



IMMUNO-INFLAMMATORY BIOMARKERS OF CARDIORENAL SYNDROME

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Introduction.

Renal dysfunction is associated with a higher incidence of recurrence of myocardial ischemia, myocardial infarction (MI), stroke, serious hemorrhagic complications, acute heart failure, atrial and ventricular fibrillation. Even a slight decrease in kidney function significantly worsens the course of the underlying cardiac pathology, at the same time angiotensin converting enzyme, angiotensin II receptor antagonists, nitrates, methods of renal replacement therapy) increasing the incidence of complications and the risk of death, and, conversely, a decrease in myocardial contractile function affects the kidneys in the most negative way. The need for early detection of kidney damage in cardiovascular pathology in order to assess risk, develop strategies and tactics for patient management contributed to the emergence of such concepts as "cardiorenal anemia syndrome" and "cardiorenal continuum" [1,2].

The purpose of the study was to determine informative immunological indicators of coronary heart disease associated with cardiorenal syndrome.

Materials and methods of research:

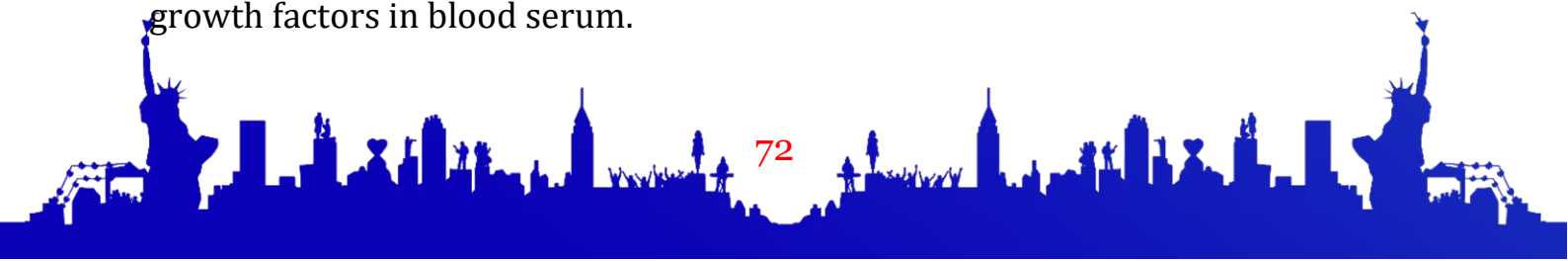
The study included 234 middle-aged patients with an average age of 52.4 ± 1.27 years. The distribution of patients into groups for the study was carried out as follows:

- 64 patients with hypertension (GB) stage 1, grade 1, risk II were included in group 1;

- 52 patients with ischemic heart disease (CHD) were included in group 2: stable angina pectoris (SSN), functional class II (FC), stage 2 GB, grade 2, risk III;

- Group 3 consisted of 58 patients with coronary heart disease: SSN, III FC, GB 3-stage, 3-degree, risk IV;

- the control group consisted of 60 practically healthy individuals without cardiovascular pathology for all patients, along with the necessary functional ones (ECG, echocardiography, coronary angiography, ultrasound of the abdominal cavity, chest X-ray. A laboratory study was conducted to study the protein, lipid and carbohydrate spectrum of blood, coagulogram, cytokines and growth factors in blood serum.





Results. Immunological blood parameters in cardiovascular syntropia tended to proportionally increase the concentration of all cytokines with increasing severity of the disease: patients in group 1 had an increase of IL-17A by 1.3 times compared with the control group, IL-1 β by 1.25 times, however, the content of other cytokines practically did not differ from the control parameters. In patients of the 2nd group, an increase in the level of IL-17A (99.9 ± 2.71 pg/ml) was detected by 2 times compared with the control (49.9 ± 2.65 pg/ml), while the complement of C3 increased by 1.4 times, In group 3, IL-17A increased by 2 times, IL-6 and C3 - by 1.5 times. It was found that an increase in cytokine levels in proportion to the progression of the severity of the disease proves the pathogenetic significance of immunological changes in the pathology of the cardiovascular system

Conclusion

It was found that the predictors of the development of coronary heart disease in patients with arterial hypertension are elevated levels of creatinine, fibrinogen, procalcitonin and IL-6 in the blood. These indicators were increased in patients with carotid artery atherosclerosis detected by duplex angioscanning, along with pathological changes in the lipid spectrum.

References:

1. Rodrigo E., Fernandez-Fresneda G., Barreda P., Ferrer-Costa C., M de Francisco Á. L. [et al.]. Clinical-genetic approach to assessing cardiovascular risk in patients with CKD. Clinical Kidney Journal. 2017;10(5):672-678. <https://doi:10.1093/ckj/sfx039>
2. Younan P., Iampietro M., Nishida A., Ramanathan P., Santos R.I., Dutta M., Lubaki N.M., Koup R.A., Katze M.G., Bukreyev A. Ebola virus binding to Tim-1 on T lymphocytes induces a cytokine storm. mBio 2017; 8(5): e00845-17, <https://doi.org/10.1128/mbio.00845-17>.

