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гінальних сердець без істотної різниці з показниками виживаності іншої групи (однорічне – 90,0±5,50; 95% ДІ 79,9–100% проти 88,0±4,30; 95% ДІ 80,1–96,8%; p=0,709 та дворічне – 84,0±7,70; 95% ДІ 70,1–100% проти 88,0±4,30; 95% ДІ 80,1–96,8%; p=0,709 виживання).

Висновки. Наш перший досвід проведених трансплантацій серця показав обнадійливі безпосередні та середньострокові результати. Пацієнти після трансплантації серця соціально та фізично адаптовані та проживають повноцінне життя. Подальше спостереження триває.

Єдиним шляхом компенсувати критичний дефіцит ефективних донорів в Україні є розширення критеріїв у створенні пари «донор-реципієнт» є використання маргінальних донорських органів.

Prediction of heart failure in diabetic patients using biomarkers of energy metabolism

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Aim. To predict the development of heart failure (HF) in diabetic patients after acute myocardial infarction (AMI).

Methods. In total, 74 patients with ST-elevation MI (STEMI) and type 2 diabetes mellitus (DM) were enrolled. The patients were treated at the State Institution "Academician L.T. Malaya National Institute of Therapy of the National Academy of Medical Sciences of Ukraine" and Kharkiv Clinical Hospital on Railway Transport No. 1 of «Health Center» branch of the Joint Stock Company "Ukrainian Railways" from September 1, 2020 to December 31, 2024. Values of C1q tumor necrosis factor-related protein 3 (CTRP3), fatty acid binding protein 4 (FABP4), adropin, glucose, low-density lipoprotein (LDL), high-density lipoprotein density (HDL) were quantified and data on pulse and diastolic blood pressure were analyzed based on history cases over the 14-day hospital period. Serum concentrations of CTRP3, FABP4 and adropin were measured by enzyme-immunoassay. LDL, HDL and glucose were determined by a biochemical method. A generalized linear mixed model (GLMM) was used to construct a HF prediction model for diabetic patients with STEMI.

Results. The fixed (main) effects of the model were presented by two one-factor (adropin concentration for day 1 and CTRP3) and two-factor indicators (combined influence of 2 indicators) (adropin and FABP4 on day 14; glucose on the 1st and 14th day), and random effects – five univariate indicators (manifestations of acute left ventricular failure within 14 days, diastolic blood pressure on day 1, pulse on day 14, LDL and HDL). The predictive accuracy was 61.5% for the development of HF functional class II according to the New York Heart Association classification within a year, and 89.6% – for HF functional class III, indicating a very high level of the model sensitivity to this level of complications. The overall model accuracy was 79.7%. Adropin level on day 1 has been found to be a strong negative predictor, and the combined effect of adropin and FABP4 levels on day 14 – a positive one according to the fixed factor analysis of coefficients from GLMM. The combined effect of blood glucose level on day 1 and 14 and CTRP3 on day 1 were negative predictors.

Conclusions. The occurrence and progression of HF are more common in diabetic patients. A special attention is given to diabetic patients with AMI. It is known that one of the late AMI complications is the development and progression of HF, complicating the life of these patients. The study has shown that the model for HF prediction could be used in the long term for diabetic patients with AMI. There is clearly a need to test the model using a larger sample size of diabetic patients with STEMI to confirm or refute the obtained results and conclusions.

Investigation of sacubitril/valsartan efficacy and safety in chronic heart failure management in patients with diabetes mellitus type 2

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Recent large trials demonstrated that sacubitril/valsartan is significantly effectively reduces all-cause mortality, cardio-vascular mortality, number of hospitalizations due to heart failure worsening, and positively influenced on life quality and functional capacity of patients.

The goal of the present study was to evaluate the efficacy and safety of sacubitril/valsartan in management of chronic heart failure in patients comorbid with diabetes mellitus type II.

Material and methods. 136 comorbid patients (57 women (41,9%) and 79 men (58,1%) with type II diabetes mellitus (DM-II) and congestive heart failure (CHF) of NYHA functional class III were included in to the study. Mean age of the subjects was (56,1±2,6) years. We involved in to the study subjects with CHF that developed due to ischemic heart disease (IHD) and essential hypertension (EH); mean duration was (8,2±2,1) years and 6,7±1,9) years, appropriately. The diagnosis of CHF was confirmed by anamnestic, electro- and echocardi-

ography, and a six-minute walk test (SMWT). All patients were examined at baseline, right after of CHF compensation and 6 months after the treatment period. All subjects underwent full clinical examination, that also included systolic blood pressure (SBP), diastolic (DBP)) and heart rate (HR) measurement, the degree of fluid retention in the body and the severity of edematous syndrome evaluation. Laboratory biochemistry included: parameters of kidney function (urea, creatinine levels, microalbuminuria (MAU), glomerular filtration rate (GFR), glycemia parameters (fasting, postprandial, average), lipid metabolism parameters (general cholesterol (TC), β-lipoproteins and triglycerides (TG)), blood electrolytes,). CHF remedies included diuretics, β-adrenergic receptor blockers, statins, antiplatelet agents. DM-II treatment included Metformin (1000–2000 mg/day and Dapagliflozin 10 mg/day). Sacubitril/valsartan (Uperio, Novartis Pharma) was prescribed against the background of basic therapy for both diseases at an initial dose of 50 mg (24,3 mg of Sacubitril and 25,7 mg of valsartan) – 200 mg (97,2 mg of Sacubitril and 102,8 mg of valsartan) twice per day. The target dose of Sacubitril/valsartan was 200 mg (97,2 mg of Sacubitril and 102,8 mg of valsartan) twice per day. The average dose of Sacubitril/valsartan was 150 mg per day.

Results. Under the influence of Sacubitril/valsartan, there was a significant improvement of in symptoms and QOL: improvement of the patients well-being, decrease in dyspnea at rest, an increase in motor activity increasing and a decrease in the severity of peripheral edema. Edematous syndrome was eliminated at 103 subjects (75,7%). Body weight significantly decreased for an average of 6,4±1,3 kg. A decrease in the degree of dyspnea made it possible to increase the distance traveled during SMWT by 20,34% ($p<0,05$). In the study after 6 months, achievement of target blood pressure levels was noted in 91,4% of patients, CHF II FC was observed in 66,9%, and CHF III FC – in 33,1% of subjects. A decrease in the degree of dyspnea made it possible to increase the distance traveled during SMWT by 24,06% ($p<0,05$) comparing with baseline ones. Adverse events and changes in blood parameters – creatinin and potassium – were not detected. Negative changes in parameters of kidney function, carbohydrate and lipid metabolism were not revealed.

Conclusions. From the available clinical data, it appears that sacubitril/valsartan possesses significant beneficial antihypertensive and HF effects and is fairly safe and well tolerated short term. Our six-month study resulted that the addition Sacubitril/valsartan to the combined basic therapy for CHF resulted significant improvement of patients clinical and hemodynamic status without negative effects on the electrolyte parameters of the blood, lipid and carbohydrate metabolism, and kidney function.