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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.

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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.

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We have found that 4-(azidomethyl)pyrazole-3-carboxylic acid esters 2a-c react with cyanoacetamides 3a-e in refluxing THF in the presence of *t*-BuOK, forming pyrazolo-[3,4-*e*][1,2,3]triazolo[1,5-*a*]diazepine-3-carboxamides 4a-g in 53-67% yields. This transformation is presumably an example of a tandem reaction that begins with the cycloaddition to the azido group of a carbanion, generated from cyanoacetamide, and the formation of an intermediate polyfunctional triazole A, susceptible to the formation of the diazepine cycle due to the intramolecular attack of the triazole amino group on the ethoxycarbonyl group of the pyrazole ring.

Chernyukh O.G.

ESTIMATION OF THE RENAL CONDITION BY GLOMERULAR FILTRATION RATE IN THE PREGNANT WITH PREECLAMPSY

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The majority of experimentally reliable examinations of glomerular filtration rate (GFR) is based on intravenous infusion of such exogenous markers as inulin, iotalamate, iohexol. However, the main method to estimate GFR used in clinical practice is detection of creatinine clearance (CC) considering its availability and low cost.

We divided the patients into four groups depending on the volume of diuresis (Vn): I group – Vn up to 1000ml (6 examinations); II group – Vn from 1100 to 2000 ml (23 examinations); III – Vn from 2100 to 3000 ml (24 examinations); IV – Vn more than 3100 ml (8 examinations).

Average values of GFR, tubular reabsorption, minute diuresis, daily proteinuria, creatinine concentration in the blood serum and urine and their mean-quadratic variations in these groups were detected.

Proteinuria (more than 2,0 g per day) is indicative of renal failure developed against the ground of preeclampsia of various degree. Two diametrically opposite by the volume of diuresis groups - I and IV ones –were in the risk group according to this sign. The value of daily diuresis was taken as a criterion of distribution into the groups. It was II group with the optimal value of diuresis without the signs of poly- and initial oliguria which became the control one. Considering the fact that the majority in the distribution of medical signs, especially in small samplings, is not normal, non-parametric methods of variation statistics were applied in statistical processing: Wilkinson-Mann-Whitney and Craskell-Wallis criteria.

The comparison of all the groups found a reliable difference ($p<0.05$) in the indices of minute diuresis, urine creatinine, GFR and tubular reabsorption. The value of proteinuria and concentration of blood creatinine are only individual characteristics for every patient.

Davydova N.V.

INFLUENCE OF MELATONIN ON THE LEVEL OF CERULOPLASMIN IN RATS' BLOOD UNDER ALCOHOLIC INTOXICATION AGAINST THE GROUND OF PERMANENT LIGHT EXPOSURE

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The vast majority of the adult population of most societies consume alcohol to some degree. Ukraine ranks fifth in the world in alcohol consumption per capita. Numerous experimental and clinical studies have found out that activation of free radical oxidation of biomolecules is at the basis of ethanol toxic effects on the organism.

In modern life, the use of ethanol is often combined with the influence of other harmful factors, such as the violation of light regime. A modern person is exposed to light almost all the time. Night shifts, flights, jet lag and active nightlife contribute to the disturbance of circadian rhythms. Normally, the biological rhythms are regulated by melatonin, which is known to be

secreted in the dark. Even a slight lighting inhibits its synthesis. Melatonin has been shown to have a wide range of biological effects, but its main feature is a powerful antioxidant action.

The objective of the work was to study the level of ceruloplasmin in the rats' blood plasma under subacute alcohol intoxication, its combination with light exposure and melatonin administration.

The experiments were conducted on 32 albino male rats with body weight of 180-230 g. A subacute alcohol intoxication was induced by intragastric administration of 40% ethanol in the dose of 7 ml/kg of the body weight for 7 days. A light exposure was caused by keeping animals under a fluorescent light of 1500 lux intensity for 24 hours a day.

Alcohol intoxication along with the permanent light exposure were found to cause a significant increase in the ceruloplasmin concentration in blood plasma by 88% above the control. This parameter was higher than that of rats which had alcohol intoxication induced under normal light regime by 80% and which might have been resulted from decrease in melatonin synthesis and lack of its antioxidant effect under constant light exposure.

The administration of melatonin at the dose of 5 mg / kg daily at 20^0 for 7 days to animals exposed to ethanol intoxication or its combination with constant lighting prevented elevation of ceruloplasmin level in blood plasma. Animals that were administered melatonin against the background of the combination of alcohol intoxication with light exposure showed a tendency to normalization of ceruloplasmin level, but the figure remained 24% above the control.

Thus, the administration of melatonin against the ground of alcohol intoxication or its combination with constant light exposure contributed to normalization of blood plasma ceruloplasmin which proves melatonin's antioxidant properties.

Dikal M.V.

BIOCHEMICAL CHANGES OF BLOOD PLASMA INDICATORS IN THE MODELING OF ALOXAN DIABETES IN RATES

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The number of patients with diabetes mellitus (DM) in the world is growing steadily. At present there is no clear molecular mechanisms of inheritance of type I diabetes mellitus, and there is no single conventional theory that would explain the numerous data obtained in this field. And various metabolic lesions of systems and organs that develop against the background of type II diabetes are a significant threat to health and one of the causes of disability of the population.

The experiment was conducted on 40 non-linear male rats weighing 0.16-0.18 kg, which were divided into two subgroups: control intact rats (n = 20) and experimental (n = 20) rats with induced alloxan DM, which was caused by the introduction of 5% alloxan monohydrate intraperitoneally in the dose of 150 mg/kg. Basal glycemia studies were performed using a One Touch device (manufactured by Johnson & Johnson), which was ≥ 10.0 mmol/l for blood sampling from the tail vein. All manipulations with animals were carried out according to European Convention for the Protection of Vertebrate Animals used for Experimental and Other Scientific Purposes and law of Ukraine "On protection of animals from cruelty". The material for the study was blood plasma. The concentration of the main biochemical parameters was determined in heparinized plasma without traces of hemolysis by conventional methods.

Against the ground of significant hyperglycemia (12.6 ± 1.28 mmol / l) the concentration of total protein of blood of experimental animals was found to decrease significantly ($p < 0.05$) and against the ground of disturbance of transamination and metabolism of amino acids, in the absence of significant change in albumin concentration. Such changes may be indicative of certain imbalance in the synthesis of the globulin fraction and inform redistribution of the content of many acute-phases proteins. However, urea and creatinine concentrations remained unchanged when comparing the control and experimental groups on the 14^{th} day of the disease simulation.