

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ВИЩИЙ ДЕРЖАВНИЙ НАВЧАЛЬНИЙ ЗАКЛАД УКРАЇНИ
«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

101 – ї

підсумкової наукової конференції

професорсько-викладацького персоналу

Вищого державного навчального закладу України

«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

10, 12, 17 лютого 2020 року

Чернівці – 2020

УДК 001:378.12(477.85)

ББК 72:74.58

М 34

Матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м. Чернівці, 10, 12, 17 лютого 2020 р.) – Чернівці: Медуніверситет, 2020. – 488 с. іл.

ББК 72:74.58

У збірнику представлені матеріали 101 – ї підсумкової наукової конференції професорсько-викладацького персоналу вищого державного навчального закладу України «Буковинський державний медичний університет» (м.Чернівці, 10, 12, 17 лютого 2020 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

Загальна редакція: професор Бойчук Т.М., професор Іващук О.І.,
доцент Безрук В.В.

Наукові рецензенти:

професор Братенко М.К.

професор Булик Р.Є.

професор Гринчук Ф.В.

професор Давиденко І.С.

професор Дейнека С.Є.

професор Денисенко О.І.

професор Заморський І.І.

професор Колоскова О.К.

професор Коновчук В.М.

професор Пенішкевич Я.І.

професор Сидорчук Л.П.

професор Слободян О.М.

професор Ткачук С.С.

професор Тодоріко Л.Д.

професор Юзько О.М.

професор Годованець О.І.

ISBN 978-966-697-843-4

© Буковинський державний медичний
університет, 2020



The analysis of the frequency of phenotypes detection showed the following addiction. A single suture bicuspid aortic valve, which is usually located between the left and right coronary cusps with hemodynamically prevailing stenosis, is more common, and all other types are defined as a mixed compound that is one of the risk factors for aortic stenosis and associated aortopathy and may lead to significant hemodynamic changes. Patients in the bicuspid aortic valve group were more likely to have periannular complications in compare with the tricuspid group. The prominent clinical manifestations brought on the progression of heart failure and the development of complications. The aortic pathology analysis is performed depending on the bicuspid aortic valve phenotype. The placement of the ventricles may be anterior-posterior or right-to-left. According to the functional state of the bicuspid aortic valve divided into complicated and uncomplicated. Patients of different phenotypes are characterized by the indirect eccentric flow and uneven tension on the walls of the aorta that lead to vascular remodeling of the ascending aorta and formation of aneurysms or dissection. There was a significant difference in the frequency of aortic stenosis and the failure of the aortic valve. The phenotype 3 showed a significantly higher incidence of aortic stenosis compared to phenotype 1, while the frequency of aortic failure in phenotype 1 was higher than among other phenotypes. The frequency of mass or vegetation in phenotype 1 was significantly lower compared to other phenotypes.

Timely transesophageal echocardiography and diagnosis of initial conditions of hyalinosis, fibrosis, and calcinosis of the bicuspid aortic valve, insufficiency, and stenosis of aortic valve or insufficiency of the aorta allow early delivery to surgical treatment to prevent hemodynamic dysfunction, to improve the quality and the increase patient's lifetime.

Hryniuk O.Ye.

EXCHANGE FEATURES OF EXTRACELLULAR MATRIX COMPONENTS IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND NON-ALCOHOLIC STEATOHEPATITIS

*Department of Internal Medicine, Clinical Pharmacology and Occupational Diseases
Higher state educational establishment of Ukraine
"Bukovinian State Medical University"*

The steady increase in the incidence of comorbidity of chronic obstructive pulmonary disease (COPD) and non-alcoholic steatohepatitis (NASH) against the background of obesity in people of working age in Ukraine and in the world stipulates the need of investigation of the interconnection mechanisms and the search for new factors of the pathogenesis of this comorbid pathology progression.

The aim of the study to establish peculiarities of the exchange of connective tissue components in patients with a combined course of non-alcoholic steatohepatitis, COPD and obesity.

100 patients with COPD participated in the study, including 49 with NASH and obesity of the 1st degree: group 1 - 28 patients with COPD (2B GOLD). Group 2 - 23 patients with COPD (3C, D). Group 3 - 25 patients with COPD (2B) with NASH. Group 4 - 24 patients with COPD (3C, D) and NASH. Control group - 20 healthy persons (HP). Changes in the metabolism of the extracellular matrix components were determined by of oxyproline content in the blood: free oxyproline (FOP) – by S.S. Tetianets (1985) and protein-bound oxyproline (PBOP) by M.S. Osadchuk (1979), hexosamines (HA) by O.H. Arkhipova (1988).

