UDC 616.124.2-008.1:616.12-008.46

ASSESSMENT AND PREDICTION OF THE CLINICAL COURSE OF CHF IN PATIENTS WITH MYOCARDIAL REVASCULARIZATION

Musaeva R.Kh.

Bukhara State Medical Institute

✓ *Resume*

Chronic heart failure (CHF) is one of the most common, progressive and prognostically unfavorable diseases of the cardiovascular system, the social significance of which is determined by the high mortality rate of patients, the most common cause of hospitalization, deterioration in the quality of life (QOL) and disability of patients [1,2]. The results of the study showed that the clinical course of the disease and LV systolic dysfunction are associated with the degree of occlusion of the coronary arteries. Severe lesions of the coronary arteries - 85-95% and total occlusion were significantly more frequent in the group of patients with reduced LV systolic function (EF <40%) and a relationship was revealed between the progression of the disease, as well as an increase in volume parameters - end-diastolic and end-systolic volumes LV with degree of occlusion

Key words: Assessment and prognosis of the clinical course of chronic heart failure, patients with myocardial revascularization.

MIYOKARDIYAL REVKULYARIZATSIYA QILINGAN BEMORLARGA SURUNKALI YURAK ETISHMOVCHILIGINING KLINIK KECHSINI BAHOLASH VA BASHORATLASHLASH

Musaeva R.X.

Buxoro davlat tibbiyot instituti

✓ *Rezyume*

Surunkali yurak etishmovchiligi (SYE) yurak-qon tomir tizimining eng keng tarqalgan, progressiv va xavfli prognozli kasalliklaridan biri bo'lib, uning ijtimoiy ahamiyati bemorlarning yuqori o'lim darajasi bilan belgilanadi, kasalxonaga yotqizishning eng keng tarqalgan sababi, bemorlarning hayoti sifati yomonlashishi (HS) va nogironligi sababi hisoblanadi.[1,2]. Natijalar. Tadqiqot natijalari shuni ko'rsatdiki, kasallikning klinik jarayoni va chap qorincha sistolik disfunktsiyasi koronar arteriyalarning okklyuziya darajasi bilan bog'liq. Chap qorincha sistolik sistolik funktsiyasi pasaygan (OF <40%) bemorlar guruhida koronar arteriyalarning og'ir zararlanishi - 85-95% va umumiy okklyuziya sezilarli darajada tez-tez uchraydi va kasallikning rivojlanishi bilan o'zaro bog'liqlik aniqlandi hajm parametrlarining ko'payishi - okkluziya darajasi bilan chap qorinchaning so'nggi diastolik va sistolik hajmlari bogliqligi aniqlandi.

Kalit so'zlar: Surunkali yurak etishmovchiligining klinik kechishini baholash va prognozi, miokard revaskülarizatsiyasi bo'lgan bemorlar.

ОЦЕНКА И ПРОГНОЗИРОВАНИЕ КЛИНИЧЕСКОГО ТЕЧЕНИЯ ХСН У БОЛЬНЫХ С РЕВАСКУЛЯРИЗАЦИЕЙ МИОКАРДА

Мусаева Р.Х.

Бухарский государственный медицинский институт

✓ *Резюме*

Хроническая сердечная недостаточность (ХСН) является одним из распространенных, прогрессирующих и прогностически неблагоприятных заболеваний сердечно-сосудистой системы, социальная значимость которой определяется высокой смертностью больных, наиболее частой причиной госпитализации, ухудшением качества жизни (КЖ) и ограничением трудоспособности больных [1,2]. Результаты. Результаты исследования показали, что клиническое течение заболевания и систолическая дисфункция ЛЖ ассоциируется с со степенью оккклюзии коронарных артерий. Тяжелые степени поражения коронарных артерий – 85-95% и тотальная окклюзия достоверно чаще встречались в группе

больных со сниженной систолической функцией ЛЖ (ФВ<40%) и выявлена взаимосвязь прогрессирования заболевания, а также увеличения объемных показателей – конечно-диастолического и конечно-систолического объемов ЛЖ со степенью окклюзии.

Ключевые слова: Оценка и прогноз клинического течения хронической сердечной недостаточности, больные с реваскуляризацией миокарда.

Relevance

Chronic heart failure (CHF) is one of the most common, progressive and prognostically unfavorable diseases of the cardiovascular system, the social significance of which is determined by the high mortality rate of patients, the most common cause of hospitalization, deterioration in the quality of life (QOL) and disability of patients [1,2]. According to the Framingham Study, HF have approximately 1–2% of the adult population in developed countries [3]. CHF is the outcome of all cardiovascular diseases and the so-called cardiovascular continuum, has become one of the most important problems in practical health care [4,5]. The main causes of CHF are coronary heart disease (CHD) and arterial hypertension. The risk of sudden death in patients with CHF is 5 times higher than in those without heart failure [6]. A number of scientific studies are underway aimed at diagnosing, early detection and achieving high efficiency in approaches to the tactics of treating patients with CHF. In the development of approaches to treatment, the most important aspect is the introduction of surgical methods for the treatment of CHF using high-tech methods [7,8]. In CHF of ischemic genesis, it is important to study the features of the angiographic characteristics of coronary artery disease, the relationship between clinical and hemodynamic parameters, heart remodeling processes and disease prognosis [9, 10].

