MODERN MEDICINE AND PRACTICE
https://inovatus.es/index.php/ejmmp
EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE
Vol. 3 No. 05 (May - 2023) EJMMP ISSN: 2795-921X

PECULIARITIES OF RECOVERY OF MYOCARDIAL STUNNIG ZONES IN ACUTE MYOCARDIAL INFARCTION UNDER THE INFLUENCE OF CORVITHIN

Khasanjanova F. O., Saidov M. A., Nizamov Kh. Sh., Muinova K. K., Nizamova N. G.
Samarkand State Medical University, Samarkand regional branch of the Republican Scientific and Practical Medical Center of Cardiology

Annotation: Cardiovascular disease (CVD) ranks first in both economically developed and developing countries in the structure of morbidity and mortality. Cardiovascular accidents such as acute myocardial infarction (AMI) are especially dangerous because of their sudden onset, which is often accompanied by the development of life-threatening complications. Bioflavinoid Efficacy Studied quercetin (Corvitin) on restoration of myocardial stunning zones in patients with AMI with ST segment elevation undergoing myocardial revascularization. The study included 66 patients with ST- segment elevation AMI. Carrying out reperfusion therapy against the background of Corvitin contributes to the protection of the myocardium from the development of the necessary dysfunctions.

Key words: acute myocardial infarction, corvitin, stunnig zone, revascularization.

Relevance:

Most CVDs are based on atherosclerosis, which is asymptomatic for many years and, as a rule, is quite pronounced by the time clinical symptoms appear. In more than 50% of cases, sudden cardiac death or acute myocardial infarction (AMI) are the first symptoms of coronary heart disease (CHD), i.e. occur at the subclinical stage of atherosclerosis. Today, AMI is the leading cause of death in economically developed countries. Even with early myocardial revascularization, the results of treatment often do not satisfy clinicians, and the fact that restoration of blood flow may be accompanied by aggravation of myocardial damage actualizes the task of protecting it from reperfusion and ischemic damage.

To prevent complications of AMI, it is necessary to reduce the progressive damage to cardiomyocytes, a metabolic disorder that occurs from the first seconds of myocardial ischemia [2, 3]. Leading in the pathogenesis of myocardial Stunning is caused by three factors: the formation of an excess amount of reactive oxygen species, postperfusion calcium overload of cardiomyocytes, and a decrease in the sensitivity of myofibrils to calcium [4, 5]. That is why cardiologists have recently been intensively developing methods for the metabolic correction of conditions caused by ischemia / reperfusion in the treatment of acute and chronic forms of coronary artery disease, in particular, methods of myocardial cytoprotection [1, 5, 7]. If earlier the efforts of researchers were concentrated on studying the metabolic properties of hemodynamically active drugs, then more and more attention has recently been paid to drugs that have the properties of antioxidants and membrane protectors, inhibitors of catabolic enzymes [6, 10]. The search for new drugs for the prevention of reperfusion injuries with an impact on the key pathogenetic links of this process continues. These include quercetin, an inhibitor of a number of oxidative enzymes,

especially lipoxygenases, a powerful antioxidant, as has recently been established, a drug that increases the content of nitric oxide in the ischemic myocardium [4, 6, 9].

Corvitin is a complex of quercetin with polyvinylpyrrolidone (lyophilized powder for solution for injections). The range of pharmacological effects of the intravenous form of quercetin is quite wide [3, 7, 8]. Corvitin has a cardioprotective effect on the neurons of the ischemic myocardial tissue. It has been established that the main cardioprotective mechanisms of Corvitin are membrane-stabilizing, antioxidant, anticoagulant, antiplatelet and anti-apoptotic effects [2, 5, 9] .

Quercetin protects cell membranes and improves capillary function, restores blood microcirculation throughout the body, and normalizes metabolism at the cellular level [1, 12, 16]. Its antioxidant effect is many times greater than the effectiveness of vitamins A, C and E. Quercetin increases the effectiveness of complex therapy. Studies have shown that the inclusion of quercetin in the complex therapy of hypertension and cardiac arrhythmias increased the effectiveness of treatment by 86.7% [11, 13, 17]. In addition, quercetin has anti-inflammatory, decongestant, antihistamine effects, lowers cholesterol and glucose levels, and reduces blood viscosity.

Purpose of the study: to study the features of restoration of stunning zones of the myocardium of the left ventricle in acute myocardial infarction under the influence of Corvitin after myocardial revascularization .

Materials and methods of treatment: The study included 70 patients with AMI with ST segment elevation from 23 to 45 years old, hospitalized in the departments of acute coronary syndrome and coronary heart disease of the Samarkand Regional Branch of the Republican Specialized Scientific and Practical Medical Center for Cardiology. The mean age of the patients was 42±3.4 years. All patients were randomized into 2 groups. Group 1 included 37 patients who received traditional therapy and underwent myocardial revascularization. The 2nd group included 33 patients who were prescribed in combination with the traditional method of treatment, the drug quercetin was added at a dose of 1.0 + 0.9% -100 ml of sodium chloride solution intravenously for 5 days after revascularization myocardium. Conducted stress echocardiography (EchoCG) with dobutamine after stabilization of the condition on the 7th day of the disease, repeated echocardiography on the 10th, 15th and after a month of treatment.

