New draft classification of chronic heart failure of the Russian Society of Cardiology: are there any obvious advantages over the current ones?

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ABSTRACT

In the interests of practical healthcare, routine classifications should be modified as rarely as possible. At the same time changes should be discarded only on sufficient grounds, for example, when there are no obvious advantages of a new classification over the existing ones or they can no longer be modified by introducing fundamental changes and amendments. In this regard, the evolution of approaches to the classification of chronic heart failure (CHF) is prominent. It becomes particularly relevant due to the fact that currently experts of the Russian Society of Cardiology (RSC) are actively discussing a new draft classification of CHF. The authors of the lecture gave a brief historical insight and reviewed the main classifications of CHF used in North America, Europe, and Russia. The new classification of CHF proposed by RSC experts, which is actually a modified classification of North American colleagues, does not have obvious advantages over the currently used CHF classification in Russia (since 2002). The latter is based on the classification by Vasilenko – Strazhesko which is familiar to domestic internists, since it has become an indispensable part of their clinical practice and has stood the test of time. In addition, its underlying principles provide the potential for its flexible modification.

Keywords: chronic heart failure, classification, stage, functional class, ejection fraction

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Проект новой классификации хронической сердечной недостаточности российского кардиологического общества: есть ли очевидные преимущества перед действующими?

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РЕЗЮМЕ

В интересах практического здравоохранения менять привычные классификации нужно как можно реже, хотя и отказываться от перемен следует только при достаточных основаниях, например, когда отсутствуют очевидные преимущества новой классификации перед действующими или неполностью исчерпаны возможности их модификации путем внесения принципиальных изменений и дополнений. В этом плане показательна эволюция подходов к классификации хронической сердечной недостаточности (ХСН), приобретающая особую актуальность в связи с тем, что в настоящее время экспертами Российского кардиологического общества (РКО) активно обсуждается проект новой классификации ХСН. Авторы лекции сделали краткий исторический экскурс и рассмотрели основные классификации ХСН, применяющиеся в Северной Америке, Европе и России.

Предлагаемая экспертами РКО новая классификация ХСН, представляющая собой фактически видоизмененную классификацию североамериканских коллег, не имеет очевидных преимуществ перед действующей в России с 2002 г. классификацией сердечной недостаточности, основанной на привычной для отечественных интернистов классификации Н.Д. Стражеско и В.Х. Василенко, которая вошла в плоть и кровь российских медиков и выдержала проверку временем. К тому же принципы, заложенные в её основу, обеспечивают потенциал для ее гибкой модификации, возможности которой не являются полностью исчерпанными.

Ключевые слова: хроническая сердечная недостаточность, классификация, стадия, функциональный класс, фракция выброса

INTRODUCTION

The philosophical encyclopedic dictionary, published in 150,000 copies by the publishing house "Soviet Encyclopedia" in 1983, provides the following detailed definition of the term "classification" (Latin *classis* − rank, class and *facio* − to do, lay out): "a system of subordinate concepts (classes of objects) of any field of knowledge or human activity, often presented in the form of diagrams (tables) of various forms and used as a means to establish connections between these concepts or classes of objects, as well

as to navigate in the diversity of concepts or relevant objects" [1]. At the same time, the authors distinguish artificial and natural classifications. In the latter, the most essential features are taken as the basis, from which the maximum of derivatives follows, so that classification serves as a source of knowledge about the objects being classified. Artificial classifications lack these properties, since they are based on one or more insignificant, but easily distinguishable features. As an example, we can cite a primitive descriptive approach to classification based on a dichotomous division: sick – healthy; pregnant – not pregnant, heart failure +/-.

It is clear that in such an inexact science as medicine, it is almost impossible to construct a completely natural classification, similar to the periodic system of chemical elements by Mendeleev. But at all times many medical scientists have sought to create such a classification that would be as close as possible to a natural one in terms of this dichotomous division: natural − artificial.

A classification constructed in compliance with all logical requirements and being a convenient tool for clinical practice can be still used after more than one paradigm shift. At the same time, the dialectical nature of the development of scientific knowledge is clearly manifested in most classifications. At each stage of the development of scientific thought, the authors of one or another classification summarize the obtainted knowledge, marking the beginning of a new period of evolution, which almost inevitably results in a revision of the dominant paradigm, which can become an incentive to develop a more advanced classification [2].

