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Clinical Status of Patients with Unstable Angina and Chronic Heart Failure with Normal Ejection Fraction

Khasanjanova F. O., Abdukhalikov A. A.
Samarkand State Medical Institute

Saidov M. A., Nizamov Kh. Sh., Rakhmatullaev A. A.
Samarkand regional branch of the Republican Scientific and Practical Specialized Medical Center for Cardiology, Samarkand, Uzbekistan

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ABSTRACT

Chronic heart failure is a syndrome that develops as a result of a violation of the ability of the heart to fill and / or empty, occurring in conditions of an imbalance of vasoconstrictor and vasodilating neurohormonal systems, accompanied by insufficient perfusion of organs and systems and manifested by complaints: shortness of breath, weakness, palpitations and increased fatigue and, with progression, fluid retention in the body (edematous syndrome) [1, 3, 5]. At the present stage, the attention of cardiologists and therapists is drawn to the conditional polarity of CHF variants with low and normal left ventricular ejection fraction (LVEF), since relatively recently it has become obvious that approximately half of all cases of CHF occur with a normal or borderline state of the contractile function of this chamber of the heart [2, 4, 6]. In the first years of this century, the prevalence of this variant of CHF was 3-5% in the general population of people over 65 years old, and among men and women aged 80 years and older - 4-6% and 8-10%, respectively [7, 9, 11]. Statistical reports indicate a stable trend towards an increase in the general population incidence of CHF with preserved LV EF (approximately 1% per year), which may lead to a change in the phenotype of heart failure as such in the coming decades [8, 10, 12]. The leading role of hypertension in the occurrence of CHF with normal LV contractility has been firmly proven [13, 15, 17]. The presence of systemic hypertension in history was noted in the vast majority (>80%) of patients with CHF, whose left ventricular ejection fraction was ≥50% [14, 16, 18].

Recent studies [19] have shown that a significant proportion of patients with CHF have normal or almost normal (slightly reduced) LV EF. The occurrence of CHF in such patients is due to a violation of the processes of relaxation and filling, loss of elasticity and increased stiffness of the LV myocardium with preserved EF (50%), i.e., a violation of the diastolic function of the LV myocardium. In such cases, one speaks of HF-SFV LV or diastolic HF. Currently, LVHF-HF is understood as a complex clinical and pathophysiological syndrome characterized by symptoms and clinical signs of CHF and LV myocardial dysfunction, despite a normal or practically unchanged LV EF [4, 6, 9]. Unlike systolic CHF, for the diagnosis of diastolic CHF, four criteria must be simultaneously identified in a patient: 1) symptoms typical of CHF; 2) physical signs typical for CHF; 3) normal or slightly reduced LV EF in the absence of dilatation of the LV cavity; 4) relevant structural changes in the heart, such as LV myocardial hypertrophy or dilatation of the left atrial (LA) cavity, and/or diastolic dysfunction of the LV myocardium [12, 15, 20].

It is believed that older women with obesity, hypertension, coronary artery disease, diabetes, atrial fibrillation (AF), anemia, chronic renal failure and other diseases are more likely to be patients with LVHF-HF [4, 6, 9]. Clinical manifestations of CHF in patients with instrumental signs of only diastolic dysfunction of the LV myocardium and those with disorders of both systolic and diastolic function of the LV myocardium do not differ significantly [11]. At the same time, systolic CHF is easier to verify than CHF-SFV of the left ventricle, since its symptoms and clinical signs are more pronounced, and by the time it appears, most patients, as a rule, have already been diagnosed with serious heart damage. Patients with LVHF-HF often do not have obvious heart disease and complain only of shortness of breath and decreased exercise tolerance or fatigue, which are mistakenly regarded by general practitioners as clinical manifestations of other diseases, such as anemia, obesity, or chronic obstructive disease lungs, so the prevalence of HF-SFV in the general population may be underestimated [4, 6, 8].

The frequency of occurrence of patients with CHF-SFV LV depends on the severity of the examined population and the criteria for assessing systolic function. So, in severe decompensated inpatients with CHF, the frequency of HF-SFV of the left ventricle is low and, as a rule, does not exceed 20% [12; 14], and among all patients with CHF in inpatient and outpatient practice, the proportion of CHF-SFV of the left ventricle can reach 30-50% [13]. According to the population study EPOCHA-O-CHF [11], in our country, more than half of patients with CHF have preserved LV EF. It is for this reason that studying the clinical course of CHF with preserved LV EF in patients with unstable angina pectoris determines the relevance of this problem.

