

SPECIALIZED CENTER FOR THE PATIENTS WITH CHRONIC HEART FAILURE -EXTENSION OF LIFE

Rizayev J.A.¹, Agababyan I.R.², Ismoilova Yu.A.³

¹Rizayev Jasur Alimdjanovich - Doctor of Medical Sciences, Professor, Rector;

²Agababyan Irina Rubenovna - Candidate of Medical Sciences, Associate
Professor, Head of the Department;

³Ismoilova Yulduz Abduvokhidovna - Assistant,

DEPARTMENT OF INTERNAL MEDICINE, FACULTY OF POSTGRADUATE,
SAMARKAND STATE MEDICAL INSTITUTE,
SAMARKAND, REPUBLIC OF UZBEKISTAN

Abstract: *chronic heart failure (CHF) is a serious problem for all developed countries of the world, despite significant progress in treatment, since the prognosis of these patients remains unfavorable. This is primarily due to the aging of the population, since a sufficient number of drugs have appeared that have a positive effect on the life expectancy of these patients. However, the introduction of centers for monitoring patients with CHF will be able to prolong and improve the quality of life of patients with CHF.*

Keywords: *CHF, specialized care, hospitalization.*

In the last 15 years, there has been an increase in the number of patients with chronic heart failure (CHF) in our country, especially FC III-IV [1, 3]. Diagnostics, treatment methods have become more advanced, as well as a sufficient number of new drugs aimed at improving the quality of life of patients. All this prolongs the life of patients with chronic heart failure (CHF) at a satisfactory level.

However, it should be noted that currently, during the covid-19 pandemic, there is a natural increase in mortality from cardiovascular diseases, due to the fact that patients are not given proper attention. A sufficient number of prostate complications appeared in the heart after acute viral myocarditis, toxic-metabolic cardiomyopathy, cases of stress cardiomyopathy (Takatsubo syndrome), lymphocytic pericarditis, progressive CHF, rhythm and conduction disturbances requiring long-term rehabilitation were revealed.

For patients with CHF, especially with stages III-IV, frequent development of acute decompensation is characteristic, and hence frequent hospitalizations, which significantly increases the cost of the state for the management of such patients and dictates the need to create a system of specialized medical care, as well as strict control over drug therapy and physical rehabilitation after discharge from the hospital at the outpatient stage (Mareev V.Yu. et al., 2014).

With the discovery of ACE inhibitors, ARBs, BB and AMCRs in the 20th century, the understanding of pathogenesis and approaches to the treatment of CHF changed, which was reflected in the rapid rate of improvement in the

survival rate of patients with CHF in those years [2, 4]. Today, a revolution in the treatment of CHF is taking place again - the use of ARNI, a renin antagonist neprilisin inhibitor, can, on average, increase the prognosis of life in patients with severe CHF by 2.1 years compared with a three-component neurohormonal blockade based on an ACE inhibitor [5, 10, 28]. In many countries of Europe, North Africa, the Middle East and the United States, a good coverage of patients with basic CHF therapy is reported: in many studies and registries, the use of RAAS, BB and AMKR blockers is observed in almost 90% of patients [7, 8, 9, 15, 18, 19, 23, 28].

In recent years, more and more foreign and Russian experts in the field of CHF have expressed an opinion about the need to change approaches to the management of patients with CHF and the creation of specialized medical care centers for this category of patients [8, 17, 24, 30]. Today, specialized centers for the treatment of CHF have been created and successfully operate in Europe, the USA, Australia and New Zealand and in Russia. The international practice of specialized centers for the treatment of CHF shows a significant reduction in the risk of overall mortality and the frequency of readmission to hospital when changing approaches to monitoring patients with CHF. In particular, in order to prevent one death due to CHF, it is necessary to treat only 11 patients in a specialized center, to prevent one death from any cause, only 17 patients [26].