We fully support the opinion of B.I. Shulutko [3] who stated that in the interests of practical healthcare, it is necessary to change habitual stereotypes (in particular, classifications) as rarely as possible. Although changes should be introduced only when reasons for them are sufficient, for example, when there are no obvious advantages of the new classification over the existing ones, or they cannot be modified by introducing fundamental changes and additions. In this regard, the evolution of approaches to the classification of chronic heart failure (CHF) is indicative, acquiring particular relevance due to the fact that currently experts of the Russian Society of Cardiology (RSC) are actively discussing a draft new classification of CHF, which, according to its authors, has advantages over existing ones [4, 5].

The aim of this lecture was to discuss the draft new classification of CHF proposed by RSC.

HISTORY OF THE ISSUE

Before we begin discussing the main issue of the lecture, let us give a brief historical insight into it. Researchers first attempted at creating a meaningful classification of CHF a long time ago. Even Jean-Nicolas Corvisart des Marets, determining the size of the heart intravitally using percussion, which he did perfectly, and comparing these data with the results of the autopsy, distinguished two types of cardiomegaly (he used the term "aneurysm"): active (with an increase in the thickness of the walls of heart chamber and an increase in its contractility) and passive (with thinning of the walls of the heart chamber and a decrease in its contractility) [6]. Having laid the foundations for the concept of cardiac remodeling, the pioneer of modern cardiology presented careful considerations about left and right ventricular (including secondary to left ventricular) heart failure. He insightfully described in the form of a 3-member formula the most common scenario of transformation of the size, shape, and function of the heart after its damaging overload. Pressure overload of the left ventricle (LV) – formation of an "active aneurysm" of the LV − development of a "passive aneurysm" of the left atrium and right ventricle, and also gave an excellent description of the three stages (periods) of a cardiac aneurysm of what would now be called CHF1[1].

At the first stage, which a competent physician may suspect due to the patient's predisposition to its development, the patient complains of weakness, shortness of breath, and palpitations upon exertion, without any findings during a physical examination, with the exception of cardiomegaly. At the second stage, the severity of symptoms increases: the patient instantly gets tired and often wants to rest, the heartbeat becomes stronger and faster, and breathing becomes extremely difficult with minimal physical exertion (*"The patient cannot climb three or four steps at once without being obliged to stop due to shortness of breath")*. And even at rest, when the patient is unable to breathe freely lying and, to facilitate breathing, is forced to sit up, swelling of the feet and ankles appears in an upright position, which usually disappears during the night. At the third stage, the severity of symptoms and signs of CHF reaches a peak, at which the patient's life is in immediate danger

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[1] Corvisart J.N. An essay on the organic diseases and lesions of the heart and great vessels. Translated by J. Gates. Boston: Bradford and Read, 1812: 344.

every minute (*"Death always intervenes to terminate the painful scene which this combination of symptoms presents"*). The severity of shortness of breath reaches the level of suffocation, edema syndrome progresses (up to anasarca), fluid accumulates in large cavities, diuresis decreases, a significant dilation of the veins in the neck and a painful enlargement of the liver are detected, the edge of which becomes dense. Thus, Jean-Nicolas Corvisart des Marets, albeit using general ideas, quite accurately outlined the continuum of heart failure (in fact, from risk factors to its terminal stage) which is a paradigm used in all modern classifications of CHF, without exception, based on identifying the stages of the pathological process.

We will not bore the reader for too long with an insight into the distant past; let us move on to the current classifications of CHF. The most time-tested classification is the one by New York Heart Association (NYHA[1]). P.D. White and M.M. Myers[2] convincingly substantiated more than 100 years ago that there is a need to supplement the diagnostic conclusion in patients with cardiovascular pathology with intranosological characteristics of their functional status, which is currently perceived as an axiom, and the NYHA classification of CHF based on this principle has received international recognition. This classification is used everywhere and is considered as a cornerstone in determining treatment strategies in all modern guidelines and recommendations on heart failure [7–9]. The discussed classification makes it possible to assess the level of decrease in physical activity and the degree of clinical manifestations of CHF. However, it cannot be used to assess the severity of heart disease, which is the cause of functional disorders, since the severity of symptoms (especially in the case of effective therapy) does not necessarily reflect the degree of myocardial dysfunction that causes them or correspond to it, which reduces the predictive power of the classification result [7, 10–14].