The aim of the study was to predict the course of CHF in patients with myocardial revascularization.

Material and methods. Were examined 112 patients with CHF with II-III FC CHF ischemic genesis. The average age of the patients was 56.4 ± 4.5 years. The patients were divided into 2 groups: group 1 consisted of 50 patients who received stard therapy for CHF, group 2 - 62 patients who underwent myocardial revascularization by stenting coronary arteries.

Result and discussion

The analysis of the clinical course of the disease in the examined patients with FC III and III CHF showed: the initial indicators of HS were 327.7 ± 11.6 and 197.5 ± 7.4 meters, respectively. The study of the initial indicators of the clinical state of patients with CHF according to the results of SHOKS revealed that the indicators in patients with CHF II and III FC were 5.9 ± 0.2 and 10.2 ± 0.1 points, respectively. The analysis of the initial indicators of the quality of life according to the total index of the quality of life according to the results of the Minnesota questionnaire in the examined patients showed a significant increase in SI QOL with an increase in the FC of CHF. In patients with FC II and III CHF, SI QOL was 30.1 ± 4.6 and 42.5 ± 3.7 points, respectively (Table 1).

Characteristics of the clinical state in patients with CHF   Table 1

	Age	six minute walk test	clinical assessment scale	the quality of life
Total 112 (100%)	56,4±4,5	244,7±10,5	7,4±2,1	34,1±0,9
FC II 39 (34,8%)	57,7±3,9	327,7±11,6	5,9±2,2	30,1±4,6
FC III 73 (65,2%)	56,16±3,2	197,5±17,4	10,2±1,9	42,5±3,7

When analyzing the relationship between the degree of coronary vascular lesions and the clinical course of CHF, it was found that with 55-60% coronary artery disease, the HRT was 367.5 ± 7.5 meters, with 85-95% lesions - 168.6 ± 11.3 meters. When studying the indicators of SHOC, it was also

found that with lesions of the coronary artery 85-95%, this indicator was 13.5 ± 0.5 points, which was 1.7 times higher than the indicator of SHOC with lesions of coronary arteries 55-60% (Table .2).

Table 2
Characteristics of the clinical state in patients with CHF depending on the erosion of coronary artery lesions

KA lesion degree	six minute walk test		clinical assessment scale		the quality of life	
	FC II	FC III	FC II	FC III	FC II	FC III
55-60%	367,5± 7,5	240,25± 240,3	5,8± 0,5	7,8± 0,5	25,25± 4,4	29,6± 4,1
60-70%		207,2± 24,5		8,4± 0,4		33,9± 2,8
70-85%	329,5± 10,3	184,6± 26,5	4,75± 0,5	8,8± 0,2	29,8± 2,3	36,8± 2,6
85-95%	335,2± 8,8		5,8± 0,5	11,4± 0,1	33,5± 3,5	43,2± 2,1
Total occlusion	327,5± 25,9	250,5± 39,5	6,5± 0,5	13,5± 0,5	36,2± 3, 9	42,5± 4,5

When studying the QOL parameters in CHF patients, an association was also noted between the SI QOL parameters and the degree of coronary artery disease: in FC II patients with coronary artery lesions of 85-95%, it was 33.5 ± 8.5 points, and in FC III patients - 42 , 5 ± 4.5 points. These indicators exceeded the indicators of patients with coronary artery disease 55-60% by 1.3 (p <0.05) and 1.4 times (p <0.01), respectively. Revealed an inverse correlation between the degree of stenosis of the coronary arteries and indicators of SHOC, QOL.

The results of the study showed that the clinical course of the disease and LV systolic dysfunction are associated with the degree of occlusion of the coronary arteries. Severe lesions of the coronary arteries - 85-95% and total occlusion were significantly more frequent in the group of patients with reduced LV systolic function (EF <40%) and a relationship was revealed between the progression of the disease, as well as an increase in volume parameters - end-diastolic and end-systolic volumes LV with degree of occlusion.

Correlation of the degree of coronary artery disease with the clinical course of the disease and indicators of cardiac remodeling was revealed: a high inverse correlation with HSH and EF (r = -0.71, r = -0.65, respectively) and a direct correlation with SHOC and LV ED (r = 0, 64, r = 061, respectively) and an indicator of the quality of life (r = -0.51).