Despite the success of drug treatment and good coverage of the patient population with treatment in developed countries, some studies have shown that in the 21st century there has been no significant improvement in patient survival after diagnosis of CHF [27, 30]. Thus, in the UK, the overall annual, five-year and 10-year survival rates after diagnosis of CHF from 2000 to 2017 increased by 6.6%, 7.2% and 6.4%, respectively, which is interpreted by the authors of the study as insignificant progress [29, 31].

There are various programs for specialized medical care for patients with CHF, which have been developed taking into account the specific conditions of medical care in different countries and regions. In particular, in 2000, the SHOKS scale was created by Russian cardiologists headed by prof. Mareev V.Yu. for a more rigorous determination of the patient's condition and stage of CHF, rehabilitation programs and non-drug management of an outpatient. These programs are based either on the management of patients by a multidisciplinary team of medical specialists with the involvement of psychologists and social workers [13, 14, 17, 21, 29], also a competent nurse specialist.

In countries with a sufficiently large territory and low population density, a model of CHF management based on observation by a nurse after discharge from the hospital was developed and tested in randomized clinical trials. It was proved that this model of CHF management worked effectively in real clinical practice in those countries where it was used, as it was shown to reduce the risk of death and readmission and improve the quality of life of patients with CHF included in this monitoring system [16]. In another study in Sweden, it was

shown that in patients who underwent hospitalization for CHF, during follow-up in a heart failure clinic under the guidance of a nurse, survival and personal care skills improved, both the number of readmissions and number of days in hospital with readmission [6] The advantages of this model of CHF management based on observation by a nurse - a specialist in CHF were confirmed in a meta-analysis and recognized abroad as the "gold standard" of CHF management [13, 23, 28].

For patients who are characterized by low mobility and severe or "advanced" course of CHF, experts from the European Society of Cardiology recommend organizing home care based on the supervision of a nurse - a specialist in CHF [6, 7, 16].

The history of independent work of a nurse with CHF patients began in Australia, and now this technology is successfully used in the UK, Norway, Sweden, the Netherlands, France, Australia, New Zealand and the USA [13, 15, 18, 19, 24]. In these countries, today a nurse - a specialist in CHF is an important element in the successful management of heart failure and is involved in the education of patients and their caregivers, contributes to the optimization of drug therapy and monitors the initial manifestations of decompensation in order to prevent re-hospitalization [10, 12, 14, 15].

There are specialized clinics for the treatment of CHF, in which the basis of disease management is observation by a physician with experience in providing medical care to patients with CHF. In this model, the primary place of care is the outpatient clinic and the primary specialist is the cardiologist. In some cases, in such clinics, medical care is also provided in a hospital, with the involvement of other specialists. These models of care may involve nurses who help cardiologists coordinate and educate patients. If a nurse is primarily responsible for the day-to-day care of patients and has more authority, it is usually a highly qualified nurse [11, 12, 16, 25, 26, 29]. For example, in Germany, to assess the effectiveness of such centers, the EVITA-HF register was formed, the results of which showed that the patients of these centers after a year of follow-up significantly improved CHF FC, had better adherence to basic CHF therapy [20]. Involvement of cardiologists in the management of patients with CHF is also justified from the standpoint of the quality of medical care, because there are studies in which cardiologists, in contrast to general practitioners, reliably prescribe and titrated basic CHF therapy [21].

Perhaps the cheapest method of managing the course of CHF is the method of telephone contact or telephone support for the patient, which was first studied in the conditions of domestic clinical practice in the CHANCE program [12, 19]. In this program, patients were followed up in regular outpatient settings after discharge from hospital, but in addition they were scheduled for three visits to the Investigative Cardiologist during the year. In addition, the intervention group received training and telephone support for patients, which was shown to be effective in reducing the number of hospitalizations compared to the group of

