Material and methods.** 300 children aged 6-7 and 12 living in nitrate-contaminated areas were examined in accordance with WHO recommendations. Generally accepted methods of examining a dental patient were used for the examination.

**Results.** Epidemiological studies conducted show a high prevalence of the main dental diseases in children from the studied region, namely: dental caries - 91.3-96.7%, maxillofacial anomalies and deformations - 52.7-66.7%, periodontal tissue diseases - 60-80%. The structure of periodontal diseases is dominated by chronic catarrhal gingivitis, which accounts for 95% of cases. Clinical manifestations of gingivitis in children living in nitrate-polluted areas are characterized by the dominance of symptoms of bleeding and dental calculus.

**Conclusions.** Thus, high spreading of caries, pathology of periodontal tissue and dental-jaw anomaly are found in children, living on the territory with increased level of nitrates in the drinking water. Chronic catarrhal gingivitis that goes with symptoms of bleeding and dental calculus dominates in the structure of periodontal pathology. Oxidant stress and hypoxia promote the realization of local factors that influence the children's parodontopathy as the result of nitrate intoxication influence on the organism.

**Havaleshko V.P.**

### **CHARACTERISTICS OF DENTO-ALVEOLAR PATHOLOGY IN PATIENTS WITH TEMPOROMANDIBULAR JOINT DYSFUNCTION AT RHEUMATOID ARTHRITIS**

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**Introduction.** Numerous native and foreign studies show that the prevalence of temporomandibular joint (TMJ) diseases among the adult population reaches 25–65% (Al-Ani Z., 2020; Thomas D.C. et al., 2023). A detailed study of the state of the maxillofacial system of such patients will help to form an adequate plan of treatment and prevention of exacerbations.

**The aim** was to conduct a clinical assessment of the state of the maxillofacial system in patients with TMJ dysfunction with accompanying rheumatoid arthritis.

**Material and methods.** 82 patients with rheumatoid arthritis, aged from 47 to 66 years, who sought consultation regarding manifestations of TMJ dysfunction, were examined. The control group consisted of 44 practically healthy people of the appropriate age.

A clinical examination of the oral cavity of the patients was carried out. TMJ status was assessed using a short Hamburg test, palpation and X-ray examination. All patients underwent occlusiography and odontoperiogram.

**Results.** It was found that in 25 patients (30.5 %) TMJ arthropathy wasn't detected, but occlusion disorders, the presence of dentition defects was determined, which required rational prosthetics with deprogramming of myostatic reflexes and restoration of occlusal relationships. Only 3.66 % of patients had signs of TMJ dysfunction without violations of occlusal relationships. All other patients (65.84 %) had various combinations of pathologies of both TMJ and dento-maxillofacial complex. Chronic generalized periodontitis (CGP) of the I-II degree of severity was found in 36.6 % of patients with TMJ pathology against 11.35 % in the control group. At the same time, CGP was accompanied by occlusion pathology (traumatic occlusion) in 79.92 % of people. Multiple defects of the dentition were found in 56.61 % of patients with CGP. Secondary maxillofacial deformities were also observed in 10.98 % of patients, pathological eruption of third molars – in 9.76 %, and the presence of orthodontic pathology – in 4.88 % of patients.

**Conclusions.** Analysis of the state of the maxillofacial system in patients with temporomandibular joint pathology with existing rheumatoid arthritis showed various combinations with chronic generalized periodontitis (36.6 %), traumatic occlusion (79.92 %), dentition defects (56.61 %), which can be the cause of the development of temporomandibular joint dysfunction and contribute to its aggravation.

**Kasiyanchuk M.V.**

## **SOLITON IN BONE TISSUE NEUROLOGICAL MANIFESTATIONS IN DENTAL CLINIC PECULIARITIES OF COMPUTER SUPPORT TO CLINICAL AND CLINICAL RESEARCH**

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**Importance.** During dental implantation, the main task of a practitioner is to restore the lost anatomical structure of the jaw's cellular process. The scientist, in our opinion, faces a slightly different task: to find alternative methods of diagnosis and treatment that would prevent the manifestation of inflammatory and dystrophic processes in tissues as a result of surgical intervention. It is known from the literature that in many cases it is surgical trauma at the first and second stages of implantation that provokes bone loss. We believe that one of the ways to prevent it is to use interactive techniques. And, the development of telecommunication technologies encourages us to improve medical technologies.

Thus, the **aim** of this study was to evaluate the effectiveness of soliton in bone tissue in a preclinical study using the ANDROID technology during surgery for the maximum possible preservation of bone tissue.

**Materials and methods.** In laboratory conditions, on a bone preparation of a dead animal (piglet under 6 months of age), we performed an experimental dental implantation operation with the registration of the effect of physical factors on the periosteum in the implant area, for which we used phantom implants (analogous to real ones: D=3.5 mm; L=6.0 mm). When planning the laboratory experiment, it was assumed that during surgery, uncontrolled pressure (traumatic stimulus) on the periosteum occurs, which becomes a pathogenic destructive factor. To control the movement and positioning of the implant, we used our own methodology using a navigation module (patent of Ukraine No. 68641), which was integrated with a mobile phone on the ANDROID platform via a micro-USB port (2x7) type B ("Navigator UK A"). We compared the results of the experiment with the results obtained in the experiment with navigation systems integrated with a desktop computer running the WINDOWS OS via a USB port (Navigator UK).