In order to predict the progression of CHF, a calculator program has been developed to determine the prognosis of the course of CHF, taking into account angiographic indicators, LV contractility, clinical criteria of the disease,
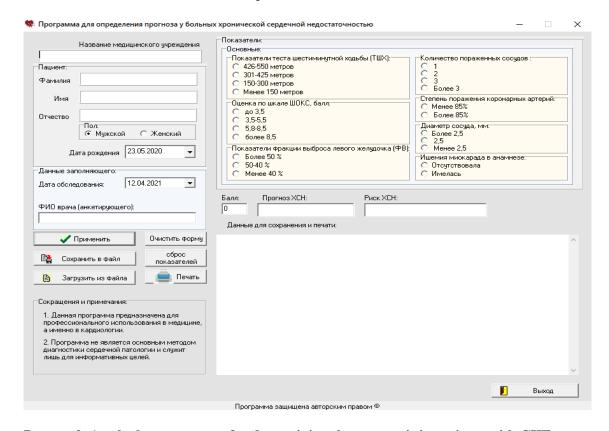
including the assessment of the significance, diagnostic value and prognostic significance of individual diagnostic criteria with the construction of a mathematical model of signs. To assess the individual risk stratification of the patient, a diagnostic table was compiled to identify the probability of an error-free prognosis and assess the severity of the patient, which makes it possible to determine the individual prognosis of the progression of CHF. To assess the significance of the parameters in predicting the course of CHF, a method based on the theory of feature recognition with a probabilistic approach was used. The method allows you to determine the diagnostic value of features by calculating diagnostic coefficients. The development of differential diagnostic tables included three stages: the first was the study of the probability of a symptom in case of a favorable and unfavorable course of CHF, the calculation of diagnostic coefficients and the determination of the information content of each symptom. The second stage was the compilation of diagnostic tables, which included only signs with high information content. The third stage is the choice of diagnostic thresholds (the sum of diagnostic coefficients), which made it possible to make the correct diagnostic decision.

The assessment of the sensitivity, specificity and prognostic significance of identifying each sign for predicting the course of CHF was carried out on the basis of the compiled matrix and with the corresponding formulas.

To assess the prognosis of the course of CHF, taking into account the methods of investigation of patients with CHF, the following parameters were selected: HSH, assessment of the clinical state by

SHOKS, angiographic data, LV systolic function - EF. The most sensitive signs for determining the prognosis of the course of CHF were: - TShH <150 m, SHOKS> 8.5, CA lesions> 80%, the presence of a small diameter of vessels <2.5 mm; 2-3 vascular lesions of the coronary arteries; History of myocardial infarction; LVEF <40%.

Pattern 2. A calculator program for determining the prognosis in patients with CHF

The analysis of prognostic parameters showed that patients with developed unfavorable outcomes had low exercise tolerance (according to TSS), higher scores of SHOC, pronounced stenosis of the coronary arteries (more than 80%) and lower LVEF (less than 40%), as well as the presence of lesions of several arteries compared with patients without cardiac events.

Thus, assessing the prognosis in patients with CHF is important for determining the severity of the course of the disease in each patient, optimizing treatment by selecting a treatment method, which helps to improve the course of the disease, reduce secondary complications and improve the quality of life of patients.

LIST OF REFERENCES:
1. Douglas L., Mann G., Felke M. Heart Failure: A Companion to Braunwald's
2. Heart Disease. 10th addition, 2015: 762p.
3. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2016. European Heart Journal, 2016; 37 (27): 2129-2200.
4. Habal M.V., Liu P.P., Austin P.C. et al. Association of heart rate at hospital discharge with mortality and hospitalizations in patients with heart failure. Circ Heart Fail, 2014; 7: 12-20.
5. Osipova OA, Petrova GD, Shekhovtsova LV, Nagibina AI and others. The main pathogenetic mechanisms of the development of chronic heart failure against the background of ischemic heart disease. Scientific Bulletin of Belgorod State University, 2015: 4 (201): 29: 11-15.
6. Yancy C.W., Jessup M. 2016 ACC/AHA/HFSA Focused Update on New Pharmacological Therapy for Heart Failure: An Update of the 2013 ACCF/AHA Guideline for the Management of Heart Failure: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Failure Society of America. Circulation, 2016; 134: e282.
7. Windecker S., Kolh P., F.Alonso 2014 ESC/EACTS Guildelines on myocardial revascularization: the Task Force on Myocardial Revascularization of the European Society of Cardiology(ESC) and the European Association for Cardio-Thoratic Surgery(EACTS) developed with the special

contribution of the European Association of Percutaneous Cardiovascular Intervention (EAPCI). 2014.-Vol.35,№37.P.2541-2619.

8. Gautier S.V., Mironkov A.B., Sakhovsky S.A. Evaluation of the efficiency of myocardial revascularization in potential heart recipients with chronic ischemic heart failure. Bulletin of Transplantology and Artificial Organs. 2018; 20 (1): 39–44.

9. Rayol S.C., Sá M.P.B.O., Cavalcanti L.R.P.et al. Current Practice of State- of-the-Art Coronary Revascularization in Patients with Heart Failure. Braz J Cardiovasc Surg. 2019 Jan-Feb; 34(1): 93–97.

10. Khazova E.V., Bulashova O.V., Malkova M.I. A new approach to predicting the outcomes of chronic heart failure. Practical Medicine 2014; 6: 101-104.

11. Hwang S.J., Melenovsky V., Borlaug B.A. Implications of coronary artery disease in heart failure with preserved ejection fraction. J Am Coll Cardiol, 2014; 63: 2817–2827.

Entered 09.02.2021