

Quality of Life in Patients with Chronic Heart Failure Under the Influence of Pharmacotherapy

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Abstract:

This article discusses chronic heart failure, which (CHF) is not an independent nosological form, but is a syndrome, a certain pathophysiological condition when dysfunction of the heart does not allow it to maintain the level of blood circulation necessary for tissue metabolism. Also, the course and prognosis of CHF, which largely depend on the characteristics of the underlying disease that caused it, such as ischemic heart disease, hypertension, heart defects and so-called non-coronary myocardial lesions (cardiomyopathies, myocarditis, etc.)

Keywords: chronic heart failure, methods of diagnosis and treatment, Quality of life, functioning in society, syndrome, pathophysiological condition, cardiac dysfunction.

INTRODUCTION

In recent years, despite the emergence of new rather complex, labor-intensive and expensive diagnostic and treatment methods, there has been no significant progress in terms of increasing the life expectancy of patients suffering from dilated cardiomyopathy. In this regard, as noted by R.A. Libis and Ya.I. Kots., (1998) a natural question arises: "If treatment does not increase life expectancy, then what specific benefit from the therapy can the patient expect right now, in real, real everyday life?" The authors note that finding an answer to this question without involving the concept of "Quality of Life" would be very difficult.

This led to a revision of the principles of drug treatment, its role and place in the complex of treatment measures. Reducing or eliminating the symptoms of the disease and its progression is one of the main components of treatment. However, the patient's feelings about his well-being in life: physical, mental, social should also be taken into account [1,2,3,4]. After all, what is important for the patient is not only the dynamics that the clinical and paraclinical indicators undergo during treatment, characterizing the disease, to which he does not attach importance due to his incompetence. For the patient, other factors are even more important. First of all, he is interested in how the treatment itself affects his overall well-being, functioning in society, in the family, and on his sense of satisfaction with life.

QUALITY OF LIFE in diseases determines the extent to which the disease does not allow the patient to live the way he would like. Chronic heart failure (CHF) itself is not an independent nosological form, but is a syndrome, a certain pathophysiological

condition when dysfunction of the heart does not allow it to maintain the level of blood circulation necessary for tissue metabolism. The course and prognosis of CHF largely depend on the characteristics of the underlying disease that became its cause. First of all, these are coronary artery disease, hypertension, heart defects and so-called non-coronary myocardial lesions (cardiomyopathies, myocarditis, etc.) [5,6].

One of the goals of modern medicine for CHF is to improve survival. In patients with CHF, with existing treatment methods, their mortality rates range from 50% within 5 years, with mild symptoms, to more than 50% within 1 year, with its severe forms (CONSENSUS; SOLVD) [7, 8,9].

How does treatment affect the QUALITY OF LIFE of patients with clinically significant chronic disease? The model of such a disease can be congestive heart failure (CHF) in patients with DCM, in which there is dysfunction of many systems, including the lungs, gastrointestinal tract, kidneys, and brain. CHF is characterized by high rates of “morbidity”, which is characterized by decreased tolerance to physical activity, deterioration in QUALITY OF LIFE and a high need for repeated hospitalizations [10,11,12].

For chronic long-term diseases (CHF), among the general questionnaires for assessing quality of life, the most generally accepted and adequate is the SF 36 questionnaire, which includes 36 questions of the main module, supplemented by various scales. It allows you to assess the current and most significant aspects of QUALITY OF LIFE such as: “symptom/problems”, burdensomeness of the disease, its impact on daily life, cognitive functions, professional status, sexual function, quality of social interaction and sleep. This QUALITY OF LIFE questionnaire does not include characteristics of social support (including staff of specialized departments) and satisfaction of the patient himself, and QUALITY OF LIFE is an item of general health assessment [12,13,14,15,16].

In assessing the effectiveness of treatment for patients with DCM with clinical manifestations of CHF, three levels of assessment are used: 1. - symptoms of the disease, data from clinical and paraclinical research methods (hemodynamic parameters, laboratory and instrumental data); 2. – indicators of QUALITY OF LIFE of patients; 3. - life expectancy of patients.

