МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

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106-ї підсумкової науково-практичної конференції
з міжнародною участю
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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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DENTAL CARIES IN CHILDREN: CLINICAL AND SOCIAL ASPECTS

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Introduction. Dental caries is an important social problem of childhood in all countries of the world and is often accompanied by serious impacts on the health of children and their families and implies serious consequences for the development of the dentition and child's life quality. The prevalence of this disease in the world ranges from 25% to 72%.

The aim of the study. In this regard, the aim of our study was to assess the dental health of children aged 12 and 15 years.

Material and methods. To achieve this goal, we examined 56 children aged 12 and 15 years living in Bukovyna. We formed 2 study groups: group I included children aged 12 years, group II consisted of children aged 15 years. The dental examination was performed according to the standard methodology and an anonymous questionnaire was administered to determine dental health education.

Results. The study of the state of hard dental tissues in children of both groups revealed a high prevalence of caries in permanent teeth according to the WHO criteria, with the number of healthy teeth (without caries) ranging from 15.39 to 19.36 %. The analysis of the intensity of caries in permanent teeth showed that its average value at the age of 12 was 4.62±0.19 teeth, while in 15-year-olds it was significantly higher - 5.89±0.24 teeth. In the structure of the DMF, the component 'D' prevailed in both groups, respectively in group I - 3, 56±0.12 teeth and 4.48±0.19 in group II. It was found that in 12-year-old children the average value of the SIC index was 6.67±0.14 teeth, which was significantly different from the indicators of 15-year-old children (8.41±0.35 teeth). According to our data on the Stellard index, children aged 12 and 15 years were found to have poor oral hygiene, but the scores in both groups were significantly different ($p<0.05$).

We found that children in both groups (62.36% and 75.56%) brushed their teeth twice a day and rated their condition as good. 68.75% of children in group I and 76.36% of children in group II were satisfied with the appearance of their teeth. Almost all children in both groups brush their teeth with a toothbrush and toothpaste. With regard to toothpaste, only 18.7% of children in both groups reported using fluoride toothpaste, while the rest did not know the composition of the toothpaste. In terms of food, 87.5% of children in group I and 75.5% in group II eat sweets every day, and 75.5% and 64.3% drink sweet drinks every day, respectively. 93.7% of children in group I visited dentists during the year on their own and 50% in case of acute pain, with similar dynamics for children in group II.

Conclusions. Thus, the high prevalence and intensity of caries determine the special importance of caries prevention measures and indicate the necessity of finding new approaches to improve children's dental health

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ENDOTHELIAL DYSFUNCTION IN PATIENTS WITH PERIODONTITIS AND CONCOMITANT CHRONIC PANCREATITIS

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Introduction. Numerous researchers have studied the dysfunction of the endothelium of the periodontal microcirculatory vessels and consider it an important pathogenetic link in the development of periodontal tissue diseases (Riznyk S. et al., 2022; Angjelova A. et al., 2024). However, there are no data on the state of the endothelium in chronic periodontitis and concomitant chronic pancreatitis as a possible link in the common pathogenesis of these diseases, which makes this topic relevant.

The aim of the study. To study the peculiarities of endothelial dysfunction in patients with comorbid periodontal tissue diseases and chronic pancreatitis.

Material and methods. We examined 24 patients with chronic generalized periodontitis (CGP) in the exacerbation phase and concomitant chronic pancreatitis aged 32 to 65 years, who were included in the 1st group of the study. The 2nd group consisted of 12 patients with CGP in the exacerbation phase of the corresponding age without concomitant pancreatic pathology. 5 practically healthy individuals were included in the control group. In all patients, the concentration of endothelin-1 in the oral fluid was determined using. Statistical processing of the material was performed using Microsoft Excel (USA).

Results. According to the classification of periodontal tissue diseases by M.F. Danylevskyj, 19 patients in the 1st group were diagnosed with initial and the 1st grade of CGP, 5 patients – with the 2nd grade, in the 2nd group there were 8 patients with the 1st grade and 4 patients with the 2nd grade of CGP.

The maximum concentration of endothelin-1 was detected in the oral fluid of patients in the 1st group with the 2nd grade of CGP. The average value of endothelin-1 concentration in the main group was 1.2±0.004 fmol/ml, which exceeded the value in the 2nd group by 1.4 times ($p<0.001$), and in the control group – by 1.9 times ($p<0.001$). This probably indicates an additional destabilizing effect of chronic pancreatitis on the state of endothelial dysfunction, in particular the periodontal microcirculation in this category of patients.

Conclusions. The development of the inflammatory-dystrophic process in patients with chronic generalized periodontitis is aggravated by an increase in the concentration of the endothelial dysfunction marker endothelin-1 in 100% of patients. However, the highest values of this indicator were found in patients with concomitant chronic pancreatitis, which requires further investigation for effective treatment.

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UNSTATIONARY IRRIGANT FLOW MODEL IN THE ROOT CANAL

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Introduction. Irrigation is the only way to affect those areas of the root canal wall that are not touched by mechanical instruments, and according to literature sources, this is from 20 to 80%. The importance of the problem motivates the constant interest of researchers. Over the past 15 years, many works have been published and new studies are constantly being conducted.

The aim of the study. To carry out a numerical simulation of the irrigant flow in the tooth root canal using the Navier-Stokes equation.

Material and methods. The simulation of the unsteady irrigant flow, namely 6% sodium hypochlorite solution, was carried out with a closed-type endodontic needle with a side hole of size 30G. The tooth canal was previously widened with a RaCe 4%-30 tool from FKG Dentaire (Switzerland) to an oval shape and initially filled with water.

Results. Numerical modeling of the irrigant flow was performed in an unsteady setting using the continuity equation and three-dimensional Reynolds-averaged Navier-Stokes equations of an incompressible viscous fluid with defined parameters.

Conclusions. Therefore, we performed a mathematical calculation of the irrigant flow in the tooth root canal, which subsequently makes it possible to create a computer model of the flow from the endodontic needle at different distances from the apical opening and to study the hydrodynamic parameters of the irrigation solution.

Soltys O.M.

PROPOLIS AND DECAMETHOXIN USE IN THE PERIODONTAL TISSUE DISEASES COMPREHENSIVE TREATMENT

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Introduction. Numerous epidemiological studies in recent years indicate a significant prevalence of periodontal tissue diseases among the population of the Earth. Comprehensive