### 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 05, 07, 12 лютого 2024 року

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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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mm visual analog scale (VAS). The degree of activity of the inflammatory process in RA was assessed by the disease activity index DAS28.

Results. We carried out a 30-day basic treatment of RA in the form of methotrexate 10 mg/week, folic acid 5 mg/week, methylprednisolone 20 mg/day and treatment of comorbid pathology by using rosuvastatin at a dose of 10 mg per day, telmisartan at a dose of 80 mg per day and L-arginine aspartate in a dose of 5 ml 3 times a day. The intensity of the pain syndrome, according to VAS, was evidenced by the presence of severe pain in the joints, which did not have a clear dependence on comorbid pathology. However, severe joint pain (≥60 mm) occurred in 100.0% of patients with RA with hypertension, AO, and DM 2, and DAS28≥5.1 units in 77.3% (p<0,05). Analysis of the pain syndrome intensity according to VAS depending on the polymorphic variants of the eNOS gene (rs 2070744) proved the presence of severe joint pain in 49 patients (81.67%). DAS28\ge 5.1 units was observed in 87.5\% of carriers of the CC genotype of the T-786C eNOS gene polymorphism. The effectiveness of the prescribed treatment is confirmed by a decrease in the DAS28 index: 1.54 times (p<0.05) – for RA and AH, 1.49 times – for RA, AH and AO and 1.38 times (p<0.05) - for RA, AH, AO and DM 2. RA activity decreased in 78.57% of patients (according to ACR20) and in 5.71% of patients (according to ACR50) (p<0.05). At the same time, it should be noted a decrease in disease activity in 100% of RA patients with the TT genotype, 66.67% with the TC genotype, and 33.33% with the CC genotype.

**Conclusions.** Therefore, the addition of angiotensin-II receptor antagonists, statins, and nitric oxide donors to the complex of treatment (with the correction of their dose in carriers of the CC genotype) is appropriate and effective in patients with rheumatoid arthritis in combination with arterial hypertension, abdominal obesity, and type 2 diabetes.

#### Buzdugan I.O.

# ENDOTHELIAL DYSFUNCTION IN PEPTIC ULCERS OF THE STOMACH AND DUODENUM IN COMBINATION WITH ARTERIAL HYPERTENSION AND TYPE 2 DIABETES MELLITUS

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**lintroduction.** Endothelial dysfunction remains one of the diagnostic criteria for vascular endothelial pathology. Comorbidity of pathologies leads to the development of endothelial dysfunction, especially in the presence of peptic ulcers of the stomach (PS) and duodenum (PD) with diabetes mellitus (DM) and arterial hypertension (AH).

The aim of the study. To study the state of endothelial dysfunction in patients with peptic ulcer of the stomach and duodenum in combination with arterial hypertension and diabetes mellitus type 2.

**Material and methods.** 108 patients were examined, of which 28 patients with PS and duodenum in the presence of toxigenic strains CagA+VacA+ (group 1), 20 patients with PS and duodenum in the presence of a combination of strains CagA+VacA-/CagA-VacA+ (group 2), 22 patients with PS and duodenum in the presence of toxigenic strains CagA+VacA+ in combination with hypertension and T2DM (group 3), 38 patients with PS and PD in the presence of a combination of strains CagA+VacA-/CagA-VacA+ in combination with hypertension and T2DM (4 group) and 30 practically healthy individuals (PHI) (group 5). Assessment of vascular endothelial dysfunction was carried out by determining ET-1 with a set of reagents from Bender MedSystems GmbH (Austria), sVCAM-1 - Bender MedSystems GmbH (Austria).