Aim : to evaluate the clinical status of patients with unstable angina pectoris with chronic heart failure with preserved left ventricular ejection fraction (CHF-SFV) and its relationship with other factors.

Materials and methods. The study included 92 patients (45 men, 47 women) with CHF – NFV stages I–II A, FC I–III, in combination with coronary heart disease (CHD), aged 49–77 years (mean age 60.0±7, 8 years). All patients underwent anamnesis, anthropometry, general clinical examination with an assessment of CHF symptoms according to the SHOKS scale. Exercise tolerance was determined using the 6-minute walk test (WST). ECG and echocardiography were also performed according to the standard method. Statistical processing of the results was carried out using the Statistica 6.1 program.

Results. The substrate for the development of CHF-SFV in 50% of patients was progressive exertional angina, in the remaining 50% - hypertension in combination with coronary artery disease. In women, CHF–SFV more often developed against the background of unstable angina (73% of cases), in men - against the background of a combination of hypertension with coronary artery disease (73.3% of cases). Abdominal obesity (WC ≥80 cm in women and ≥94 cm in men) was observed in 79.3% of patients. The proportion of patients with AO among men and women was 80 and 85%, respectively. During the general clinical examination, all patients complained of shortness of breath during exercise; 55 (59.7%) had pastosity of the feet and legs, 10 (23.8%) had edema; congestive rales in the lungs were heard in 8 (19.0%); also in 8 (19.0%) - the liver was enlarged. Correlation analysis revealed a relationship between the total score for SHOKS and QoL (r=0.43; p=0.003), as well as SHOKS and the result of TST (r=-0.46; p=0.002). The severity of the clinical condition according to SHOCS was also influenced by the thickness of the IVS (r=0.47; p=0.002), GL (r=0.34; p=0.03), LVML (r=0.38; p=0, 03) and LVMI (r=0.35; p=0.04). Patients with hypertension and coronary artery disease had a higher total score for SHOCS than patients with progressive angina pectoris: 4.0±1.6 versus 3.3±0.8 (p=0.08); and they also tolerated physical activity worse: the distance covered by them during the TSH was 376.3±82.2 m and 415.4±78.6 m, respectively (p=0.09). Differences were

also obtained between some structural and functional parameters of the myocardium in these groups of patients: the size of the pancreas in patients with only unstable angina was 30.0 ± 3.2 mm versus 32.1 ± 2.8 mm in patients with hypertension and coronary artery disease (p= 0.03), IVS thickness – 13.1±0.9 and 14.1±1.7 mm (p=0.02), IVRT – 112.1±26.9 and 131.7±27.4 mm (p=0.04), LV MM - 257.6±41.0 and 310.5±63.1 g (p=0.006), LV MM - 138.8±21.2 and 154.2±19, 9 g/m2 (p=0.04), respectively.

Conclusions. Women with unstable angina pectoris most often suffer from CHF–SFV, the vast majority of whom have AO. The leading complaint is dyspnea on exertion. With an increase in the total score for SHOKS, the quality of life and exercise tolerance deteriorate. The severity of clinical manifestations of CHF correlates with the degree of LV hypertrophy. Patients with hypertension and coronary artery disease have more pronounced CHF symptoms, tolerate physical activity worse and have a higher degree of LV hypertrophy.

Bibliography:

