MODERN PRINCIPLES OF CHRONIC HEART FAILURE

Aripov Dilshodbek Murodilloevich

https://orcid.org/ 0009-0004-1840-0819

Bukhara State Medical Institute named after Abu Ali ibn Sino, Uzbekistan, Bukhara.

Abstract. *The problem of chronic heart failure is currently becoming increasingly important not only for clinical medicine, but also for the entire healthcare system and society as a whole. An increase in life expectancy, improvement of medical care for patients suffering from various cardiovascular diseases (CVD), lead to an increase in the number of patients with chronic heart failure (CHF). Having achieved significant success in terms of combating acute cardiovascular diseases, improving treatment and preventive care for patients with CHF will bring the system of care for patients with CVD to a higher level. The main element of the new design is the creation of a specialized service to help patients with CHF. This review is devoted to the discussion of modern trends in heart valve replacement.*

Key words: *chronic heart failure, cardiac surgery, health care system, cardiovascular diseases.*

СОВРЕМЕННЫЕ ПРИНЦИПЫ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТИ

Арипов Дилшодбек Муродиллоевич

https://orcid.org/ 0009-0004-1840-0819

Бухарский государственный медицинский институт имени Абу Али ибн Сино, Узбекистан, г. Бухара.

Аннотация. *Проблема хронической сердечной недостаточности в настоящее время приобретает все большую актуальность не только для клинической медицины, но и для всей системы здравоохранения и общества в целом. Увеличение ожидаемой продолжительности жизни, улучшение*

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медицинской помощи пациентам, страдающим различными сердечно-сосудистыми заболеваниями (ССЗ), приводят к увеличению числа пациентов с хронической сердечной недостаточности (ХСН). Достигнув серьезных успехов в плане борьбы с острыми заболеваниями сердечно-сосудистой системы, улучшение лечебно-профилактической помощи пациентам с ХСН позволит вывести систему оказания помощи больным ССЗ на более высокий уровень. Главным элементом новой конструкции является создание специализированной службы для помощи пациентам с ХСН. Данный обзор посвящен обсуждению современным тенденциям протезирования клапанов сердца.

Ключевые слова: *хроническая сердечная недостаточность, кардиохирургия, система здравоохранения, сердечно-сосудистые заболевания.*

Relevance of the research

Over the past few years, there has been a significant decrease in mortality from cardiovascular diseases (CVD) worldwide. This result has been achieved primarily due to the development of a system for providing care to patients with acute pathology (acute coronary syndrome and stroke). Within the framework of the Vascular Program, an effective network of vascular centers has been created, high technologies for the treatment and rehabilitation of patients have been introduced [1].

Recently, CHF has become a condition that determines not only clinical outcomes in the group of patients with CVD, but also largely determines the financial and other resources of the healthcare system [1-3]. This is due to several reasons. Firstly, an increase in life expectancy associated with improved quality of medical care leads to an increase in the number of elderly and senile people who develop heart failure (HF), including for other natural causes. Secondly, achievements in the fight against CVD have led to a decrease in mortality in patients in the acute period of myocardial infarction (MI) and stroke [3-5].

It should be noted that mortality from CHF is currently higher than from MI, and in the case of repeated hospitalizations this figure increases 2 times. In addition, the population of patients with HF has an extremely high rate of hospitalization [4]. All this dramatically increases the costs of treatment and rehabilitation of this

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contingent, often leading to unjustified direct and indirect losses comparable to the costs of providing care to patients with acute MI. So, what can we offer in response to these challenges facing both cardiology and society as a whole? Of the entire range of measures aimed at changing this situation, we allowed ourselves to pay special attention to the prospects that are capable of solving the entire task in a comprehensive manner. Non-pharmacological methods of treating patients with CHF According to the modern definition, CHF is a clinical syndrome characterized by the presence of typical symptoms (shortness of breath, increased fatigue, swelling of the shins and feet) and signs (increased pressure in the jugular veins, wheezing in the lungs, peripheral edema) caused by a violation of the structure and / or function of the heart and leading to a decrease in cardiac output and / or an increase in the filling pressure of the heart at rest or under load [1].

In other words, CHF is precisely a syndrome, i.e., a largely unified response to primary damaging mechanisms. It is extremely important to note that CHF develops most often at the very end of the cardiovascular continuum. For clinical practice, this means that a patient with CHF is most often elderly, has several concomitant chronic diseases, and the adaptive reserves of his body are almost exhausted. All this leads to the fact that increasing the survival of patients with CHF is an extremely difficult task, and even during a short period of "survival" such patients very often end up in hospital and require the use of various aggressive and expensive methods and strategies of therapy. At the same time, even the most carefully selected pharmacological therapy is not always able to improve the prognosis or even the symptoms of the disease, and non-drug treatment is required. Within the framework of this article, we will obviously not discuss the fact that treatment regimens based on the principles of evidence-based medicine are focused only on one form of CHF (CHF with reduced LVEF), and for other forms such evidence is extremely scarce. A large number of special studies are devoted to this topic, and we hope to see "breakthroughs" in this area in the future. We consider it appropriate to dwell on the fact that the implantation of special devices is considered already at the early stages of managing a patient with CHF with reduced LVEF. If

