

**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
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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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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

4. The magnitude of any effort is determined by incentives, incentives – the value of the goal, and the time and opportunity to achieve it. Unfortunately, health often becomes the goal when death becomes a near reality. However, even death cannot frighten a weak-willed person for long.

5. Four conditions are necessary for health: physical activity (at least for 20-30 minutes, but so that you sweat and your heart rate doubles), dietary restrictions, hardening, time and the ability to rest. And the fifth is a happy life!

Numerous physiological studies indicate that exercises that train the cardiovascular system should be isotonic (dynamic) rather than isometric (static), aerobic rather than anaerobic, intermittent rather than continuous, submaximal rather than maximal.

Physical activity affects all organs and systems, but the training effect develops at different rates in different organs. Therefore, the pace of increasing loads and duration should be chosen with a margin and focus on «slow» organs.

Conclusions. Doctors treat diseases, and health needs to be acquired independently through training. Because health is the «reserve power» of organs, of our entire physiology. They are necessary to maintain normal functional indicators at rest and during stress - physical and mental, as well as not to get sick, and if possible, not to die.

Semianiv M.M.

ASSOCIATION BETWEEN SPECIFIC GENETIC VARIATIONS IN THE AGTR1 AND VDR GENES AND THE RISK OF ESSENTIAL HYPERTENSION

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Introduction. Essential hypertension (EH) affects about 25-43% of the world population. Experts estimate that EH is the global most common disease: from 1 billion people in 2000 to 1,6 billion in 2025. As well, EH is one of the most important risk factors for death from cardiovascular diseases. EH, as a polygenic disease, develops as a result of the interaction of environmental factors, genetic factors and epigenomic structures. Most of genetic variations that are associated with normal or pathological conditions, including EH collected in Genome-wide association studies, where SNPs play the role of possible biomarkers for screening of EH predisposition.

The aim of this study was to establish the role of 1166A>C polymorphism of the AGTR1 gene (rs5186) and A/G polymorphism of the VDR gene (rs2228570) in risk prediction of essential hypertension (EH).

Materials and methods. The study included patients with EH and hypertensive-mediated organs damage (2nd stage), moderate, high/very high cardiovascular risk. 100 individuals were involved in the case-control study. There were 70.84% females, 29.16% males among them, the mean age was 57.86±7.81 y.o. Age- and gender-matched controls (n=60) whose blood pressure measurements were in normal range and without any apparent diseases were randomly selected to compare with the patient data. In order to detect AGTR1 (rs5186) and VDR (rs2228570) gene polymorphism the qualitative real-time polymerase chain reaction was done. AGTR1 gene genotyping was performed for 72 patients and 48 healthy individuals and VDR gene – for 100 patients and 60 healthy subjects.

Results. The distribution of genotypes and alleles AGTR1 (rs5186) and VDR (rs2228570) in the study and control groups did not differ significantly ($p>0.05$). C-allele of AGTR1 gene (rs5186) increases the risk of EAH more than 2 times [OR 2.31; 95% CI OR:1.19–4.47; $p = 0.011$], as well as AC- and the combination of AC- + CC-genotypes [OR–2.09; 95% CI OR:1.03–4.25; $p = 0.038$ and OR–2.30; 95% CI OR:1.14–4.64; $p=0.017$]. The epidemiological analysis showed that polymorphic variants VDR (rs2228570) genes are not the risk factors of EH in the observed. Although, combination of wild alleles of both genes in the homozygous state (AA_{AGTR1}/AA_{VDR}) makes a protective effect [OR=0,42; OR 95%CI:0,18-1,0; $\chi^2=3,74$; $p=0,05$], the combination of minor alleles (C-allele AGTR1 /AA_{VDR}+C-allele AGTR1/AG_{VDR}) increases the risk of EH more than threefold [OR=3,36; OR 95%CI:1,24-9,09; $\chi^2=5,88$; $p=0,015$].