Another repeatedly noted limitation of the NYHA classification of CHF is its low reproducibility [8, 15], since when assessing the functional status of a patient with CHF, one should take into account the distinct subjectivity of both the doctor and the patient in determining which limitation of physical activity is slight or, conversely, significant, as well as what kind of physical exertion is habitual for the

patient [16]. This subjectivity naturally leads to poor reproducibility of the results of functional class (FC) assessment in the same patient by different doctors [15, 16–18]. To objectify the FC assessment, it is most often proposed to evaluate exercise tolerance (distance covered in 6 minutes, threshold load, etc.) and the maximum volume of oxygen consumed in a functional test [9, 19]. However, this approach does not always provide a drastic increase in classification accuracy [20–22].

Medical scientists hoped that an approach based on additional identification of the stage of the pathological process could at least partially solve the problems with the above-mentioned shortcomings of the NYHA functional classification of CHF. This approach made it possible to more reliably and objectively classify patients with CHF during the development of heart and vascular disease, as well as prescribe treatment in strict accordance with the stage of development of the pathological condition. At the end of 2001, the medical journals Circulation and the Journal of the American College of Cardiology published further recommendations for the assessment and treatment of CHF in adults proposed by a working group of the American College of Cardiology (ACC) and the American Heart Association (AHA). The proposed recommendations for the first time divided the development CHF into 4 stages: from a threat of developing CHF with the presence of risk factors (stage A) to the terminal stage (stage D) [23]. The same stages were preserved in subsequent recommendations, including those of 2022 [8]. This classification complements, but does not replace, the NYHA functional classification, which reflects the severity of CHF symptoms in patients who can be classified as stage C or D [8].

As for the first part of the ACC and AHA classification, at stage A (allows to describe a patient at high risk of developing heart failure, but does not have structural or functional disorders of the pericardium, myocardium or heart valves) and B (diagnostic conclusion applicable to the patient with structural abnormalities of the heart, who has never had symptoms or signs of heart failure), there is no CHF as such, since the latter is defined as a complex clinical syndrome with corresponding symptoms and signs [8]. Thus, half of the heart failure classification

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[1] New York Heart Association. Diseases of the heart and blood vessels: nomenclature and criteria for diagnosis, by the Criteria Committee of the New York Heart Association / Charles E. Kossmann chairman [and others]. Boston: Little, Brown, 1964:463.
[2] White P.D., Myers M.M. The classification of cardiac diagnosis. *JAMA*. 1921;77:1414–1415. DOI: 10.1001/jama.1921.02630440034013.

discussed is actually only applicable in a clinical situation without heart failure.

A reasonable question arises about the extent to which CHF is actually asymptomatic in a patient with so-called structural heart disease, which the classification suggests designating "stage B" in the diagnostic conclusion. For example, you are visiting a patient who seems not to have any symptoms and has been suffering from arterial hypertension for a long time, and a routine echocardiography revealed concentric myocardial hypertrophy and a type of LV diastolic dysfunction with impaired relaxation, as well as a high level of natriuretic peptides in the blood serum. Does anyone really think that, if asked in a straightforward way, such a patient is likely to deny the presence of shortness of breath, fatigue, and palpitations during intense and prolonged physical activity? Obviously, the vast majority of patients with so-called pre-heart failure will answer affirmatively. We will definitely interpret such complaints in this patient with isolated cardiovascular pathology as a manifestation of latent heart failure and not, for example, detraining.

American experts in the 2013 guideline [24] in patients with stage B CHF, who are essentially different from patients with stage C in that they have never had symptoms or signs of heart failure, still allowed the presence of such symptoms (even with physical activity exceeding normal), corresponding to FC I (Table 1). The choice of features that allow for dual interpretation as the basis for classification cannot but cause cognitive dissonance, since the members of the classification must be mutually exclusive. It is like at first they tried to prove to you that crocodiles do not fly, and then they say that they fly, only low. Taking into account the fact that Russian leading cardiologists have repeatedly expressed reasoned objections to the introduction of stage A CHF into the Russian classification [25, 26], it is not surprising that this approach was not adopted in Russia.

