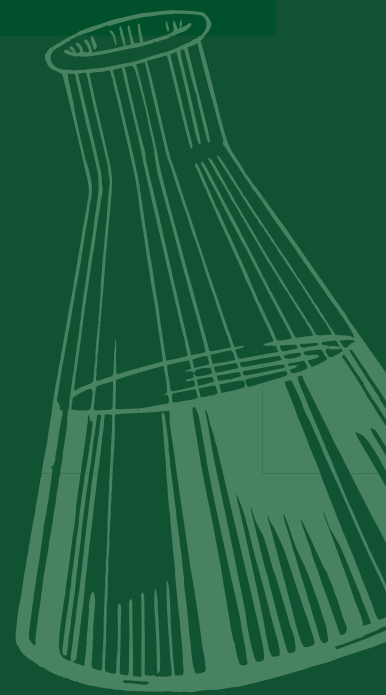


ФЕСТИВАЛЬ МОЛОДІЖНОЇ НАУКИ  
"МЕДИЦИНА ТРЕТЬОГО  
ТИСЯЧОЛІТТЯ"

ЗБІРНИК ТЕЗ  
КОНФЕРЕНЦІЇ



24-26 20  
СІЧНЯ 22

Kuye Adesegun Jacobs , Azuwike Uchechi Blessing .....	78
THE EFFECTS OF THE COVID-19 PANDEMIC ON THE TOTAL BODY WEIGHT AND ITS ASSOCIATED SYMPTOMS. ....	78
Lapshyna Kateryna <sup>1</sup> , Aleksandrova Tatiana <sup>1</sup> , Chereliyk Natalia <sup>2</sup> .....	80
Hormone-like cytokines in patients with non-alcoholic steatohepatitis and hypertension.....	80
Martovytskyi Dmytro, Melenevykh Anastasiia, Narizhna Anna .....	81
INFLUENCE OF INSULIN-LIKE GROWTH FACTOR-I AND ENDOSTATIN IN SERUM ON LIPID PROFILE INDICATORS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND OBESITY .....	81
Nartey Lydia, Ukaogu Aguziendu Daniel, Mullings Doneile Ashley.....	83
INDICATORS OF LIPID METABOLISM IN PATIENTS WITH COMORBID COURSE OF NON-ALCOHOLIC FATTY LIVER DISEASE AND ARTERIAL HYPERTENSION .....	83
Okhaigbe Daniel, Adetula Toluwanimi.....	84
Smoking and the cardiovascular system: a habit that kills. ....	84
Samer Dakdouk, Elchami Abdullah .....	85
PROGNOSIS OF RECURRENT MYOCARDIAL INFARCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS .....	85
Saray Yasser Refaat Aziz .....	87
Impace of covid-19 on the cardiovascular system.....	87
Silvan Daskapan, Ltufe Alhamad Ahmad.....	88
PLASMINOGEN ACTIVATOR INHIBITOR TYPE 1 DETERIORATES CARDIOHEMODYNAMIC'S PARAMETERS OF PATIENTS WITH MYOCARDIAL INFARCTION AND TYPE 2 DIABETES MELLITUS .....	88
Tvrezovska Iryna Ivanivna, Rozhdestvenska Anastasiia Olexandrivna .....	90
NON-INVASIVE DIAGNOSIS OF LIVER FIBROSIS IN PATIENTS WITH COMORBID COURSE NON-ALCOHOLIC FATTY LIVER DISEASE AND HYPERTENSION .....	90
Авдеєнко Олександр Ігорівна.....	91
ЕКСТРАПУЛЬМОНАЛЬНІ ТА АТИПОВІ ПРОЯВИ COVID-19:ОГЛЯД ЛІТЕРАТУРИ .....	91
Алієва Сусана Відадіївна.....	94
РЕЗУЛЬТАТИ НАВЧАННЯ ХВОРИХ НА БРОНХІАЛЬНУ АСТМУ .....	94
Анищенко Анна Михайлівна, Фельдман Діана Аркадіївна .....	95
Патофізіологія синдрому Такоцубо.....	95
Боровик Катерина Миколаївна, Базян Аїда Арменівна, Арзуманова Інеса Володимирівна .....	97
ОЦІНКА СТАНУ ВУГЛЕВОДНОГО ОБМІНУ У ХВОРИХ НА ХРОНІЧНУ СЕРЦЕВУ НЕДОСТАТНІСТЬ ШЕМІЧНОГО ГЕНЕЗУ З СУПУТНИМИ МЕТАБОЛІЧНИМИ РОЗЛАДАМИ	97
В'юн Тетяна Іванівна <sup>1</sup> , В'юн Сергій Валерійович <sup>2</sup> .....	98
ВИЗНАЧЕННЯ СТАНУ КАЛЬЦІЄВОГО ОБМІНУ У ПАЦІЄНТІВ З ХРОНІЧНИМ ПАНКРЕАТИТОМ ТА ЙОГО ВПЛИВ НА РОЗВИТОК ОСТЕОПЕНІЧНИХ СТАНІВ.....	98
Голобородько Ірина Володимирівна, Олійник Поліна Сергіївна.....	100
ПРОЛАПС МІТРАЛЬНОГО КЛАПАНУ У ОСІБ ПРАЦЕЗДАТНОГО ВІКУ З АРТЕРІАЛЬНОЮ ГІПЕРТЕНЗІЄЮ ПРИ АРИТМІЇ СЕРЦЯ .....	100
Гріднева Ольга Володимирівна .....	103
ЕПІДЕМІОЛОГІЧНІ ВИЗНАЧЕННЯ РИЗИКІВ РОЗВИТКУ ШЕМІЧНОЇ ХВОРОБИ СЕРЦЯ ПРИ ОЖИРІННІ .....	103
Гріднева Ольга Володимирівна, Кадикова Ольга Ігорівна .....	104
МАРКЕРНІ ОСОБЛИВОСТІ БАТОКІНІВ FGF21 ТА VEGFA У ХВОРИХ НА ШЕМІЧНУ ХВОРОБУ СЕРЦЯ В ПОЄДНАННІ З ОЖИРІННЯМ .....	104
Гурбанова Карина Ігорівна.....	105
СТОМАТОЛОГІЧНІ АСПЕКТИ ЗАХВОРЮВАНЬ ПЕЧІНКИ .....	105
Дунаєва Інна Павлівна .....	106
ІНСУЛІНОРЕЗИСТЕНТНІСТЬ, ЯК СКЛАДОВА КАРДІОМЕТАБОЛІЧНОГО РИЗИКУ У ХВОРИХ З КОМОРБІДНОЮ ПАТОЛОГІЄЮ .....	106
Дунаєва Інна Павлівна .....	108
ДІАГНОСТИЧНІ МАРКЕРИ ПРОГРЕСУВАННЯ ХРОНІЧНОЇ СЕРЦЕВОЇ НЕДОСТАТНОСТІ У ХВОРИХ НА ПОСТІНФАРКТНИЙ КАРДІОСКЛЕРОЗ З СУПУТНИМ ЦУКРОВИМ ДІАБЕТОМ 2 ТИПУ ТА ОЖИРІННЯМ.....	108
Зейдан Адель Імадович, Бондаренко Валерія Віталіївна .....	110
ВПЛИВ СТРЕСУ ЛЮДИНИ НА ПРОЯВ ПЕРШИХ СИМПТОМІВ ЦУКРОВОГО ДІАБЕТУ 1 ТИПУ .....	110

