

**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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system (calibrated and certified), equipped with software for automatic cardiological calculations in M and B modes. During the study, such parameters as the size of the aorta, left atrium (LA) and right atrium (RA), left (LV) and right ventricle (RV), thickness of the interventricular membrane (VT), volume and ejection fraction (EF) of the left ventricle were taken into consideration.

Results. Pronounced changes in the size of the heart (which differ from the other groups of patients and the control group) were found in patients with a combined disease of the respiratory system and chronic coronary syndrome (CCS). A significantly larger size of the right ventricle (RV) and the right atrium (RA) indicates the formation of a syndrome of mutual encumbrance of RD and CCS, which causes the development of the pulmonary heart. Evaluation of the right heart sections taking into account pulmonary complications indicates a significantly greater size of RA in patients with pulmonary emphysema compared to those without this disease — by 47.9% for RA and 51.9% for RA. The analysis of the left sections of the heart shows significantly larger dimensions of the LV and the annular component of the LV compared to the RD, CCS and the control group. Larger sizes of the interventricular septum and LV were also noted. This may indicate a negative impact of the combined disease on the functional remodelling of the left heart and the development of LV diastolic dysfunction. With the combined course, a larger size of the annular area of the LV region and a smaller value of the ejection fraction (EF) were noted, and this may indicate a reduced pumping function of the heart in the interaction of diseases.

Conclusions. Pronounced changes in the size of the heart were found in patients with a combined course of RD and CCS. These findings indicate a mutual aggravation of both. Analysis of the left and right parts of the heart allows to detect pathological changes that can affect the functional remodeling and pumping function of the heart in this category of patients. These results emphasize the importance of a comprehensive approach to the evaluation and treatment of patients with comorbidities.

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THE ROLE OF THE ANGIOTENSINOGEN (rs699) AND VITAMIN D RECEPTOR (rs2228570) GENES IN THE DEVELOPMENT AND COURSE OF ESSENTIAL ARTERIAL HYPERTENSION

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Introduction. Arterial hypertension is one of the most common cardiovascular diseases (CVD), which is characterized by high blood pressure (BP). The overall prevalence of hypertension in adults in 2015 was approximately 30-45% with a standardized global prevalence of 24 and 20% in men and women, respectively. Considering a heavy social burden of the disease and a high mortality rate, it is important to improve the effectiveness of predicting the severity of essential arterial hypertension (EAH) and early diagnosis of metabolic disorders for the purpose of secondary prevention and correction of treatment.

The aim of the study: to analyse the role of angiotensinogen (AGT, rs699) and vitamin D receptor (VDR, rs2228570) genes in the development and course of EAH.

Materials and methods. 100 patients with stage II EAH, 1-3 degrees of blood pressure elevation, high and very high cardiovascular risk, including 21% (21) men, 79% (79) women were involved into the case-control study. An average age of the patients was 56.86 ± 5.52 years. The control group consisted of 60 practically healthy individuals, comparable in age and gender distribution. To study the polymorphism of the AGT (rs699) and VDR (rs2228570) genes, qualitative real-time polymerase chain reaction (PCR) was performed.

Results. Relative frequency of hypertensive patients with obesity (body mass index (BMI) >30.0 kg/m²) was greater in T-allele carriers of the AGT gene (rs699) and the A-allele carriers of the VDR gene (rs2228570) than in controls - by 33.33% and 8.67%, respectively. With a smaller number of people with a normal BMI (≤ 24.9 kg/m²): for the T-allele of the AGT gene (rs699) – by 20.83%, for the A-allele of the VDR gene (rs2228570) – by 14.0% and 15.67% ($p < 0.001$), respectively.

The course of EAH in T-allele carriers (especially TC-genotype) of the AGT gene (rs699) and the A-allele carriers of the VDR gene (rs2228570) is characterized by a more frequent burden of heredity for cardiovascular pathology by 28.63%, 35% and 26.7 %, respectively. More often, among individuals with the T-allele of the AGT gene (rs699), there are those with excessive waist circumference (WC) (>88 cm for women, >102 cm for men) - by 21.86% and the waist-hip ratio (WHR) in women (>0.85) - by 50.5%, respectively. Similarly, increased WHR in women was found in AA- and AG-genotypes carriers of the VDR gene (rs2228570) - by 36.23% and 43.71%, respectively. On the other hand, among men, an increased WHR was more often registered in the control group with the GG-genotype of the VDR gene - by 38.62%.

Conclusion. Polymorphic variants of the AGT (rs699) and VDR (rs2228570) genes are not predictors of the hypertension development in the examined population. However, a more severe course of EAH probably occurs more often in T-allele carriers, especially the TT-genotype of the AGT gene (rs699). Genotypes of the VDR gene (FokI / rs2228570) are not associated with the severity of EAH according to BP levels in our study. However, the G-allele of this gene, especially the AG-genotype, is protective against more severe forms of the disease, with probably higher chances of a clinically milder course.

Rusnak I.T.

CARDIOSURGEON M. AMOSOV ABOUT HEALTH, PHYSICAL ACTIVITY

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Introduction. There is a constant increase in the incidence of non-communicable diseases in the modern world. Modernization of technology and new methods and tools help to save people from death in time, but unfortunately, the growth of initially detected diseases, in particular of the cardiovascular system, does not stop.

The aim of the study. Find out the view of the outstanding cardiac surgeon M.M. Amosov on the problem of health loss and its recovery, on the effective, simple and accessible methods that he researched.

Material and methods. Analysis of literary data about the life, practice and results of the application of health improvement by M. Amosov.

Results. Outstanding cardiac surgeon M.M. Amosov emphasizes that health is primarily a personal matter for everyone. Health care bodies, all medicine with its curative and health-improving measures cannot improve the level of health of an adult because this requires his own will. He believes that the main condition for preserving human health is compliance with the health regime or the regime of restrictions and loads. By the named regime, the scientist understands the way of life of a person, which contributes to the restoration, maintenance and development of the body's reserves. Its most important factors are proper nutrition and physical activity.

The essence of proper nutrition: limitation of the energy value and amount of fats of animal origin, limitation of salt - provided a complete set of vital substances, a balanced diet, i.e. strict correspondence of the amount of food consumed to the body's energy expenditure.

Dietary restrictions must necessarily be combined with a complete food composition. Fats of plant origin, vitamins, trace elements are necessary in sufficient quantity. Appetite is a mental function and it takes about 3 months to «detrain» it. A person must remember: a person eats to live, not lives to eat!

The heart surgeon sees the following as the basic image of health:

1. The fault of most diseases is not nature, not society, but only the person himself. Most often, he gets sick because of laziness and lust, and sometimes because of ignorance.

2. Do not rely on medicine. It perfectly treats many diseases, but it is not able to make a person healthy.

3. In order to become healthy, you need to make your own efforts, constant and significant. There is nothing to replace them. Fortunately, man is so perfect that he can almost always be restored to health. Only the efforts necessary for this increase with aging and deepening of diseases