

Modern Comprehensive Characterization of the Current Epidemiological Situation With Regard to the Incidence and Prevalence of Chronic Heart Failure (Literature Review)

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Annotation: In recent years, the number of patients with chronic heart failure with preserved ejection fraction (CHF) of the left ventricle has been sharply increasing. It was found that the rigidity of the main arteries in patients with ischemic heart disease is increased. An increase in central aortic pressure and augmentation index was also revealed. It was noted that the severity of CHF depends on an increase in the parameters of central hemodynamics. The interrelationships of increased rigidity of the great vessels with NT-proBNP levels in patients with CHF were revealed.

Keywords: chronic heart failure, arterial rigidity, parameters of central hemodynamics, natriuretic peptide.

Introduction: According to the World Health Organization (WHO), chronic heart failure (CHF), due to its widespread prevalence and high mortality rate, is considered one of the global medical and social problems [1]. The prevalence of XCH, covering approximately 1-2% of the adult population of developed countries, has reached fairly high rates among people over 70 years of age ($\geq 10\%$) and depends on the definition used. At least one in six people in the older age group (over 65 years old) with complaints of shortness of breath during exercise will eventually remain with an unrecognized XCH. The risk of XCH, even during life, for men and women aged 55 years, is 33% and 28%. The proportion of patients with XCH depends on many factors and ranges from 22% to 73%. According to WHO experts, the number of CHF patients may exceed 50 million by 2030 [8]. The importance of this major health problem is determined by severe health disorders, financial costs of expensive drugs, disability and death of patients. The UN calls on all countries to "create national programmes for the prevention, treatment and prevention of chronic noncommunicable diseases and include them in public health programmes" [12].

Currently, in world practice, the most relevant research is to improve the diagnosis, treatment and prevention of CHF, identify risk factors and factors for predicting the progression of CHF, which may pose additional difficulties for establishing diagnostic and prognostic biomarkers, as well as targets for preventive action [6]. The main mechanisms of the formation and course of CHF in patients with cardiovascular diseases (CVD), as well as factors for predicting the progression of CHF, contributing to the mutual influence of complications and comorbid conditions on the course of the disease, are being studied [7].

In our country, XCH, being established on the basis of clinical criteria, is 11.7%, while its variability in different regions reaches from 7% to 17% of cases. In patients admitted to hospitals, the diagnosis of XCH was confirmed in 78.8% of cases [5].

Among the XCH indicators, the main clinical, epidemiological and economic indicators are highlighted, including prevalence, etiology, prognosis and mortality. They are significantly influenced by age, gender, ethnic and social differences among the population under surveillance.

In developed countries, the incidence of XCH among residents has a more significant increase than in developing countries [2]. Nevertheless, approaching 2050, it is developing countries that have an unfavorable forecast of an increase in the prevalence of XCH [11]. The relevance of the problem of

XCH, its morbidity, prevalence, mortality and its negative prognosis, remains high. According to the American Heart Association (ANA), XCH was named the leading cause of death in 400,000 people in 2018 [12].

Thus, decompensation of XCH itself causes frequent, repeated hospitalizations, in turn dramatically increasing the financial costs for the ongoing therapy of XCH patients. A similar situation has developed in Uzbekistan, and there is also an entry into the leading positions of the prevalence and incidence of XCH [5]. In summary, we can say that the problem of XCH is common, both for Uzbekistan and for the whole world. It should be noted that the epidemiological profiles of HCNnFV and HCNnFV have certain differences. Usually, patients with CHF, compared with CHF, are older people, of female gender, with a history of hypertension and AF often, unlike MI [4].

Lethality. Among the many nosologies that cause mortality, CVD diseases currently hold leading positions in the structure of morbidity and mortality [5]. In Uzbekistan, the volume of deaths from CVD is 59.3% of the total mortality structure. The ESC-HF pilot study [3], conducted in European countries, demonstrates data on the annual mortality of patients with CVD. So, for 12 months, these indicators, including hospitalized and stable/outpatient patients suffering from XCH, amounted to 17% and 7% related to all causes. The frequency of hospitalization of these patients over a 12-month period was 44% in hospitalized and 32% in outpatient patients. In general, the majority of deaths among patients with XCH are associated with the occurrence of sudden death and deterioration of the clinical course of XCH [1].

The results of epidemiological studies conducted abroad clearly demonstrate the fact that one of the widespread diseases of CVD, which has an unfavorable prognosis and often ends in death, as before, is XCH [3]. Thus, the Framingham study demonstrates the presence of about 2.5% (5 million) XCH patients in the United States, aged over 45 years, with a pronounced clinical picture in absolute numbers in the population. Every year, the number of patients worldwide increases by 400-600 thousand people. At the same time, the prevalence of XCH in the USA and in Europe dynamically varies from 2 to 20, and in the older age group – from 23 to 130 people per 1000 population.

The recommendations of the European Society of Cardiology (ESC) on Heart Failure (2020) state that among the population of European countries, a certain incidence of symptomatic XCH varies from 1.0% to 2.0% [8]. It follows from this that a pronounced XCH clinic is observed in at least 10 million people among the total population of European countries, where 900 million people live. The frequency of developing myocardial dysfunction in XCH is similar to these figures, without a pronounced clinical picture of XCH. The epidemiological study EPOCH-XCH conducted in Russia convincingly proves that the prevalence of XCH in Russia is about 9.5%, and is at a higher level compared to most other countries. A possible reason for this lies in rarely performed cardiac surgery for various cardiac pathologies (heart defects, coronary vascular lesions), including ineffective pharmacotherapy of hypertension and coronary heart disease [10]. Thus, the results of the EPOCH-AH study showed that only 7.2% of patients received effective AH therapy [6].

Conclusions: Thus, summing up the results of the conducted epidemiological studies, it can be concluded that there are noticeable growth trends in the prevalence of XCH. This is best seen from the results obtained during the Framingham study. So, for three decades, the prevalence of XCH, according to this study, starting from the age of 50-59 years and up to 80-89 years among the population, has increased from 1% to 10%. Preventive measures aimed at eliminating or reducing the most significant risk factors (hypertension, tobacco use, hypercholesterolemia) They contributed to the weakening of the incidence of coronary heart disease and to some extent prevented the adverse course of the disease. Due to the use of thrombolytic therapy in patients with MI at the end of the 20th century, the prognosis of the disease improves, mortality decreases, and the incidence of XCH develops much later. The general aging of the population also plays a role in this process.

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