Results: Due to the large quantity of free radicals contained in the smoke, there is enhanced oxidative stress.

In combination with reduced availability of nitric oxide, nicotine induced vasoconstriction and impaired vasodilation can lead to endothelial dysfunction.

Smoking has been linked with an increase in total cholesterol and triglyceride levels. Additionally, it is observed that there's a slightly higher level of LDL and VLDL cholesterol in smokers. On the flip side there's low HDL levels. Due to these findings, smoking is considered atherogenic.

Smoking increases catecholamines in peripheral sympathetic sites (by long-term reduction of vagal drive) causing an increase in baroreflex function, thereby, leading to an increase in heart rate at rest.

It is a known fact that smoking causes high levels of carboxyhemoglobin. The carbon monoxide produced from cigarettes has 300 times more affinity to hemoglobin than oxygen. This displaces the oxygen and prevents it from reaching the tissues.

Conclusion: Multiple negative effects of cigarette smoking on the circulatory system such as oxidative stress, endothelial dysfunction, dyslipidemia, activation of the sympathetic nervous system cause a wide range of unfavorable consequences: atherosclerosis, ischemic heart disease, tachycardia, clot formation. These harmful effects of smoking far outweighs the temporary “good feeling” of smoking.

*Samer Dakdouk, Elchami Abdullah*

**PROGNOSIS OF RECURRENT MYOCARDIAL INFARCTION IN PATIENTS WITH TYPE 2 DIABETES MELLITUS**

Ukraine, Kharkiv

Kharkiv National Medical University

Department of Internal Medicine №2, Clinical Immunology and Allergology named after academician L.Malaya

Scientific advisor: PhD Minukhina D.V.