**Results.** Investigating the state of endothelial dysfunction in the blood, it was found that in patients with PS and duodenum with hypertension and T2DM, the level of nitrates/nitrites is the highest in the group of patients with PS and duodenum CagA+VacA+ in combination with hypertension and T2DM. Assessing the content of the adhesion molecule (sVCAM-1) in patients without concomitant pathology, it was found that in patients with PS and duodenum CagA+VacA+ the indicator was (1802.96±221.31), which was 3.83 times higher than the content in the PS group (483 .87±109.72) (p<0.001), and in patients with PS and duodenum CagA+VacA-/CagA-VacA+

(1404.00±350.30) (p<0.001), which is 3.05 times increased compared to the PHI group. However, the content of this indicator in patients with prostate and duodenum CagA+VacA+ is 1.27 times (p<0.001) higher in comparison with the group of patients with prognosis and duodenum CagA+VacA-/CagA-VacA+. In the presence of concomitant pathology, the content of sVCAM-1 in patients with prostate cancer and duodenum CagA+VacA+ (3384.55±299.4) (p<0.05) is 6.87 times increased in comparison with the group of prostate cancer, and in patients with prostate cancer and duodenum CagA+VacA-/CagA-VacA+ (1654.00±145.56) (p<0.05) - 3.37 times, respectively. However, assessing the effect of toxigenic strains and hypertension and diabetes mellitus on the pancreas and duodenum, it was found that this indicator was 2.04 times (p<0.001) increased in the group of patients with CagA+VacA+ pancreas and duodenum in combination with hypertension and diabetes mellitus 2 compared with the group patients with PS and duodenum CagA+VacA-/CagA-VacA+ in combination with hypertension and T2DM.

**Conclusions.** The combination of pathologies, namely peptic ulcers of the stomach and duodenum, arterial hypertension and type 2 diabetes mellitus contributes, to the development of endothelial dysfunction by increasing the level of sVCAM-1.

#### Dudka I.V.

# THE SIGNIFICANCE OF OXIDATIVE STRESS IN THE PROGRESSION OF CHRONIC PANCREATITIS AGAINST THE BACKGROUND OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

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**Introduction.** Numerous studies have been devoted to studying the intensity of lipid peroxidation (LPO) processes and the state of antioxidant defense factors (AOD) in patients with inflammatory pathology of the digestive system, pulmonological pathology, since the intensification of oxidative stress (OS) can contribute both to the development of diseases, significantly affect their course, and contribute to their progression with the development of functional organ failure. The frequency of chronic pancreatitis (CP) comorbidity with chronic obstructive pulmonary disease (COPD) has significantly increased recently, and it may be accompanied by changes in oxidant-antioxidant homeostasis and activate a cascade of reactions of mutual burdening of these pathologies.

The aim of the study. To define the state of oxidant-antioxidant homeostasis by studying the intensity of lipid peroxidation, oxidative modification of proteins (OMP) and the state of individual factors of the AOD system in the development and course of CP, depending on the comorbid COPD presence.

Material and methods. 317 patients were examined, including 62 patients with isolated CP (Group 1), 132 CP patients with comorbid COPD (Group 2), 123 patients with isolated COPD (Group 3). The content in blood of isolated double bonds in compounds, conjugate dienes, ketodienes and conjugate trienes, malonic aldehyde, reduced glutathione, the activity of catalase, glutathione-S-transferase, glutathione peroxidase were evaluated in all patients.

**Results.** The results showed that in CP patients with an isolated course, reliable activation of LPO processes was registered against the background of the AOD factors of the body system imbalance. This point of view is supported by the increase of LPO finish products content in the blood, namely, in observation Group 1, the reliable increase of MA plasma and erythrocytes 1.7 times (p<0.05), as well as the increase of IDB content in the blood 1.8 times compared to AHP (apparently healthy persons) (p<0.05).

The OS intensity analysis according to the above indicators in comorbid CP patients with COPD in the acute phase of both diseases indicates the maximum OS intensity among the compared groups, namely, the reliable increase of MA plasma and erythrocyte levels by 1.9 and 2.0 times, respectively (p<0.05), as well as the 2.2-time increase of the IDB content in the blood compared to AHP (p<0.05). The more intensive increase of the intermediate LPO product level in Group 3 was also established: CD and CD&CT -1.9 times, which indicates decompensation of LPO processes in