These levels of assessing the effectiveness of treatment are the most important in the treatment of patients with clinically asymptomatic (ejection fraction <35-40%) and oligosymptomatic (subcompensated) systolic (pumping) heart failure. In these cases, the benefit-risk ratio of treatment measures is especially important. An essential criterion for the appropriateness and justification of the choice of means will be control over the patient's QUALITY OF LIFE [17,4,19,20].

QUALITY OF LIFE in CHF is determined by three main criteria: the degree of functionality of the patient, the severity of CHF symptoms and the level of psychosocial adaptation to the disease.

QUALITY OF LIFE indicators can be used as the main, additional or only source of a more objective assessment of medical intervention. In this case, it is necessary to determine the initial data QUALITY OF LIFE, which will most likely change during the course of the disease and during treatment. The patient's QUALITY OF LIFE indicators may be useful for determining treatment tactics for clinically not only asymptomatic, but also low-symptomatic diseases and assessing the benefit-risk ratio of medical interventions. In these cases, the criterion for the appropriateness of choosing treatment methods will be monitoring the patient's QUALITY OF LIFE. It is necessary to conduct a QUALITY OF LIFE study when testing new treatment methods, medications, and assessing their side effects for various diseases. In the latter case, little attention has previously been paid to subjective disorders that occur with long-term use of the drug [22,11,23,24,25].

This is especially important since many diseases require lifelong drug treatment. The deterioration in QUALITY OF LIFE with long-term and lifelong use of medications is also associated with the tendency to use retard forms of drugs. Taking medications less often improves the psychological state of patients.

The impact of the disease on QUALITY OF LIFE indicators is more obvious with manifest, clinically expressed manifestations that cause subjective and objective health problems, decreased functionality and physiological functions. In these cases, the degree of change in QUALITY OF LIFE is proportional to the degree of intensity of the disease. At the same time, assessing the QUALITY OF LIFE is important for two reasons [26,27,28,29].

Firstly, a direct connection between QUALITY OF LIFE and the intensity of the disease does not always exist, since it is largely determined by the patient's subjective ideas about the severity, his disease, a real or imaginary threat, and the QUALITY OF LIFE is less about its possible consequences. In this case, the need to reduce work activity, the possibility of developing disability, changing life habits, for example, nutrition, quitting smoking, etc. are important [1,30,31,4].

Secondly, often the doctor's and his patient's assessment of the effectiveness of treatment does not coincide. Thus, for a doctor, optimization of blood pressure in a patient with arterial hypertension is considered one of the indisputable "surrogate" criteria for the good effect of antihypertensive therapy, while patients note an improvement in their condition only in 50% of cases, and in 10% of cases even a worsening. Moreover, about 60% of patients stop treatment within a year due to side effects from medications. In this case, the patient should be explained so that he understands that for the sake of "endpoints", he either must put up with certain side effects, or the doctor needs to reconsider pharmacotherapy, otherwise he will refuse treatment, against the background of which his QUALITY OF LIFE worsens [5,32]

It has been established that in patients with CHF syndrome, its symptoms worsen the QUALITY OF LIFE of patients to a greater extent than the symptoms of a number of

other non-communicable diseases, even such as angina pectoris, respiratory diseases, arthritis, diabetes mellitus and arterial hypertension [33,9,34].

To assess the QUALITY OF LIFE of patients with CHF, nonspecific and specific methods are used. All specific methods for assessing QUALITY OF LIFE in CHF can be divided into two groups: those assessing the functional state and more broadly reflecting the QUALITY OF LIFE in patients with this pathology. One of the generally accepted methods for determining the QUALITY OF LIFE of patients with CHF is the classification of the New York Heart Association (NYHA), which has been used for more than 30 years. Its simplicity and prevalence are not accompanied by its high reliability and reproducibility. Its main criterion is the patient's ability to perform "normal physical activity", which is understood ambiguously by doctors and patients, both in intensity and duration. Thus, when interviewing the same patients by two doctors, a coincidence of the functional class was noted in 55% of cases, and a correlation with the results of an objective test with physical activity in 50% of cases. If necessary, to distinguish between patients of functional classes II and III, the greatest difficulties and discrepancies in conclusions have been noted [6,36,37,38].