patients without telephone support. In this study, telephone communication supplemented face-to-face doctor visits [23]. It is important to note that the effectiveness of telephone communication without a visit to the doctor is less than the effectiveness of the visit to the doctor itself [30]. In studies that used only telephone contact with recommendations to visit their doctor in case of worsening of the condition, the number of hospitalizations for decompensated CHF decreased, but the prognosis of patients did not improve [23, 28]. The TIM-HF study used telemonitoring, which included telephone support for patients, daily remote monitoring of ECG, blood pressure and patient weight, which, first of all, strengthened the contact of patients with medical personnel and inspired patients with confidence in treatment, but was ineffective in reducing the total and cardiovascular -vascular mortality [16, 26, 27]. An interesting fact is that when interviewing patients admitted to hospital with ADF, it was found that more than half of them believed that hospitalization for CHF could have been prevented if they had more knowledge about the non-drug management of heart failure and had the opportunity to easily contact medical personnel if necessary [22]. But all these studies confirm the need for not only telephone, but also regular face-to-face contact with medical personnel.

More difficult in practical terms, but also more effective is the introduction of a multidisciplinary monitoring system for patients with CHF. The results of foreign studies indicate that the prognosis of patients was significantly better when they were involved in programs with the participation of interdisciplinary teams and in programs that use personal communication with a doctor, compared with standard observation in conventional outpatient facilities [14, 25].

A meta-analysis has shown that a multidisciplinary approach reduces the risks of overall mortality by 25% and the need for readmission to hospital by 26% within a year in patients with CHFCHF [8]. The strategy of a multidisciplinary approach, enhanced by the outpatient management of patients by visiting nurses, has also shown an improvement in the prognosis of patients with CHF [6, 9, 10, 14, 27].

In recent years, multidisciplinary teams have become increasingly popular in various countries (Great Britain, the Netherlands, France, Poland, USA, Canada, Australia), having proven their effectiveness in preventing re-hospitalization and improving patient prognosis [9, 18, 21, 24]. Such teams include doctors of various specialties: nutritionists, nurses, pharmacists, psychologists and social workers [19, 23, 26]. These teams are often supported by a variety of electronic alert systems and communication platforms that can be used to facilitate patient monitoring at home [8, 9, 16, 24, 26]. The multidisciplinary approach to the management of patients with CHF is certainly highly effective, but it was difficult to finally assess the economic effect of the implementation of this strategy, and it should be borne in mind that the functioning of this model, in comparison with consultations with a specialist in CHF, requires higher costs at

the first stage [9, 22, 30]. It is important to recognize that the multidisciplinary approach is one of the most difficult to implement in real clinical practice, and has often been investigated in academic medical centers [21].

A very interesting "seamless" approach to the management of patients by one team at the outpatient stage after discharge from the hospital. This approach has begun to be studied in recent years and has shown not only medical, but also economic efficiency [12, 17, 29]. For example, in Canada, an analysis of the work of the hospital stage with the organization of "seamless" monitoring of patients with CHF at the outpatient stage showed a decrease in both mortality and hospitalizations due to CHF and other reasons [13]. An interesting fact is that in the developed CHANCE program, it was mainly recommended to attract patients with CHF stages I-II, where a long period of stay at this stage, more rare hospitalizations and a higher adherence to treatment are possible.

Any CHF management program should be developed and adapted to the conditions of real clinical practice in the country where it is planned to be used - only in this case it can be useful for providing optimal medical care for patients with CHF [14, 18, 21, 26]. It is important that these programs are applicable outside academic scientific medical centers, where the conditions for managing patients with CHF differ significantly from real clinical practice [22]. Thus, taking into account the increase in the prevalence of diseases that are the causes of CHF, in Uzbekistan in the coming years, an increase in the prevalence of CHF and an increase in the burden on the health care system are predicted due to the large number of patients with heart failure. A modern patient with CHF is an elderly comorbid, or, as they say now, polymorbid patient, often not adhering to adherence to medication and non-medication recommendations at the outpatient stage, with high risks of death and repeated hospitalizations. Lack of good patient adherence and consistency in treatment at the outpatient stage create the basis for the formation of frequent readmission, and, therefore, significantly increase the cost of managing a patient with CHF. Also, these factors contribute to an increase in the risk of death in patients with CHF, both due to the formation of ADF and other cardiovascular complications.

