

**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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**Results.** With the same rotational force in the area of the implant platform, the pressure on the bone tissue increases disproportionately, and at a certain value it is destructive. Uneven deformation of the adjacent bone structures was found. When comparing the experiments, the results are comparable, the difference in data rate is not subjectively determined. For visual examination, we used an endoscope mounted on the ANDROID platform (patent pending). In 22% of cases, we observed manifestations of bone deformation, the manifestation of soliton in the bone tissue, which was not visualized by conventional observation. The efficiency of endoscopy by the proposed method was 92%. The use of the ANDROID platform in medical navigation and endoscopy systems is relevant due to the development of telecommunication technologies.

**Conclusions.** The application of the author's innovations actually caused bone growth. Implant bone healing is a process of remodeling of the cancellous process, which ultimately leads to an imbalance of resorption and bone formation processes in the direction of the former. In order to prevent atrophy, preserve the height, width and shape of the cancellous process, it is necessary to carry out a set of measures, the main of which is the use of implant prostheses and bone substitutes, the formation of a labile implant depot and a cytostatic barrier complex. Their combined use changes the functionality in the biogenic aspect. The use of an improved method of radiovisiography and a modified sensor allowed to detail the bone architecture and the state of adjacent soft tissues from 44.8% to 100%.  $\pm 1.5\%$  and to differentiate adjacent soft tissues, including atral ones -  $67.1 \pm 6\%$ . Reduce the exposure by one order of magnitude -  $0.08s \pm 8\%$ , according to the data on the X-ray device display.

**Kilmukhametova Yu.H.**

## **RESULTS OF CYTOLOGICAL STUDY IN EXPERIMENTAL ANIMALS WITH AND WITHOUT TREATMENT OF ULCERATIVE NECROTIC GINGIVITIS WITH A COMPLEX OF DRUGS WITH ANTIOXIDANT PROPERTIES**

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**Introduction.** Changes in the quantitative indicators of non-specific resistance systems of the body indicate a violation of homeostasis in the body and the development of a pathological process. The state of defense systems largely determines the course and provides a predictive characteristic of the intensity and effectiveness of treatment measures. In patients with inflammatory processes of periapical tissues, there is an imbalance of factors that characterize the state of local resistance of the oral cavity and the mucous membrane of the gums. Also, quantitative and qualitative changes in indicators of phagocytosis, chemotaxis of leukocytes, secretion of cytokines, immunoglobulins, and bactericidal activity of humoral factors of the body's defense were observed.

**The aim of the study** was to determine changes in the quantitative indicators of non-specific resistance in experimental animals with and without treatment of ulcerative necrotic gingivitis with a complex of drugs with antioxidant properties.

**Material and methods.** Laboratory animals with an experimental model of ulcerative-necrotic gingivitis by chemical burn were divided into three groups: intact, control, and experimental. Animals of the control group were not treated; in the experimental group, a complex of drugs was applied to the ulcer surface, which included Thiotriazoline ointment, Zinc oxide, and 0.05% Chlorhexidine solution. In the selected periods of observation (3rd, 5th, 7th, and 10th days), cytological examination of smears was used to determine the adsorption reaction of microorganisms (ARM) by counting the number of bacteria adsorbed on the surface of each epithelial cell (based on 100 cells).

**Results.** At the beginning of the observation, a sharp decrease in the number of highly differentiated cells was noted in the smears of animals of the control group, cells of the III stage of differentiation prevailed, and the IDC decreased to 67.52% of the level of intact animals. In all subsequent periods, animals of the control group showed a gradual increase in the IDC index due to an increase in cells in the V stage of differentiation on the surface of the ulcer. The CDI value was

significantly different from the norm on the 5th day, with a value of 75.15% of the physiological level, and on the 7th day, with a value of 87.54%. Only on the 10th day was an unreliable difference from the average indicator with 99.13% to its value. In the experimental group, on the 3rd day, a sharp and reliable decrease in the number of highly differentiated pools of epitheliocytes and the dominance of cells in the III stage of differentiation was observed, the number of which reached the value of  $44.0 \pm 1.5\%$ . As a result, at this time, the CDI value decreased relative to the indicator of intact animals to 69.85% of its level. At the end of the observation, the CDI value reliably exceeded the level of intact animals by 4.12%. The most significant decrease in the value of ARM in animals of the control group was detected on the 3rd day, which in percentage value was 76% of the value of intact animals. On the 5th day, the value of "ARM +" increased slightly (only by 4%) to 80% of the physiological norm, and on the 7th day by another 5.5% to 85.5%. Even at the end of the experiment, the "RAM +" indicator in the animals of the control group was significantly lower than that of the intact animals - 90% of it.

**Conclusion.** Therefore, due to the additional local anti-inflammatory effect of the developed complex of drugs, it became possible to achieve the normalization of the damaged local non-specific reactivity of the oral mucosa faster (on average, for 3-4 days), and the stimulating regenerative effect promotes more rapid differentiation of epitheliocytes and complete restoration of the damaged area of the gums in a shorter time (on average, 2 -3 days) treatment terms.

**Kotelban A.V.**

## **CHARACTERISTICS OF TRACE ELEMENTS BALANCE IN CHILDREN AND ITS IMPACT ON DENTAL STATUS**

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**Introduction.** Today, the incidence of dental caries is pandemic. According to the WHO, its prevalence in different countries ranges from 80 to 98% in the world. There can be more than 100 reasons for the risk of developing caries. These include nutrition, fluoride content, oral hygiene, heredity, and ecology. Both the entry of trace elements into the human body and their assimilation are undeniably important because they participate in almost all biological processes of body tissues. The most studied are iron, copper, manganese, zinc, iodine, fluorine and some others. The sources of their intake are diet, water consumption and, to a lesser extent, absorption through the skin or during inhalation from the air. Given the importance of micronutrient balance in order to maintain children's health in general, and dental health in particular, studies examining the relationship between micronutrient levels in dentally healthy children and children with caries are relevant.

**The aim of the study.** To evaluate the features of trace element provision of the body in children living in Bukovyna by determining Fe, Cu, Zn and Mg in the hair.

**Material and methods.** To solve the goal, we examined 95 children aged 6 years living in Bukovyna. The following observation groups were selected: Group I - 69 children suffering from caries, and Group II - 26 dentally healthy children. In order to determine stable indicators accumulated over a long period of time, we analyzed children's hair for Fe, Cu, Zn and Mg content by atomic absorption spectrophotometry. The degree of probability of the obtained results was statistically assessed.

**Results.** As a result of our research, in the hair of children with caries, it was found that copper and zinc were probably lower, by 24.93% and 77.93%, respectively, compared to dentally healthy children, which negatively affects the processes of mineralization and contributes to the demineralization of teeth. The level of iron and magnesium was 33.43% and 59.83% higher in children with dental caries. We determined the content of trace elements depending on the intensity of caries damage to the teeth: the highest values of copper, zinc and iron - under the conditions of a low level of caries intensity, the lowest – under the conditions of a very high level. Magnesium concentration increased with an increase in the number of carious-affected teeth.