Table 1

Comparison of stages and functional classes of CHF [24]	
Stage of CHF	Functional class according to NYHA classification
A	No heart failure
B	I
C	I
	II
	III
D	IV

In Russia, the approach to the classification of CHF which takes into account the division into stages and FC was different. The classification of stages of CHF by N.D. Strazhesko and V.H. Vasilenko (approved at the XII All-Union Congress of Therapists in 1935) which is continuously updated is well known to several generations of doctors who have successfully used it in their daily practice in diseases of the cardiovascular system with primary damage to the left side of the heart. It is quite simple to determine stages I and II of untreated CHF right at the patient's bedside: stage I is latent heart failure, which manifests itself only during physical activity; stage IIA is clinically pronounced monoventricular (left ventricular); stage IIB is severe biventricular (right ventricular, secondary to left ventricular) [15]. With the phenotype of treated CHF, when in a patient with compensated heart failure there is no information on the so-called hemodynamic changes (symptoms and signs of stagnation in the pulmonary and systemic circulation may be absent with full compensation), its stage I or II can be accurately established based on the results of an echocardiography assessment of remodeling (the presence and severity of spherification and thinning of the walls) and LV function (primarily diastolic). Asymptomatic LV dysfunction, adaptive LV remodeling or maladaptive LV remodeling should be diagnosed, which correspond to stages I, IIA or IIB CHF. The modification of the classification made in 2002 by Society of Experts in Heart Failure (SEHF) will be discussed below [27]. At the same time, the fundamental difference between stage III CHF and stage II B CHF is the presence of irreversible structural changes in target organs (heart, lungs, blood vessels, brain, kidneys) [27].

It should be admitted that a more detailed classification of the stages of CHF by N.D. Strazhesko and V.H. Vasilenko has significant advantages over the trivial approach proposed by American peers, who, as if taking the entire palette of achromatic shades to white and black, propose to distinguish only two stages of clinically pronounced CHF. The first one is conservative – curable stage C of symptomatic heart failure (the severity of clinical manifestations within this stage may differ greatly, ranging from latent left ventricular heart failure corresponding to FC I in the distant past to severe actual biventricular heart failure with anasarca). The second one is stage D which is referred to using different terms "terminal", "refractory" or "progressive" heart failure). At this stage, optimal pharmacotherapy, as

well as cardiac resynchronization therapy, are not effective, which causes repeated hospitalizations and justifies the need for such advanced treatments as heart transplantation and mechanical circulatory support, and/or transition to palliative care [8]. The attempt to describe the entire course of events in clinical heart failure using two stages is certainly better than the primitive dichotomous +/– approach (heart failure: present/absent). But it certainly represents a step back from the views that existed at the beginning of the last century, and even in the time of Jean-Nicolas Corvisart des Marets.

Classification by N.D. Strazhesko and V.H. Vasilenko also has some shortcomings, for which it is often criticized by heart failure specialists. The most common reason for criticism of the classification is its so-called rigidity, which consists in the fact that the authors use a staged approach as gradations, which excludes the transition from higher stages to lower ones [16, 28]. Indeed, the classification under discussion was approved back in 1935, when the possibilities for effective pharmacological or surgical correction of severe CHF were more than modest. The doctor actually observed the "natural" progressive course of heart failure, and therefore the classification did not provide for revising the established stage in the opposite direction [15]. But even at present, when no one doubts that the introduction into clinical practice of the achievements of clinical pharmacology and cardiac surgery often ensures positive changes in the parameters characterizing the process of cardiac remodeling, experts only allow for so-called step-up restaging ("the stage of CHF may worsen despite treatment") [29]. Taking into account the above, the possibility of repealing the provision excluding the transition from higher to lower stages should be discussed [15, 16].

The principles underlying the classification of CHF by N.D. Strazhesko and V.H. Vasilenko provide the potential for its flexible modification, the possibilities of which, in our opinion, still exist. This was the case in 2002, when SEHF proposed a combined classification that took into account the division by stages and FC for discussion. In the official commentary of the SEHF to the classification under discussion, attention is drawn to the continuity of this edition with the classifications by N.D. Strazhesko and V.H. Vasilenko, adopted in Russia, and NYHA, which is used worldwide [29]. At the same time, the classification no longer included all the additions

to the 1935 original version that were made during its long history. But new concepts were introduced into it including "asymptomatic LV dysfunction", "adaptive remodeling of the heart and blood vessels", "maladaptive remodeling of the heart and blood vessels", "final stage of organ remodeling". The proposed modification of the classification ensured the accuracy of determining the stage of the pathological process, even when cardiac decompensation is effectively corrected, due to reliance on the results of an echocardiography examination, on the one hand, and when it is possible to objectify the change in the patient's functional status during treatment or the "natural" course of the disease by reflecting FC in the diagnostic conclusion, on the other.