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after 3 months of therapy with ACE inhibitors, β-blockers and AMCRA the patient still has symptoms of CHF and LVEF below 35%, the recommendation for implantation of a cardioverter-defibrillator has the highest class. A patient with sinus rhythm with a wide QRS complex requires RS (class of recommendations I or IIa depending on certain parameters). And finally, in patients with terminal CHF, implantation of an artificial LV is considered along with heart transplantation and administration of cardiac glycosides. Such a wide use of special devices indicates that the treatment of a patient with CHF has ceased to be the exclusive prerogative of a cardiologist, but has “begun to invade” the fields of related disciplines, in particular electrophysiology and cardiac surgery. This also indicates that a physician professionally involved in the treatment of patients with CHF must have skills and abilities that are beyond the "narrow" specialization. Since January 2015, a special specialization has emerged in Western European countries within cardiology. Along with interventional cardiology and electrophysiology, the training of a heart failure specialist has been allocated to a separate "branch" [3].

A simplified training plan for such a specialist takes 24 months. Even a cursory glance allows us to assert that a CHF specialist should have skills, abilities and experience of varying degrees of severity, which traditionally belong to the competence of specialists in functional diagnostics, radiation diagnostics, ultrasound diagnostics, general cardiology, electrophysiology and partly rehabilitation and restorative medicine. Is such, at first glance, complication of educational training of a CHF specialist justified? In our opinion, yes. And this is determined by the realities of practical healthcare. Firstly, early diagnostics or determination of high-risk groups for CHF development allows for the earliest possible start of specific therapy, which makes it possible to significantly reduce the risk of CHF development and thereby increase the effectiveness of such treatment in the long term, as well as avoid excessive expenditure of healthcare resources [2, 5].

Modern diagnostic algorithms for CHF are largely based on the use of imaging techniques, of which echocardiography (EchoCG) is the gold standard at this stage of diagnosis [4]. Accordingly, mastering this skill can be considered essential for a

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physician working with patients with CHF. The rapid development of other imaging techniques, in particular magnetic resonance imaging (MRI) or computed tomography (CT) and their use for diagnostic and differential diagnostic purposes, also requires the formation of specific skills necessary for everyday work with patients with CHF. Implantation of various devices in a patient with CHF leads to the need for a thorough examination before surgery (for example, to prove asynchronous contraction of the ventricles of the heart, determine the presence of blood clots in the cavities), which is impossible without confident proficiency in EchoCG, not at a basic, but at an expert level. But even more important is the ability of a CHF specialist to carry out post-implantation patient management, in particular, to fine-tune resynchronizers according to specific echocardiography parameters, as well as the ability to reprogram devices depending on a specific clinical situation [5].

Certainly, he should know the main clinical manifestations, etiology, epidemiology and pathophysiology of HF, including systolic and diastolic dysfunction, understand the importance of asymptomatic LV dysfunction as a reversible phase preceding symptomatic HF. He is required to know international and national recommendations not only for HF itself, but also for concomitant pathology, which is important for timely referral for additional examination. Detailed knowledge of all possible causes of HF, including rare ones, including genetic, metabolic, toxic, pregnancy-related, infectious and infiltrative diseases, allow to formulate the correct diagnosis quickly and in a timely manner and prescribe specific, sometimes quite aggressive treatment. Rapid and accurate development of the necessary treatment strategies is based on active possession of not only physical, but also instrumental research methods, especially echocardiography, as well as on risk assessment in a specific patient based on unfavorable prognostic factors and the results of using generally accepted systems for assessing the prognosis for CHF. Knowledge of indications for high-tech studies in CHF (for example, endomyocardial biopsy, determination of pulmonary hypertension reversibility, stress tests with determination of oxygen consumption, genetic testing, MRI, CT, myocardial scintigraphy), the ability to interpret the results obtained is certainly necessary. It should also be noted

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that there are mandatory skills in the following diagnostic procedures: electrocardiography, transthoracic Echocardiography, stress tests without oxygen consumption, 24-hour blood pressure monitoring and electrocardiogram.

Of course, the ability to assist or independently perform coronary angiography and implant devices for the treatment of patients with CHF, as well as knowledge in the field of active monitoring of patients after high-tech procedures, are useful. And, finally, the ability of a CHF specialist to understand issues of economic feasibility, the validity of choosing appropriate examination methods, as well as to effectively interact with the patient, his family, other doctors, and junior medical personnel when discussing issues of diagnosis, examination, and treatment options for the patient is of no small importance.

LİST OF REFERENCES

1. Галявич А. С. и др. Хроническая сердечная недостаточность. Клинические рекомендации 2024 //Российский кардиологический журнал. – 2024. – Т. 29. – №. 11. – С. 6162.

2. Мареев В. Ю. и др. Хроническая сердечная недостаточность (ХСН) //Журнал сердечная недостаточность. – 2017.

3. Нестеров В. С., Урванцева И. А., Воробьев А. С. Хроническая сердечная недостаточность: современные проблемы и пути их решения //Лечащий врач. – 2018. – №. 7. – С. 11.

4. Терещенко С.Н., и др. Диагностика и лечение хронической и острой сердечной недостаточности. Кардиологический вестник. 2016;2:3-33.

5. Шаварова Е. К. и др. Хроническая сердечная недостаточность: рекомендации и реальная клиническая практика //Рациональная фармакотерапия в кардиологии. – 2016. – Т. 12. – №. 6. – С. 631-637.