

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ  
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



## **МАТЕРІАЛИ**

**104-ї підсумкової науково-практичної конференції  
з міжнародною участю  
професорсько-викладацького персоналу  
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ  
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Конференція внесена до Реєстру заходів безперервного професійного розвитку,  
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**Чернівці – 2023**

Among them 79.0% (79) women and 21.0% (21) men. Their average age is  $59.87 \pm 8.02$ ; disease duration from 6 to 25 years. All participant underwent clinical and laboratory examinations. Obesity was determined by body mass index (BMI)  $\geq 30$  kg/m<sup>2</sup>. GNB3 (rs5443) and NOS3 (rs2070744) genes genotyping performed by Real-Time PCR based method. Risks were studied by the clinical epidemiology method. All enrolled /examined patients signed the Informed Consent to participate in the study. Control group included 48 practically healthy individuals of relevant age.

**Results.** In EAH patients the mutation of the NOS3 gene in the homozygous state occurs with a frequency of 16.67%, and for the GNB3 gene – 8.33% of cases, which does not differ from the control group. The relative frequency of obese people prevailed among EAH patients with the mutational C-allele carriers of the NOS3 gene by 31.94% ( $\chi^2=13.58$ ;  $p<0.001$ ) and in patients with mutational T-allele of the GNB3 gene (30.56%) in the absence of such among the healthy. The risk of obesity increases in EAH patients with the C-allele carriers of the NOS3 gene almost 6 times [OR 95%CI:2.11-14.82;  $p<0.001$ ] and in T-allele patients of the GNB3 gene – more than 10 times [OR 95%CI:2.25-45.44;  $p<0.001$ ]. The TT-genotype of the NOS3 gene and the CC-genotype of the GNB3 gene play a protective role against obesity.

**Conclusions.** Thus, the C-allele of the NOS3 gene (rs2070744) and the T-allele of the GNB3 gene (rs5443) increase the obesity risk in arterial hypertensive patients 6 and 10 times ( $p<0.001$ ).

**Voloshyn O.I.**

## **SECONDARY IMMUNODEFICIENCY STATES – ACOMPLICATED "ADDITION" TO NUMEROUS DISEASES OF INTERNAL ORGANS**

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**Introduction.** Progressive environmental degradation, an intense increase of the life tempo and associated with them long-term psycho-emotional stress, deterioration of the biological value of food, and drinking water quality contribute to the growth of population morbidity of the Earth's population and significantly weaken the human immune system under the influence of numerous exo- and endogenous factors. There is an unfortunate prospect of increasing the frequency and severity of immunodeficiency states (IDS) and their appearance in younger people. Often, IDS manifest themselves as an "addition" to any disease or group of diseases of different organs and systems in one individual. Diagnosis, especially the treatment tactics of IDS is quite complex, often delayed, controversial and constantly improving. One of the reasons for "delay" in diagnosis is the lack of awareness of young doctors of different profiles, especially therapeutic, about this problem.

**The aim of the study.** Our aim is to highlight the main aspects of the diagnosis, treatment and prevention of IDS and the experience of teaching this material in the educational process of interns-therapists.

**Materials and methods.** A large amount of scientific data in monographic, scientific databases, materials of own long-term clinical studies with using methods of comparison and generalization of information data and other printed and electronic publications.

**Results.** It is found that in the available domestic literature this problem is covered controversially, especially in the aspect of clinical immunology of infectious bacterial and viral diseases, diseases of the endocrine system, polypathology, chronic intoxication, tumor processes, obesity, atherosclerosis, age dependencies, etc. Even in the communities of authoritative clinical immunologists, views on these aspects of immunological disorders sometimes differ significantly. The existing classifications of IDS in the clinical aspect mainly correspond to practical medicine, but they are not generally accepted, for example in cardiology, rheumatology, pulmonology, etc. Thus, clinical immunology as a science is relatively young, and its interdisciplinary aspects are now being intensively studied, but these principles are not sufficiently delivered to a wide range of doctors. In particular, we have to deepen their knowledge of general immunology, classification (working, domestic, by I.M. Drannyk), paraclinical methods of diagnostics, features of complex clinic-laboratory-immunological diagnostics (basic principles) in the practice of a general