Taking into account the fact that timely and correct recognition of heart failure, as well as the diagnosis of the notorious pre-heart failure (percussion should not be used to detect concentric LV hypertrophy or left atrial dilatation), is not conceivable without an ultrasound assessment of the structure and function of the heart, the ideas that echocardiography is not available or adaptive and maladaptive remodeling is difficult to asses should be rejected. Ensuring the universal availability of such an examination is the responsibility of regional and federal health care authorities.

On the other hand, the echocardiography examination in patients with heart failure is also necessary because, in accordance with all the latest recommendations of authoritative international and national cardiological organizations [7, 8], CHF should be classified depending on the value of the LV ejection fraction (EF). Let us recall that in the International Statistical Classification of Diseases and Related Health Problems, 11th revision (https://icd.who.int), different codes are used for left ventricular heart failure with preserved, mildly reduced, and reduced LVEF: BD11.0, BD11.1, and BD11.2, respectively.

We do not question the heuristic nature of discussing the important issue of the boundary between "normal" and "reduced" LVEF (apparently, it will not be possible without taking into account sexual dimorphism) [30–32]. Until a consensus is reached on this issue, a partial solution to the problem is to indicate a specific value for LVEF along with the CHF phenotype in the diagnostic conclusion. At the same time, we can discuss as much as we want reasonable doubts concerning the practical feasibility of identifying three CHF phenotypes based on the

initial ultrasound assessment of LVEF (with reduced, mildly reduced, and preserved LVEF), as well as reclassifying heart failure, based on the changes in the global contractile activity of the LV, established during subsequent echocardiography examinations. However, if Russian classification rejects such a division or simplification of establishing phenotypes to a dichotomy (with reduced and preserved LVEF), it would mean that we do not keep up with the rest of the world. In this regard (solely for the unification of terminology), we urge to stop simplifying CHF phenotyping to a dichotomy based on the value of LVEF.

Taking into account numerous experimental and clinical studies, the results of which cast doubt on the idea that systolic dysfunction of the heart is the main and only hemodynamic cause responsible for the occurrence and clinical manifestations of CHF, the characteristics of the state of LV diastolic function should be mentioned in the diagnostic conclusion as well (especially in patients with CHF and preserved LVEF) [15, 33–37]. Consequently, highlighting such a category in the classification is another direction of possible modifications of the current CHF classification.

DRAFT CLASSIFICATION OF CHF BY RSC

Holding the idea that the current classification of SEHF in 2002 is no longer consistent with modern ideas about the evolution of heart failure, strategies for its prevention and treatment, RSC experts initiated a discussion on the feasibility of making changes to the Russian classification of heart failure by stages [4]. The draft classification of CHF proposed by RSC was published in the ninth issue of the Russian Journal of Cardiology in 2023 (Table 2) [5].

Table 2

Classification of CHF proposed by RSC (draft, 2023) [5]
The risk of developing heart failure. The presence of diseases and conditions with a high risk of developing CHF.
Pre-heart failure. Absence of CHF symptoms and signs in the present and in the past. Presence of signs of structural and/or functional cardiac damage and/or increased levels of the brain natriuretic peptide.
Stage 1. Clinically manifested heart failure: the presence of CHF symptoms and signs in the present or in the past, caused by a disruption in the structure and/or function of the heart.
Stage 2. Advanced, clinically severe heart failure: severe symptoms and signs of CHF at rest, repeated hospitalizations due to CHF, despite attempts to optimize CHF therapy or intolerance to CHF therapy.

When getting acquainted with the project, it is impossible not to note the striking similarity of the proposed document with the classification of North American colleagues, which, as noted above, does not have obvious advantages over the Russian classification of 2002, which has not been actively used in our country for more than 20 years. On the Internet, you can find the brilliant saying "medical science has stepped far ahead, − our task is to catch up with", which accurately describes the continuous nature of the development of scientific knowledge. However, we do not understand what new scientific information on the etiology, pathogenesis, clinical presentation, and prevention of CHF has accumulated that has led to the fact that, after almost 25 years of the 21st century, an urgent paradoxical need has appeared to return to the ideas of the beginning of the century in order to keep up with progress.