In the initial stages of pumping dysfunction with manifest manifestations, complete relief and control of symptoms, risk factors and correction of disorders existing at a given time comes to the fore. The main goal of treatment is to restore the functions necessary to improve and maintain a certain quality of life. Moreover, it is aimed at improving the patient's physical condition and is directly related to improving his QUALITY OF LIFE. The most important thing is to treat the underlying disease, since CHF is always a complication. A significant contribution to the treatment of patients with CHF is made by ACE inhibitors, which not only reduce symptoms and improve QUALITY OF LIFE, but also affect the "end points", that is, the life expectancy of patients, reduce and control many existing risk factors. Diuretics, cardiac glycosides, beta-blockers, aldosterone inhibitors and peripheral vasodilators are widely used in treatment. Not all drugs that reduce the minimal symptoms of CHF at the initial stages of its development, at the same time, improve the QUALITY OF LIFE of patients. Some of them may even worsen it, which should be taken into account when treating these patients [4,39,16].

For moderate manifestations of CHF, the goal of treatment is to reduce the risk of complications, relieve, reduce, correct and control the symptoms of CHF syndrome, the underlying disease and risk factors, prevent disease progression and reduce the frequency and severity of relapses. This helps improve physical condition and QUALITY OF LIFE. Lifelong systematic treatment is carried out. It is based on ACE inhibitors, which are first-line drugs for any stage of systolic (pumping) heart failure. In addition, diuretics and cardiac glycosides are used, which only affect symptoms without affecting QUALITY OF LIFE and life expectancy. In some cases, they can even shorten it due to arrhythmias [40,41,28,35].

With pronounced and severe manifestations of CHF decompensation, our treatment options are significantly limited. Thus, despite the advances in pharmacotherapy for CHF achieved in recent years through the use of ACE inhibitors and beta-blockers, the prognosis for CHF III-IV NYHA functional class remains unfavorable, and the QUALITY OF LIFE is unsatisfactory. In NYHA class III-IV CHF, the annual mortality rate is 50%. It should be noted that QUALITY OF LIFE questionnaires do not assess the clinical severity of the disease. They reflect how the patient tolerates his illness and relates to it. Thus, with a long-term illness, some individuals seem to “get used” to their illness and stop paying attention to its symptoms. In such patients, an increase in the level of QUALITY OF LIFE can be registered, which, however, will not mean regression of the disease (Sherbourne CD., 1992). Variability and dynamic relationship QUALITY OF LIFE over time is characterized by the influence of long-term chronic disease on the subjective assessment of quality of life. It is noted that in the presence of a long-term disease, patients “get used” to its symptoms and reduce their ideas about the standard of life. This phenomenon came to be referred to as “fallacy associated with downward drift of the standard.” It is possible that this is a protective psychological reaction of patients to a long-term illness, which is characterized by a change in their “point of view” in relation to the disease, according to the principle “if you cannot change the circumstances, you need to change your attitude towards these circumstances.” By analogy, if a person fails to achieve his goals, these goals change, which is reminiscent of the fox in the fable with his attitude towards the grapes that he could not get. This position and the “drift” with the opposite sign “+” is confirmed by the data of Wittchen HU and Beloch E (1996), who found that patients with social phobia assess the QUALITY OF LIFE in the past as lower than in the present. Perhaps this is due to the desire to “find satisfaction in small things.” What really exists is what they have already achieved. Although their achievements do not significantly rise to the standards of the population as a whole [26,29,34,40,23].