The above facts raise the question of creating an effective system of medical care for patients with CHF in Uzbekistan, in particular in Samarkand, as a pilot project, which will address the following issues: improving the prognosis in patients with CHF, reducing the risk of repeated hospitalizations, improving the quality of life of patients with CHF and reducing general mortality.

References

1. *Abdurakhmanov Z.M., Mansurov A.A., Akhmedov U.B., Khalikulov X.G., Sobirov F.K., Murtazaev S.S., Egamberdiev S.I.* Favorable Efficacy of Antilipemics Usage after Electric Cardioversion in Patients with Coronary

- Heart Disease // The Bulletin of Bakoulev center cardiovascular diseases, Moscow, 2016. 17-3. P. 366.
2. *Agababyan I., Soliyeva S., Ismoilova Y.* Condition of Coronary Arteries and Change of Lipid Profile in Coronary Heart Disease // Annals of the Romanian Society for Cell Biology, 2021. P. 207-213.
 3. *Agababyan I.R., Ismailov J.A., Ruzieva A.A.* // Chronic heart failure in young obese patients with chronic obstructive pulmonary disease. Journal "Achievements of Science and Education". № 3 (57), 2020. S. 84-88.
 4. *Agababyan I.R., Ruzieva A.A.* // Dynamics of the state of endothelial function in patients with CHF against the background of the main treatment. Journal "Achievements of Science and Education". № 2 (56), 2020. Pp. 71-75.
 5. *Ageev F.T., Skvortsov A.A., Mareev V.Yu., Belenkov Yu.N.* // Cardiac insufficiency on the background of ischemic heart disease: some issues of epidemiology, pathogenesis and treatment. Russian medical journal, 2019. 15-16: 622-626.
 6. *Ahmedova A.T., Agababyan L.R., Abdullaeva L.M.* Peculiarities of the perimenopause period in women with endometriosis // International scientific review, 2020. № LXX. P. 100-105.
 7. *Aminov Z.Z., Khakimova S.Z., Davlatov S.S.* Improvement Of Treatment Protocols Of Pain Syndrome In Patients With Chronic Brucellosis // European Journal of Molecular & Clinical Medicine, 2020. T. 7. № 3. C. 2540-2545.
 8. *Atayeva M.A., Jarylkasynova G.J., Baratova M.S.* Assesment of heart rhythm disorders at left atrial stanning at early stages of left ventricular modeling // Journal of Critical Reviews JCR, 2020. 7(4). P. 1695-1699 doi:10.31838/jcr.07.04.277.
 9. *Davlatov S.S., Kasimov S.Z.* Extracorporeal technologies in the treatment of cholemic intoxication in patients with suppurative cholangitis // The First European Conference on Biology and Medical Sciences, 2014. P. 175-179.
 10. *Fattaeva D.R., Rizaev J.A., Rakhimova D.A.* Efficiency of Different Modes of Therapy for Higher Sinus after COVID-19 in Chronic Obstructive Pulmonary Disease // Annals of the Romanian Society for Cell Biology, 2021. P. 6378–6383-6378–6383.
 11. *Fomin I.V.* Chronic heart failure in the Russian Federation: what we know today and what we must do / I.V. Fomin // Russian Journal of Cardiology, 2020. № 8. P. 7-13.
 12. *Ikhtiyarova G.A. et al.* Pathomorphological changes of the placenta in pregnant women infected with coronavirus COVID-19 //International Journal of Pharmaceutical Research, 2021. P. 1935-1942.
 13. *Kadirova Sh.S., Kamilova U.K.* Indicators psychological status in patients with chronic heart failure// European science review scientific journal, 2016. № 1 – 2. P. 57–59.