Among a numerous of pathogenetic mechanisms of vascular injury in ischemic heart disease and type 2 diabetes mellitus (type 2 DM), endothelial dysfunction is crucial. An important role is played by indicators of inflammation and endothelial dysfunction in the development of complications of acute myocardial infarction (AMI). Asymmetric dimethylarginine (ADMA) is a new risk factor for cardiovascular disease

associated with a spectrum of clinical situations characterized by impaired production of nitric oxide. As a structural analogue of L-arginine, ADMA suppresses the activity of all isoforms of endothelial nitric oxide synthase (NOS), causing impaired mechanisms of formation of nitric oxide in blood plasma and tissues. Plasminogen activator inhibitor type 1 (PAI-1), as a major physiological inhibitor of plasminogen activation in vivo, inhibits thrombolysis by inhibiting the dissolution of fibrin filaments. Aim. Construct a mathematical model that allows to predict the development of recurrent myocardial infarction in patients with acute myocardial infarction in the presence of concomitant type 2 diabetes mellitus.

Materials and methods. The study included 73 patients with AMI and type 2 DM (among them 43 men and 30 women, mean age  $62.73 \pm 1.39$  years), 57 patients with AMI without type 2 DM (among them 43 men and 14 women, mean age  $63.97 \pm 1.47$  years). Level of PAI-1 was carried out by immunoassay using commercial test systems Technoclone PAI-1 ELISA Kit (Austria), ADMA-Immunodiagnostik ADMA Xpress ELISA Kit (Austria), NOS - ELISA Kit For Nitric Oxide Synthase Endothelial (NOS). Mathematical computer processing of results was carried out using the software package "Statistica 6.0" (StatSoft Inc., USA).

Results. In the first phase of the study patients were assigned to the 1st or 2nd cluster of increased risk of recurrent myocardial infarction by using classification functions:  $\Delta F = F2 - F1 = \text{cholesterol} + 0,2 * \text{insulin} - 19,5 \geq 0$ , if the calculated value of  $\Delta F$  for a patient with type 2 diabetes mellitus is positive, then it should be attributed to the 2nd cluster and otherwise to the 1st cluster. Using the "2 x 2" tables of elimination, we determined that the levels of end diastolic volume, asymmetric dimethylarginine, CM-creatinine phosphokinase and type 1 plasminogen activator inhibitor have statistically significant differences ( $p < 0.05$ ) in groups of patients with GIM with recurrent myocardial infarction. Thresholds have been defined for these metrics that have been assigned points: final diastolic volume  $\leq 180 \text{ ml} - (0), > 180 \text{ ml} - (1)$ ; ADMA  $\leq 1,05 \text{ mmol/l} - (0), > 1,05 \text{ mmol/l} - (1)$ ; creatine phosphokinase  $\leq 300 \text{ U/l} - (0), > 300 \text{ U/l} - (1)$ ; PAI-1  $\leq 68,3 \text{ ng/ml} - (0), > 68,3 \text{ ng/ml} - (1)$ .

The second phase of the study was calculating the index of probability of re-infarction (IPI) by the formula where  $IPI = 2 * \text{"final diastolic volume"} + \text{"ADMA"} + \text{"PAI-1"} +$

creatine phosphokinase ". IPI can vary from 0 to 5 points. In this case, a recurrent MI will occur when the index  $>3$ .

We determined the overall prediction accuracy of the classifier ensemble, which was 87.7% (64/73), where the prediction method sensitivity was 84.1% (correctly predicted infarction in 37 patients among 44 patients with recurrent MI), and specificity - 93,1% (correctly predicted infarction in 27 patients among 29 patients with recurrent MI).

Conclusions. The model for predicting the development of repeat Q-positive myocardial infarction with endothelial dysfunction markers, namely plasminogen activator inhibitor type 1 and asymmetric dimethylarginine, in patients with type 2 diabetes mellitus has high sensitivity (84.1%) and specificity (93.1%) with overall accuracy prediction 87.7%, which allows it to be used in modern clinical practice.

Thus, the study found the presence of a high incidence of cardiovascular complications during the 6-month observation period of the acute period of myocardial infarction in patients with concomitant type 2 diabetes mellitus.

*Saray Yasser Refaat Aziz*

## **IMPACT OF COVID-19 ON THE CARDIOVASCULAR SYSTEM**

Ukraine, Kharkiv

Kharkiv National Medical University

Department of Internal Medicine №2, Clinical Immunology and Allergology named after  
academician L.Malaya

Scientific advisor: Assoc.proff.Tetiana Zaikina

Aim of study: to analyze the existing data on the effects of COVID-19 on the cardiovascular system.

Materials and methods: a generalized retrospective analysis of the official results of numerous clinical trials conducted in the period from March 2020 to January 2021 on the effects of COVID-19 on the cardiovascular system.

Results:

Based on the results of the analysis it was found that the negative effects of SARS-Cov-2 are not limited to lung damage, but also lead to pathological changes in the cardiovascular system. They include: inflammation, cytokine storm, thrombosis and oxygen imbalance and even direct invasion.