In accordance with the international universal definition, which is cited by RSC experts [4], heart failure is a clinical syndrome with symptoms and/or signs caused by structural and/or functional disorders of the heart, confirmed by elevated levels of natriuretic peptides and/or objective signs of pulmonary or systemic stagnation [38]. However, in this project, when describing the clinical manifestations of heart failure, instead of writing "symptoms and/or signs", phrases with conjunction "and" are only used, for example, "symptom(s) and signs(s)" [5].

As for the initial stages of the cardiovascular disease continuum designated in the American prototype as stages (A and B), when there is essentially no heart failure (complex clinical syndrome with corresponding symptoms/signs), in the Russian project they are not referred to as stages, while preserving the first two lines of the CHF classification (classification of heart failure in patients without heart failure). The presence of sections of the CHF classification in which heart failure is denied (the so-called shift to the left) is explained by the need to focus on the initial stages of the cardiovascular disease continuum with an emphasis on those diseases and conditions in which the risk of developing CHF is especially high, which is extremely important for a physician to pay attention to preventive strategies that reduce cardiovascular risks [4].

There is no need to explain the importance of primary prevention, the measures of which are especially successful in high-risk groups to Russian internists, brought up on the ideas of S.P. Botkin and I.I. Mechnikov, who learned well from university

days that preventing diseases is much easier than treating them. All that is necessary to ensure the effectiveness of these measures, in addition to knowledge regarding specific risk factors for CHF and the perceived need to influence those that can be modified, is to promptly diagnose correctable factors, scrupulously record them in the diagnostic conclusion and do everything to control the situation with the help of non-drug methods and optimal pharmacotherapy in accordance with current guidelines [39–42]. Based on didactic considerations, the emphasis on preventive strategies can be put in a detailed scheme of the cardiovascular disease continuum, in which it is permissible to include its earliest links (even starting not with the major risk factors of CHF, but with the risk factors of the risk factors – the so-called primary risk factors). But the classification of heart failure, which, as we noted

above, ideally serves as a source of knowledge about the objects being classified, should not go beyond its main function, which is to distinguish patients with CHF according to the stage of the syndrome. In light of what is stated in the classification of CHF, one can accept a "shift to the left" as no more than latent heart failure, which manifests itself only when more blood is needed from the circulatory system.

The work discussed also provides a brief description of the classification criteria relating only to CHF with reduced (< 50%) LVEF (Table 3). The latter causes confusion and a number of questions, one of which we will allow ourselves to ask. It is unclear whether the authors of this classification do not recognize the existence of "normal systolic" heart failure or maybe they postponed the development of classification criteria for CHF with preserved LVEF until better times.

T a b l e 3

Classification signs of CHF with reduced LVEF			
Parameter	Clinical	Laboratory (the level of natriuretic peptide is higher than normal)	Echocardio-graphic (LVEF < 50%)
The risk of CHF	Manifestations of existing diseases (arterial hypertension, coronary heart disease, diabetes mellitus, etc.)	–	–
Pre-heart failure	Manifestations of existing diseases + structural and/or functional changes of the heart (for example, left ventricular hypertrophy)	+	–
Stage 1 CHF	Shortness of breath, pasty shins	+	+
Stage 2 CHF	Shortness of breath, pastiness (swelling) of the shins + accumulation of fluid in the cavities (hydrothorax, hydropericardium, ascites)	+	+

N o t e . CHD − coronary heart disease.

In accordance with the data in Table 3, the presence or absence of structural changes in the heart (for example, LV hypertrophy) is supposed to be confirmed by the results of a clinical examination (apparently, palpation and percussion), since the analysis of echocardiography is used only to assess the value of LVEF. For the same reason, clinical signs (in particular, an attempt to distinguish swelling of the legs from their pastiness) will have to be used to distinguish between the first and second stages of CHF. We foresee great difficulties (for example, whether the presence of a minor right-sided hydrothorax would justify the conclusion about the terminal stage of the syndrome), which we encountered until the SEHF experts supplemented the classification criteria of the stages of CHF with a number of echocardiography parameters, introducing into the classification by N.D. Strazhesko and

V.H. Vasilenko such concepts as "asymptomatic LV dysfunction", "adaptive remodeling of the heart and blood vessels", and "maladaptive remodeling of the heart and blood vessels".