14. *Kamilova U.K., Kadirova Sh.S.* The study psychological state of patients with chronic heart failure World congress on acute heart failure// European journal of heart failure supplements, 2017. P. 247.
15. *Kasymov S.Z., Davlatov S.S.* Hemoperfusion as a method of homeostasis protection in multiple organ failure syndrome // Academic Journal of Western Siberia. 2013. T. 9. № 1. P. 31-32.
16. *Khadjimetov A.A., Rizaev J.A., Akramova S.A.* The role of the system of hemostasis of blood and saliva in the development of the inflammatory process in the periodontium in patients with cardiovascular pathology // European Journal of Molecular & Clinical Medicine, 2020. T. 7. № 3. P. 3636-3645.
17. *Makhmudova S.E., Agababyan L.R.* Significance of prognostic markers in the development of preclampsia // International scientific review, 2020. № LXX.
18. *Mukhamedova M.G., Narzullaeva D.S.* Contemporary view on the problem of chronic heart failure // British Journal of Medical Health Sciences, 2020. № 3. P. 288-292.
19. *Mukhamedova M.G., Narzullaeva D.S.* Optimization of management of patients with chronic heart failure taking into account cardiovascular functional status // Biological and Pharmaceutical Sciences, 2020. № 12 (02). P. 174-178.
20. *Navruzova Sh.I., Sa'dullaeva I.K.* State of neuro-humoral regulation in congenital heart defects in children // European Science Review // Austria, Vienna, 2016. July-August. P. 133-135.
21. *Navruzova Sh.I., Sa'dullaeva I.K., Suleymanova G.S.* Correlation interrelation of immunological and hormonal indices in children with congenital heart diseases // European science. July-August. Vienna, 2018. № 7-8. P. 139-141.
22. *Navruzova Sh.I., Sadulloeva I.K., Akhmedov A.T., Khikmatova Sh.U.* Immunity and pro-inflammatory cytokines in congenital heart defects in children // Journal of critical reviews, 2020. P. 9349-9354.
23. *Navruzova Sh.I., Akhmedov A.T., Hikmatova Sh.U.* Comorbidity of congenital heart diseases in children European journal of pharmaceutical and medical research, 2020. 7 (5). P. 199-201.
24. *Qodirova Sh.S., Djabbarova M.B.* Hirudotherapy by avicenna's methods in treatment of chronic heart failure at ischemic heart disease patients with the increased arterial blood pressure// World journal of pharmaceutical research, 2020. № 3. P. 35-42.
25. *Qodirova Sh.S., Djabbarova M.B., Arashova G.A., Xudoidodova S.G., Farmonova M.A., Elmurodova A.A.* Features of the clinical course of chronic heart insufficiency depending on the psychological status of patients// American journal of medicine and medical sciences, 2020. № 10 (2). P. 127–131.

26. *Qodirova Sh.S., Djabborova M.B., Hamroyeva Yu.S.* Studying emotional states and quality of life in patients with chronic heart failure// Journal of research in health science. International peer – reviewed journal. Israel, Yashresh, 2018. 1(4). P. 23-28.
27. *Qodirova Sh.S., Djabborova M.B., Hamroyeva Yu.S.* Studying emotional states and quality of life in patients with chronic heart failure // Journal of research in health science. Israel, 2018. № 1 (4). P. 23-28.
28. *Rizaev J.A., Rizaev E.A., Akhmadaliev N.N.* Current View of the Problem: A New Approach to Covid-19 Treatment // Indian Journal of Forensic Medicine & Toxicology, 2020. T. 14. № 4.
29. *Rizaev J.A., Mavlyanov I.R., Mavlyanov S.I., Mamadierov A.M.* // "Assessment of adherence to therapy by anonymous questioning of patients" Therapeutic Bulletin of Uzbekistan, 2013. No. 4. S. 250-251.
30. *Rizaev J.A., Musaev U.Yu.* // "Organization, Epidemiology and History" Stomatology scientific and practical journal. No. 2 (79), Tashkent 2020. P. 7-11.
31. *Saidova M.M., Kamilova U.K., Yusupaliev B.K.* Evaluation cardiovascular risk indices in patients with rheumatoid arthritis// The 29-Great Wall International Congress of Cardiology. China Heart Society, held October 11-14, 2018. Vol. 72. № 16. P. 216.