As clinical practice has shown, pharmacotherapy with drugs with a positive inotropic effect, which temporarily improves the QUALITY OF LIFE of patients with severe and severe CHF, can lead to an increase in mortality rates [16,37,33]. At the same time, pharmacotherapy that significantly increases life expectancy can have an ambiguous effect on QUALITY OF LIFE indicators. This primarily applies to beta-blockers. Their use leads to a significant increase in the survival rate of patients with CHF by more than 30%, accompanied by both an improvement [41,24,38,41,29] and a temporary deterioration in QUALITY OF LIFE [24], especially at the beginning of treatment.

Some drugs, the use of which is theoretically justified, in practice increase the risk of complications and mortality. Moreover, an increase in mortality often occurs against the background of significant clinical improvement. Thus, some pharmacotherapeutic interventions using, in particular, drugs with positive inotropic action can temporarily improve cardiac function and QUALITY OF LIFE, but with prolonged use they

negatively affect the survival of patients, as they are highly toxic. According to the results of scientific research, some methods of treating CHF are quite effective. However, in clinical practice, while they provide a positive effect with long-term use, they have a number of side effects and are even dangerous. The fact is that a number of drugs give positive results according to the parameters and criteria that are a measure of assessing their effect in scientific research. At the same time, in clinical settings they are assessed by other parameters and mainly by “end points” and pragmatic and most informative intermediate “surrogate” indicators. This does not always coincide with scientific research data. Ultimately, it is important to evaluate pharmacological drugs based on “endpoints” - their effect on mortality and life expectancy of patients. Therefore, it is necessary to introduce proven drugs into practical healthcare, the effectiveness and safety of which have been proven in randomized, multicenter and controlled studies [29,37,42,40,18].

In some cases, in patients with DCM with CHF, during their treatment, the risk of developing side effects of active therapeutic interventions exceeds their hypothetical or, even more so, real benefit. These are operations in patients with DCM with complex and threatening cardiac arrhythmias or in the late stages of the disease, the implementation of which is associated with a high operational risk. In these cases, the first priority should be the preservation and maintenance of life through the use of necessary and maximally safe measures [36,39,40,20].

One of the aspects of CHF treatment in patients with DCM is improving exercise tolerance. In everyday life, this is expressed in greater comfort and independence for the patient at home. An important criterion in assessing the severity of the condition of a patient with DCM with CHF and assessing the effectiveness of treatment is the question of whether the patient can stay at home and take care of himself, perform certain roles and social functions in the family and society, and receive satisfaction from hobbies, recreation, and sexual activity. And the QUALITY OF LIFE is better than maintaining intellectual abilities, optimism and faith in the treatment, which depend on increasing the patient's physical activity and maintaining this status for as long as possible [16,19,28,35].

It should be remembered that patients with DCM with moderate and severe CHF (NYHA FC III-IV) have pronounced, severe and critical symptomatic clinical manifestations. At the same time, tolerance to physical activity decreases sharply. They must follow a strict diet for life and systematically take medications that additionally cause side effects. In addition, the patients themselves create big problems for relatives. Pharmacological drugs used to treat CHF can have completely different effects on QUALITY OF LIFE indicators. This is important to consider when treating patients with DCM. Thus, if a doctor sets the goal of increasing the physical activity of a DCM patient with CHF, then the therapy should reasonably combine ACE inhibitors, diuretics, cardiac glycosides, beta-blockers and aldosterone inhibitors [25,39].

Therefore, when conducting pharmacotherapy, one should take into account not only the criteria for the effectiveness of this drug, but also the degree of its tolerability by the patient, the effect on general well-being, psyche, and the performance of daily duties, i.e. everything that makes up the concept of QUALITY OF LIFE. The correct choice of drug will determine the patient's desire to be treated, and therefore its effect on the course of the disease and the degree of risk of complications. In recent years, taking into account the recommendations of WHO (1995), to assess the effectiveness of treatment and preventive measures, along with data on the dynamics of clinical manifestations of the disease, the physical condition of the patient, biochemical and functional indicators, such a multicomponent criterion as "Quality of Life" (QUALITY OF LIFE) began to be used). It includes the physical, emotional and social status of the patient [41].

