# 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 06, 08, 13 лютого 2023 року

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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  $59.86\pm6.22$  y.o. The control group consisted of 60 almost healthy individuals with relevant age ( $49.13\pm6.28$ 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

of the liver function. Insufficient supply of oxygen to the fetal body against the background of placental insufficiency causes activation of anaerobic glycolysis, impaired ATP utilization, inhibition of lipolysis, development of hypoglycemia, hypoinsulinemia, and hyperglucagonemia. During the implementation of perinatal risk factors during childbirth, the increased damaging effect on the body of the consequences of oxidative stress (OS) is noted.

**Objectives.** The problems of adaptation disorders of newborns in the early neonatal period are probably caused by the unfavorable background of somatic and obstetric and gynecological pathology in the mother and the implementation of perinatal risk factors. Violation of the functional state of the hepatobiliary system in newborns in the early neonatal period is a consequence of the complex harmful effects of perinatal risk factors. A significant role in this is played by placental insufficiency (PI), which causes combined hypoxic damage to the fetal body and causes delay in intrauterine development.

**Material and methods.** 80 newborn children were examined and three study groups were formed. Group I included 25 newborns who were diagnosed with nosological forms of severe diseases, group II - 25 children who in the early neonatal period had clinical manifestations of perinatal pathology of moderate severity. Group III consisted of 30 healthy newborns.

**Results.** The severity of the condition of newborns of the first group in 9 cases was caused by acute asphyxia (25.7%), in 7 children - SDR (20.0%); clinical manifestations of antenatal infection occurred in 5 cases (14.3%), hemolytic disease of newborns was diagnosed in 4 cases (11.4%). Adaptation disorders in children of group II in all cases were caused by neonatal encephalopathy (100.0%). The difference in the clinical manifestations of the pathology of the hepatobiliary system in the observation groups was characterized by the fact that the children of the I group probably more often compared to the newborns of the II group, such symptoms as an increase in the size of the liver (88.0% vs. 60.0%), jaundice (60.0 % vs. 28.0%), edema (84.0% in group I), anemia (76.0% vs. 8.0%), and hypoglycemia (72.0% vs. 8.0%).

A comparison of the nature of dysmetabolic changes in the biochemical parameters of the blood of newborns of the observation groups shows that the increase in the severity of the condition is accompanied by deeper homeostatic disorders in groups I and II compared to group III, which is confirmed by the low level of total protein (53.1 g/l and 56.3 g /l vs. 58.4 g/l) and albumin (25.8 $\pm$ 1.12 g/l and 24.8 $\pm$ 1.52 g/l vs. 35.0 $\pm$ 1.22 g/l), a high level of total bilirubin (122.4 $\pm$ 18.44µmol/l and 78.1 $\pm$ 16.51µmol/l against 33.9 $\pm$ 2.16µmol/l) due to the indirect fraction (120.7 $\pm$ 17.05µmol/l and 74.1  $\pm$ 12.77µmol/l versus 23.9 $\pm$ 2.21µmol/l), as well as a significant increase in GHT activity (117.0 $\pm$ 19.5 units/l and 67.7 $\pm$ 9.2 units/l versus 90.8  $\pm$ 8.7 units/l).

**Conclusions.** Significant differences in correlations were noted in the observation groups, which indicates a significant strain on the liver when performing its functions to maintain homeostasis and adaptation of the body after birth under the conditions of perinatal pathology. The predominance of catabolic processes over anabolic ones in the first days of life requires to carry out timely metabolic correction for such children, since morpho-functional immaturity leads to a decrease in the body's reserve capabilities, which leads to violations of urgent and long-term adaptation.

### Амеліна Т.М.

## КАРДІОРЕАБІЛІТАЦІЯ – СУЧАСНІ ВИКЛИКИ ТА ПЕРСПЕКТИВИ

Кафедра внутрішньої медицини, фізичної реабілітації та спортивної медицини

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Вступ. Вторинна профілактика серцево-судинних інцидентів забезпечується ефективною кардіологічною реабілітацією (КР), яка сприяє клінічній стабілізації захворювання, скороченню частоти госпіталізацій, зростанню толерантності до фізичних навантажень, попередженню несприятливих серцево-судинних подій і передчасної смерті, покращенню психосоціального та професійного статусу. Незважаючи на переконливу доказову базу і чіткі рекомендації, доступ до КР в усьому світі залишається низьким. Лише 38% країн світу мають програми КР, при цьому 68% цих програм працюють у країнах з