In accordance with the project under discussion, RSC experts offer examples of how diagnostic conclusions are formed in order to allow for a better understanding of the practical meaning of the classification. It should be noted that examples of diagnosis formulation in any document require great courage from its authors, since any inaccuracy, including that associated with the imperfection of the classification itself, becomes the subject of criticism. Figuratively speaking, they step into the line of fire. This is probably why the authors of many clinical guidelines avoid such examples. We are convinced that examples of diagnosis formulation should become an integral part of clinical guidelines,

without which they should not be approved by the Scientific and Practical Council of the Ministry of Healthcare of the Russian Federation.

Let us consider examples of descriptions of each stage ("pre-stage") of CHF (Table 4), which are controversial and require feedback. To begin with, we should note that the uniform requirement for diagnosis classification has been violated. As is well known, a diagnosis that is not classified anywhere, regardless of its content, is regarded as incorrectly formulated [43, 44].

Table 4

Examples of clinical diagnosis formulation in a patient with CHF

Examples of clinical diagnosis formulation [5]	Questions and comments
Essential hypertension, stage II. Risk 3. Dyslipidemia. High risk of CHF	The high risk is reported twice in the diagnosis. May the risk of developing CHF be different (for example, low), with essential hypertension? If not, why is it mentioned in the diagnosis? The authors write in order to "make doctors focused at managing patients more thoroughly." However, we do not understand what "more thorough patient management" is. Is it even possible that a competent clinician will not prescribe optimal pharmacotherapy in accordance with current recommendations if high risk is not mentioned repeatedly in the diagnosis? Unfortunately, a bad doctor will not do this even after having described a high risk three times in the diagnostic conclusion. Is arterial hypertension a risk factor only for CHF or also for CHD, cardiac arrhythmias, peripheral artery pathology, cerebrovascular diseases, and chronic kidney disease? It is unclear to us if a clinician should describe each high risk separately in the diagnosis ("High risk of CHF. High risk of coronary heart disease. High risk...") or enumerate the risks? In the presence of comorbid pathology, in a combined clinical diagnosis, the practitioner should re-describe high risk after each disease and condition in which the likelihood of developing CHF is especially high (the list is quite extensive: arterial hypertension, obesity, coronary heart disease, atrial fibrillation, cardiomyopathy, diabetes mellitus, chronic kidney disease, chronic obstructive pulmonary disease, antitumor therapy) [4]?
Type 2 diabetes mellitus. CKD, stage 3a. Pre-heart failure.	Let us ignore the fact that the diagnosis of diabetes mellitus and chronic kidney disease is not complete, but it is unknown what structural and /or functional changes in the heart allowed to justify "atrial insufficiency" (we can only call such terminology a mockery of the "great, verbose and mighty" Russian language). If there is LV hypertrophy, then the diagnosis apparently did not include information about symptomatic arterial hypertension in a patient with diabetic nephropathy (which should also be classified). Would not it be better to specifically describe these structural and/or functional changes in the heart in the diagnosis (for example, the shape and severity of LV hypertrophy), without replacing it with an elaborate and vague term?
Coronary heart disease: stable angina pectoris FC 2. Coronary artery bypass grafting in 2018 CHF, stage 1. FC 2. Coronary heart disease: postinfarction cardiosclerosis (myocardial infarction in 2020). CHF, stage 2. FC 3. LV aneurysm. Right-hand hydrothorax.	The use of a dichotomous classification of the stages of CHF leads to the fact that such a diagnosis makes it more difficult to understand that this is a patient with multiple heart failure than when using the current classification of CHF (this has already been mentioned above). The authors refused to distinguish CHF phenotypes according to the value of LVEF.

CONCLUSION

The new classification of CHF proposed by RSC experts, which is actually a modified classification of North American colleagues, does not have obvious advantages over the heart failure classification that has been adopted in Russia since 2002 and is based on the classification by N.D. Strazhesko and V.H. Vasilenko, which is familiar to Russian internists. The latter, in the figurative expression of V.Yu. Mareev [45], has become an integral part of the knowledge of Russian internists and has stood the test of time. In addition, the principles underlying it provide the potential for its modification, which is possible to carry out.

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