It is generally accepted that health-related QUALITY OF LIFE is characterized in different ways. It is important to consider how the patient's physical, emotional and social well-being will be affected by the disease or its treatment [63]. In some cases, this concept includes the quality of life, economic and spiritual aspects of the patient's functioning. Ultimately, taking into account patients' QUALITY OF LIFE can lead to improved quality of health care overall.

WHO experts (1996) define QUALITY OF LIFE as an individual correlation of one's position in the life of society in the context of culture, value systems of this society and the goals of a given individual, his plans, capabilities, and the degree of general disorder. That is, QUALITY OF LIFE is the degree of a person's comfort, both within himself and within his society [39,41].

Such an assessment completely depends on the physical and psycho-emotional state, level of independence, social status, environment and on the personal ideas of the individual.

QUALITY OF LIFE was elegantly defined by Caiman KC (1984) as "the discrepancy between a person's expectations and achievements," emphasizing that it is a purely subjective concept and reflects the patient's own preferences in choosing certain alternatives. However, "achievements" also depend on the opportunities provided by the environment. Health assessments using tools to assess functioning in social roles also take the environment into account.

There are "objective" and "subjective" criteria and methods in assessing the QUALITY OF LIFE of patients. Objective criteria include physical activity and labor rehabilitation. Subjective indicators of QUALITY OF LIFE reflect the emotional status, life satisfaction and well-being of patients [32,39].

One of the essential aspects of QUALITY OF LIFE and one of the essential functional characteristics of QUALITY OF LIFE is its dynamic relationship with time. Moreover, each of the three different components of QUALITY OF LIFE- subjective well-being and satisfaction with various aspects of life, objective functioning in various social roles and living conditions (standard of living, social support) - has a different temporal

(with emphasis on the “o”) meaning. Thus, subjective well-being largely depends on the current affective state and can change quickly. The fulfillment of social roles can be disrupted quite quickly, but it still usually takes some time. And finally, in most cases, only living conditions - both material and social - change very slowly.

The quality of a person's life is understood as his ability to function in society in accordance with his position and at the same time receive satisfaction from life [22,34]. It should be said that QUALITY OF LIFE is very important for the patient. It is, according to J. Williams, a subjective rather than an objective concept. However, J. Wiklund and co-authors emphasize that subjective elements when assessing QUALITY OF LIFE deserve more attention than it might seem at first glance. This is especially important when deciding whether a patient considers himself healthy or not, compared to traditionally used biomedical indicators, such as morbidity, mortality, lethality, complication rates, etc. [33,27].

To assess QUALITY OF LIFE, the following questionnaires are available: “general” (assessing the health status of patients in general); “private” (studying individual aspects of QUALITY OF LIFE) and “specialized” (studying QUALITY OF LIFE of patients with certain diseases). Currently, a generally accepted method of subjective assessment by patients of the course of coronary artery disease, including their determination of QUALITY OF LIFE, both in general and in terms specific to a given disease, is becoming common. Specific techniques are more sensitive to detect differences between patients and study their condition over a certain period of time [41,31,26].

It is believed that for practical purposes, the QUALITY OF LIFE index should meet the following characteristics: be assessed quantitatively; be simple, concise, easy to understand, easy to register; be comprehensive, cover various aspects of QUALITY OF LIFE; have a minimum number of restrictions on factors such as age, gender, occupation, categories of chronic diseases; be sensitive to changes in the patient's health status; results should be comparable with other measures of health status, clinical status [32,41,13].

It has been established that the patient's QUALITY OF LIFE parameters have independent prognostic significance and are more accurate predictors of the patient's survival and condition during treatment than general somatic status. Thus, data on QUALITY OF LIFE obtained before treatment gives the doctor valuable information about the possible outcome of the disease when using a certain method of intervention, and helps in choosing the right treatment program.

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