The analysis of the intensity of fibrous reactions in patients with COPD, depending on the presence of comorbid NASH, indicates a probable increase in the content of protein-bound oxyproline (PBOP) in the blood of patients of all groups: in the 1st group (61,88±2,54) – 1.5 times in comparison with the HP (41,48±3,72) (p<0.05), in patients of group 2 (73,23±2,96) – 1.8 times (p<0.05), group 3 (84,21±3,65) – 2.0 times (p<0.05), in patients of group 4 (97,38±3,42) – 2.4 times (p<0.05). At the same time, the index of FOP content in the blood, which is the biochemical marker of collagen catabolism, in patients with COPD of group 1 (15,27±0,43) was 1.2 times higher (p<0.05) than that in HP, in patients of group 2 (17,46±0,57) – 1.4 times (p<0.05), indicating a parallel increase in collagen degradation against the background of its high synthesis. The activity



of collagen degradation was even more intense in comorbidity with NASH: in patients of groups 3 and 4 – 1.5 and 1.7 times ($p < 0.05$) respectively.

Patients in all groups had a probable increase of HA in group 1 - by 12.45%, in patients of group 2 - by 16.7%, in patients of groups 3 and 4 - more intensively: by 32.3% and 41.3% ($p < 0.05$).

The received data confirm that patients with COPD secondary to NASH, which developed against the background of obesity, suffer from a significant increase in the synthesis of collagen and glycoproteins, which leads to progressive fibrosis of the lungs and liver and disturbances of their functions.

Ivanchuk P.R.

**COMPARISON OF THE EFFECTS OF BISOPROLOL AND AMIODARON ON THE
PARAMETERS OF DIGITAL PROCESSING OF ELECTROCARDIOGRAM USING THE
“SMART-ECG” SOFTWARE COMPLEX**

*Department of Internal Medicine, Physical Rehabilitation and Sports Medicine
Higher State Educational Establishment of Ukraine
“Bukovynian State Medical University”*

According to the current therapeutic views on the treatment of coronary heart disease (CHD), we must use a wide range of drugs: prolonged nitrates, antiplatelet agents, statins, β -blockers (β -AB), angiotensin-converting enzyme inhibitors. Heart rhythm disturbance is a common symptom in patients with CHD disease and requires the use of antiarrhythmic drugs.

In order to evaluate the effects of bisoprolol and amiodarone, the results of the digital processing of standard electrocardiogram (ECG) in patients with CHD were analyzed using proprietary software "Smart-ECG" (copyright registration certificate No. 73687 from 09/05/2017). Changes in the main parameters of heart rate variability (HRV) and dispersion of the QT interval, the angle of inclination of the ST segment, and the results of the analysis of differential T wave were evaluated.

All 48 examined patients admitted to the Chernivtsi Regional Clinical Cardiology Clinic with a diagnosis of stable angina pectoris II functional class (StSt) were treated according to the unified protocols of the Ministry of Health of Ukraine. The assessment of effects of bisoprolol and amiodarone before admitting and at peak of effect examined on 30 seconds ECG pattern recorded by ECG Monitor Prince 180B of Heal Force (PRC).

Statistical processing of the obtained results is based on the calculation of the sample mean, standard error of the mean, determination of the reliability of differences of quantitative parameters by testing the “null” hypothesis using appropriate statistical methods for normal and abnormal distribution, dependent and independent samples.

In a comparison of both drugs, the tendency for a more positive increase of $\Delta\%$ RR-SDNN showed bisoprolol ($\Delta\% + 13,48 + 7,8\%$) against ($\Delta\% + 5,44 + 5,2\%$, $p = 0,6$) amiodarone. Effect on PNN50 as a sign of parasympathetic control over sympathetic was more significant for amiodarone compared with bisoprolol ($\Delta\% + 8.73 + 6.5\%$ and $\Delta\% -7.22 + 5.9\%$, $p = 0.076$). Comparison of both drugs also revealed a decrease in the variance of the QT interval ($\Delta\%$ QT-DQT) in the groups amiodarone ($\Delta\% -1.67 + 2.9\%$) and bisoprolol ($\Delta\% -13.33 + 7.8\%$), and therefore with a probably more positive effect for β -blocker. The effect of amiodarone had less directivity to manifest in the plane of influence on the magnitude and direction of the angle β° (“ST-slope”) than the effect of bisoprolol ($\Delta\% -3.76 + 4.4$ vs. $\Delta\% -1.03 + 2.3\%$ respectively, $p = 0.47$), and thus did not accelerate the ST segment ascending depression. Regarding the effect of the use of amiodarone and bisoprolol on the indices of the first derivative analysis of the T wave, a positive effect was observed for both drugs with slight tendency of displacement in the direction of the predominance of the effect of bisoprolol ($\Delta\% + 0.39 + 1.4\%$ and $\Delta\% + 0.44 + 1.5\%$, $p > 0.999$), indicating the anti-ischemic effect of both drugs.

The results show that quantitative evaluation of the ECG with its digital processing (digitalization) can be recommended to increase the effectiveness of the individual approach in the