Results of the study: In the 2nd group of patients, after a test in small doses of dobutamine, myocardial stagnating was shown in 86% of segments of all asynergic segments. In group 1, left ventricular (LV) myocardial dysfunction was irreversible in 32% of segments, and reversible in 55%. On the 10th day, patients in the 2nd group showed a decrease in the number of stunted asynergic segments up to 23%, and in the 1st group up to 32%. On the 15th day of observation in the 2nd group of patients out of all asynergic segments remained only 9%, and in the 1st group 16%. Echocardiography after a month in patients in group 2 in all viable segments showed restoration of contractile function. However, in the 1st group, a month later, of all identified viable segments, 7% of the contractile function did not recover. Indicators of global systolic function were significantly higher in the group of patients treated with Corvitin compared with the control group (LV EF was 53±4.1% and 48±4.2%, respectively). In patients with AMI with ST elevation reperfusion therapy contributed to the prevention of LV dilatation, but LV volume indices in patients treated with Corvitin during reperfusion therapy were significantly lower. On echocardiography a month later, LV EDV in the 1st and 2nd groups was 151.3±5.1 and 160.2±4.2 ml, respectively. Application of infusion Corvitin prevented dilatation of the LV cavity, as a result of which the end-diastolic and systolic indices did not change during 30 days of observation. The LV ejection fraction increased to a large extent in group 2. This effect of Corvitin is associated with the inhibition of oxidase enzymes, especially lipoxygenases, powerful antioxidant properties and an increase in the content of nitric oxide in ischemic areas.

Conclusions. Carrying out reperfusion therapy at the front of the infusion Corvitin contributes to the protection of the myocardium from the development of irreversible dysfunctions, contributes to the formation of stunning (stunned) peri-infarction zones and a faster, complete restoration of the contractile function of these zones.

Bibliography:

1. Dilshodovna, Abdulloyeva Maftuna, Khasanjanova Farida Odylovna, and Pulatova Kristina Samveilovna. "Peculiarities of Psychological Disorders in Patients with Acute Coronary Syndrome." *INTERNATIONAL JOURNAL OF HEALTH SYSTEMS AND MEDICAL SCIENCES* 1.6 (2022): 203-207.
2. Gafurov B.G., M.M. Akhmedova Efficiency of neuroprotective therapy of ischemic cerebral stroke using Corvitin. Bulletin of KazNMU, No. 2-2015. Page 345-347.
3. Mishchenko T.S. Combination therapy with Corvitin and Axotiline in the treatment of patients with ischemic stroke. International neurological journal. No. 1 (95), 2018
4. Muinova, Kamola Komilovna, et al. "The role of risk factors in the development of myocardial infarction in young men depending on family history." *Advances in Science and Education* 11 (52) (2019): 70-74.
5. Majidova, Gulbakhor Talibovna, Kamola Komilovna Muinova, and Farida Orifovna Rasuli. "Family history prediction of myocardial infarction in young men." *Scientific Journal* 9 (43) (2019): 55-57.
6. Soldatova O.V. Influence of quercetin on the dynamics of serum concentrations of nonspecific proteinases and their inhibitors in patients with acute myocardial infarction treated with thrombolytic therapy. Crimean Journal of Experimental and Clinical Medicine. 2017, v.7, no.1. Page 51-59.
7. Tashkenbaeva, E. N., F. O. Khasanzhanova, and D. D. Khaidarova. "Influence of risk factors on the outcome of treatment in patients with ST-segment elevation acute coronary syndrome." *Eurasian Union of Scientists (ESU)* 9 (2018): 54.
8. Tashkenbaeva, E. N., F. O. Khasanzhanova, and D. D. Khaidarova. "Influence of risk factors on the outcome of treatment in patients with ST-segment elevation acute coronary syndrome." *Eurasian Union of Scientists (ESU)* 9 (2018): 54.
9. Tashkenbaeva, E. N., F. O. Khasanzhanova, and D. D. Khaidarova. "Influence of risk factors on the outcome of treatment in patients with ST-segment elevation acute coronary syndrome." *Eurasian Union of Scientists (ESU)* 9 (2018): 54.
10. Farida Odylovna Khasanzhanova, Mumin Shamsievich Rofeev Common risk factors for myocardial infarction in young men with different outcomes of the disease. Actual scientific research in the modern world.
11. Farida Od ylovna Khasanzhanova, Eleonora Negmatovna Tashkenbayeva The role of changes in markers of cardiomyocyte necrosis in patients with myocardial infarction depending on age. Actual scientific research in the modern world. 2018 No. 10-6. Page 42-45.
12. Khasanjanova F.O. et al. "Clinical, hemodynamic and genetic aspects of the development of unstable angina in young men". *European Journal of Molecular and Clinical Medicine* 7.09 (2020): 2122-2139.
13. Khasanjanova F.O., Tashkentenbaeva E.N., Khaidarova D.D., Mukhiddinov A.I. Features of the influence of risk factors on the outcome of treatment of patients with acute coronary syndrome with ST segment elevation in men at a young age // Colloquium-Journal. 2020. No. 19 (71).

14. Khasanzhanova F. O., Tashkenbaeva E. N. Analysis of the clinical course of unstable angina pectoris in men at a young age // Journal of Cardiorespiratory Research. – 2022. – no. SI-2.
15. Khasanzhanova F.O., Tashkenbaeva E.N., Sunnatova G.I., Khaitov I.I. (2021). Evaluation of the effectiveness of thrombolytic therapy in men with acute myocardial infarction at a young age. *Conference Archives, 15* (1), 48-52.
16. Khasanzhanova Farida Odylovna The role of dyslipidemia in the development of coronary heart disease in men at a young age. No. SI-2 (2022): Journal of Cardiorespiratory Research. Page
17. Khasanzhanova, Farida Odylovna, and Eleonora Negmatovna Tashkenbaeva. "Differences in the incidence of major complications in patients with acute myocardial infarction." *Current Research in the Modern World* 10-6 (2018): 39-41.