1. Mareev, V. Yu., et al. "Clinical guidelines. Chronic heart failure (CHF)." *Heart Failure* 18.1 (2017): 3-40.
2. Mareev, V. Yu., et al. "Chronic heart failure (CHF)." *Journal of Heart Failure* 18.1 (2017): 3-40.
3. Subkhonov U. Zh., Khasanzhanova F. O., Tashkenbayeva E. N. Adverse risk factors affecting the outcome of treatment of patients with acute coronary syndrome with ST segment elevation // Topical issues of modern medical science and health care: collection of articles of the IV International Scientific and Practical conference of young scientists and students, IV All-Russian Forum of Medical and Pharmaceutical Universities "For Quality Education", (Ekaterinburg, April 10-12, 2019): in 3 volumes - Ekaterinburg: USMU, CD-ROM. - Federal State Budgetary Educational Institution of Higher Education "Ural State Medical University" of the Ministry of Health of the Russian Federation, 2019.
4. Tashkenbaeva, E. N., et al. "Peculiarities of the clinical course of unstable angina pectoris with chronic heart failure in patients with preserved ejection fraction." *Eurasian Journal of Cardiology* S1 (2019): 279.
5. Tashkenbaeva, E. N., et al. "Relationship between the severity of chronic heart failure and the location of acute myocardial infarction." *Science and Modern Society: Interaction and Development* 2.1 (2018): 36-38.
6. Tashkenbaeva, E. N., F. O. Khasanzhanova, and K. Z. Abdullaev. "Risk factors for the development of cardiovascular complications in patients with ST-segment elevation acute coronary syndrome." *Science and Society in an Age of Change* 1 (2018): 15-19.
7. Tashkenbaeva, Eleonora, Farida Khasanzhanova, and Tohirjon Yusupov. "PARAMETERS OF LEFT VENTRICLE SYSTOLIC FUNCTION UNDER THE INFLUENCE OF THROMBOLYTIC THERAPY IN PATIENTS WITH ST-ELEVATION ACUTE CORONARY SYNDROME IN YOUNG AGE." *TRENDS AND PERSPECTIVES FOR THE DEVELOPMENT OF SCIENCE AND TO EXPLAIN IN THE MIND OF GLOBALIZATION* : 399.
8. Tereshchenko, S. N., and I. V. Zhirov. "Chronic heart failure: new challenges and new perspectives." *Therapeutic Archives* 89.9 (2017): 4-9.
9. Tereshchenko, S. N., et al. "Chronic heart failure. Clinical guidelines 2020." *Russian Journal of Cardiology* 11 (2020): 311-374.

10. Farida Odilovna Khasanjanova, Eleonora Negmatovna Tashkenbayeva, Rizamat Ziyadullaevich Mirzaev The development of chronic heart failure depending on the localization of acute myocardial infarction in men at a young age . Biomedicine wa amalyit magazines. №SI-2 | 2020. Page 276-281.
11. Fomin, I. V. "Chronic heart failure in the Russian Federation: what we know today and what we must do." *Russian Journal of Cardiology* 8 (136) (2016): 7-13.
12. Khasanzhanova F. O., Rofeev M. Sh. Common risk factors for myocardial infarction in young men with different outcomes of the disease // Actual scientific research in the modern world. – 2019. – no. 10-7. - S. 87-90.
13. Khasanzhanova, F. O., et al. "Changes in markers of cardiomyocyte necrosis in patients with myocardial infarction depending on age." *Materials of the IV Congress of the Association of Doctors of Emergency Medical Care of Uzbekistan. Tashkent* (2018): 13-14.
14. Khasanzhanova, F. O., et al. "Clinical course of chronic heart failure from localization of acute myocardial infarction." *Eurasian Journal of Cardiology* S1 (2019): 221.
15. Khasanzhanova, F. O., et al. "Predictors of poor prognosis in acute ST-segment elevation myocardial infarction in the emergency medical setting." *Materials of the IV Congress of the Association of Emergency Doctors of Uzbekistan* 278 (2018).
16. Khasanzhanova, F. O., et al. "Efficacy of Thrombolytic Therapy in Patients With St - Elevation Acute Coronary Syndrome in Young Individuals." *Central Asian Journal of Medical and natural Science* 4.2 (2023): 632-636.
17. Khasanzhanova, Farida Odylovna, and Eleonora Negmatovna Tashkenbaeva. "The role of changes in markers of cardiomyocyte necrosis in patients with myocardial infarction depending on age." *Current Research in the Modern World* 10-6 (2018): 42-45.
18. Khasanzhanova, Farida Odylovna, and Eleonora Negmatovna Tashkenbaeva. "Unfavorable risk factors affecting the outcome of treatment in patients with ST-segment elevation acute coronary syndrome." *Avicenna* 34 (2019): 4-6.
19. Khasanzhanova, Farida Odylovna, Ulugbek Azimjon Ugli Mardonov, and Tokhirjon Shomirza Ugli Yusupov. "Factors that adversely affect the outcome of treatment of patients with acute coronary syndrome in young and old age." *Problems of Modern Science and Education* 11-1 (144) (2019): 94-97.
20. Khasanzhanova, Farida Odylovna. "IMPACT OF THROMBOLYTIC THERAPY ON LEFT VENTRICLE SYSTOLIC FUNCTION IN ST-ELEVATION ACUTE CORONARY SYNDROME IN YOUNG AGE." *Current Research in the Modern World* 10-7 (2019): 91-95.