practitioner – family medicine, to determine the limits of therapeutic and preventive measures depending on the degree of IDS (independently or with the participation or under the supervision of an immunologist). The duration of immunoregulatory agents or even the frequency of courses of supportive immunotropic therapy is determined not only by the main disease but also by their combination (comorbidities), age of patients, lifestyle, nutrition, etc. The construction of the immunorehabilitation course for a particular patient is carried out by the doctor personally, according to the clinical condition, blood tests, immunogram, age, particular features of the profession, lifestyle, and ecology of the environment where the patient lives.

**Conclusion.** Secondary IDS are a clinically and prognostically significant "pathogenetic addition" to a wide range of diseases of various organs and systems, the frequency and severity of which will increase. With the progression of IDS, its pathogenesis becomes more complicated, the exploration and understanding of which justifies various immunorehabilitation programs and means of their implementation. Mastering the basics of diagnosis, treatment, and secondary prevention immunodeficiency states by young doctors, doctors of family medicine - general practice is an important part of improving their professional level and effective activity in current conditions.

**Voroniuk K.O.**

### **THE ROLE OF POLYMORPHISM OF AGT GENE (RS4762) IN THE DEVELOPMENT OF ESSENATIONAL HYP ERTENSION**

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**Introduction.** Arterial hypertension (AH) is one of the most common chronic diseases in adults and is the leading cause of disability and death worldwide. Nowadays, much attention is directed to the essential arterial hypertension (EAH) genetics studies, since the genetic factor, affects the blood pressure regulation in about 30-50% persons.

**The aim of the study** was to evaluate the role of polymorphic variants of AGT (rs4762) gene as EAH predictors.

**Material and methods.** The case-control study involved 100 patients with EAH stage II, 1-3 degrees of blood pressure (BP), high and very high cardiovascular risk. Among the patients there were 21% (21) men, 79% (79) women. The mean age of patients was  $59.86 \pm 6.22$  y.o. The control group consisted of 60 almost healthy individuals with relevant age ( $49.13 \pm 6.28$  y.o.) and gender distribution (63% - women, 37% - men). The AGT (rs4762) gene polymorphism was studied by a qualitative polymerase chain reaction (PCR) in real time.

**Results.** In patients with EAH residents of Northern Bukovyna mutated T-allele of AGT gene (rs4762) is found in 15,97% of cases, which is more frequent than in practically healthy by 9,72% ( $p=0,023$ ); mutations of AGT gene in homozygenic species in the control group were not found. Binary logistic regression confirmed an increased risk of EAH inheriting according to dominant and additive models in the minor T-allele carriers of the AGT gene (rs4762) almost 3 times higher than in C-allele homozygotes ( $p=0,04$  and  $p=0,03$ , accordingly).

**Conclusions.** The T-allele of the AGT gene (rs4762) increases the risk of EAH developing almost 3-folds (OR 95%CI: 1.11-7.29;  $p=0.039$ ), with the lowest probability of the disease occurring in the C-allele patients, particular CC genotype (OR=0,35; OR 95%CI: 0,14-0,90;  $p=0,023$ ).

**Yurkiv O.I.**

### **IMPACT OF ADAPTATION DISORDERS ON THE FUNCTIONAL STATE OF THE HEPATOBILIARY SYSTEM IN NEWBORN WITH PERINATAL PATHOLOGY**

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**Introduction.** The presence of hypoxic exposure in the perinatal period has an adverse effect on the adaptation of a newborn's body. Against the background of hypoxia, significant dysmetabolic changes occur in the fetus already in uterus, which is a consequence of the disorders