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«БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

М А Т Е Р І А Л И

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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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Techniques employed to achieve quick and effective hypothermia of the myocardium include external cooling with surface pads, cooling via an endovascular catheter (cold saline solution circulating through it), combination of endovascular cooling and infusion of chilled saline, application of hypothermia inducing suits. The disparity in achievement of the target temperature was attributed to causes such as technical difficulty, device malfunction, kinking of the catheter and first medical contact to reperfusion time being slow.

In spite of a great number of performed trials, there is still incomplete understanding of the mechanism and magnitude of the protective effect of hypothermia on the myocardium, and limited clinical data. That seems to be a perspective field for further investigation.

Nesterovska O.A.

EFFECTS OF LONG-TERM MACROLIDE THERAPY AT LOW DOSES IN ASTHMA-CHRONIC OBSTRUCTIVE PULMONARY DISEASE OVERLAP

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Patients with asthma-chronic obstructive pulmonary disease overlap (ACO) experience more frequent exacerbations and have poorer quality of life, more decline in lung function and higher mortality than asthma or chronic obstructive pulmonary disease (COPD) alone. A low dose of macrolide antibiotics have been shown to improve the lung function and reduce frequency of infective exacerbations in COPD patient. Recently, several reports showed the effectiveness of azithromycin in some patients with asthma. However, little is known about the potential for macrolide therapy to transfer these effects to patients with ACO.

Objective: to study the effectiveness of low-dose and long-term treatment with azithromycinin ACO patients.

Our study involved 20ACO patients divided into azithromycin (15 patients) and a control group – 5 patients (without azithromycin treatment). The azithromycin group was treated with antibiotic in the dose of 250 mg twice weekly for 3 months. Inflammatory cells in induced sputum, pulmonary function, the COPD assessment test (CAT) test and a 6-minute walk distance (6MWD) were analyzed.

After treatment, sputum significantly decreased in the in azithromycin group compared with control group. Treatment with azithromycin decreased the total cell count, the number of neutrophil counts and neutrophil ratio were also significantly decreased compared to the control group ($p<0.5$). No significant QTc prolongation was observed among patients assigned to azithromycin. CAT test score decreased from 20,56±1,62 to 14,00±1,16 ($p<0.05$) after treatment. There were no significant changes in 6-MWD scores after 3 month of azithromycin treatment.

Erythromycin reduced airway inflammation, total number of cells, neutrophil counts, and neutrophil ratio in induced sputum in ACO patients. Prolonged treatment, however, seems to require maintenance of clinical benefits.

Plesh I.A.

METHOD OF THE VASCULAR TONUS DETERMINATION: DIAGNOSTIC VALUE

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A new method of complex synchronous determination of arterial and venous pressure was proposed at the Department of Patient Care and Higher Nursing Education within the period of the research work fulfilment (2015-2019).

The method is based on the biophysical inverse relationship between the impedance of a part of the limb and its pulse volume level because of the physiological compression (as for the determination of blood pressure (BP)).

The invented complex of devices consists of a reoplethysmographic application (RPA-2-02), a mechanoelectric pressure transducer (MEP), an analog-to-digital converter (ADC) and a personal computer.

The procedure is as follows: the cuff is placed in the middle third of the shoulder, as for the BP taking, 4 electrodes for tetrapolar reoplethysmography are tightly connected to the middle third of the forearm. The shoulder cuff is connected to MEP and the electrode leads - to the entrance (RPA-2-02). The outputs of these devices are connected to the ADC and to the computer.

After calibrating the signal of these two channels, we get a graph of synchronous curves - pressure and impedance.

The obtained data allow the comprehensive evaluation of the following parameters: 1) at the compression - the veins' closing (PCV) and the artery closing (PCA); 2) at the decompression - the pressure of the artery opening (POA) and the pressure of the veins' opening (POV).

PCV - corresponds to the central venous pressure (CVP) (r=0,8-0,9) and does not require a known invasive method using the Waldman apparatus;

PCA - corresponds to the systolic blood pressure (r=0.9-1.0);

POA - is close to the systolic blood pressure and most likely corresponds to the mean blood pressure;

POV - corresponds to the venous tonus at the slow physiological pressure load.

Use of the method and technique in patients with impaired artery tone allows to determine the individual forms of arterial hypertension (in particular, arterial-venous hypertension), to evaluate the effect of known antihypertensive remedies on the tonus of the venous vessels, to improve the diagnostics and treatment.

Repchuk Yu.V.

DOES GENES COMBINATION INFLUENCE RISK OF ESSENTIAL ARTERIAL HYPERTENSION?

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The aim of the study was to analyze the association of AGT (T704C) and VDR (1056T/C) genes polymorphism combination with essential hypertension (EH).

The study involved 100 patients suffering from PAH with a target-organ damaging, a moderate, high or very high cardiovascular risk. Among them there were 79.0% (79) women and 21.0% (21) men, whose average age was 59.87±8.02 years old. The control group involved 60 practically healthy persons, matched by age (43.36 ± 7.1 y) and gender (62.5% women, 37.5% men). All enrolled / screened patients signed the Informed Consent to participate in the research. The genes polymorphism AGT (704 T> C) and VDR (1056T/C) was studied with PCR based method.

The genotypes distribution of the AGT (704T> C) and VDR (1056T/C) genes genotypes in patients vs control group did not differ reliably and was as follows: for AGT gene *TT-, TC- and CC* –genotypes - 13.89% vs 16.67%, 59.72% vs 54.17% and *CC*-genotype - 26.39% vs 29.17%; for VDR gene AA-, AG-, GG-genotypes – 23.0% vs 30.0%, 50.0% vs 46.67%, 27.0% vs 23.33% (p>0.05) accordingly. Distribution of polymorphic variants of both genes corresponded to the Hardy-Weinberg Equilibrium (p>0.05). The distribution of mutant genotypes combinations of both genes in study and control groups was following: TC+AG - 31.94% vs 29.17% (p>0.05), TC+GG – 16.67% vs 8.33% (p>0.05), TT+AG – 8.33% vs 4.17% (p>0.05), TT+GG – 4.17% vs 8.33% (p>0.05). The polymorphic variant combinations of both genes does not influence the risk of EH in observed population. However, in AA-genotypes carrier of VDR gene hypertensive women increased a risk of EH almost 3 times [OR = 3.08; 95% CI: 1.02-10.25; p=0.047].

Thus, the mutant genotypes combinations of AGT (T704C) and VDR (1056T/C) genes don't influence the risk of EH in population. However, AA-genotype of VDR gene in hypertensive women tripled the risk of EH.