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COGNITIVE DISORDERS CAUSED BY OXYGEN DEFICIENCY IN CARDIAC PATHOLOGY

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Abstract. The presence of circulatory problems in patients with chronic heart defects is a known physiological process that is correlated with cerebral circulation. Spontaneous decrease in blood flow affects the psychophysiological function of nerve cells

Keywords. Chronic heart failure, cardiovascular disease, heart failure, prevalence, etiology, prognosis, mortality.

Introduction. Until recently, the term “discirculatory encephalopathy” (DE) was used to describe chronic cerebral vascular ischemia. Maksutov and E.V. Schmidt interpreted the term "discrete circulatory encephalopathy" in the modern international classification of MKB-10 diseases in 1975 as "chronic cerebral ischemia." Chronic cerebral ischemia is heterogeneous, which is reflected in specific features of clinical manifestations, neurogenic data and morphological changes. an increase in the frequency and prevalence of cerebral ischemia is observed - a special form of cerebrovascular pathology, diffuse and gradual progressive insufficiency of blood supply to brain tissue, this process is directly related to cardiovascular disease. (7)

Moderate impairment of cognitive function is more common in patients with chronic heart failure (2).

According to various authors, neuropsychological examinations of patients with chronic heart failure have revealed impaired attention, memory, cognitive functions, rate of mental reactions, as well as visual impairment (Almeida OP et al., 2001; Vogels RL et al., 2009; Gaviria; M. et al., 2011; Almeida OP et al., 2012). In particular, according to New York (New York Heart Association, New York Heart Association), attention, memory, cognitive functions, and mental reaction rate were studied in 43 patients over 50 years of age with functional heart failure class II-III (FS). a statistically significant decrease in the performance of all neuropsychological tests relative to the control group was observed (8). Cognitive deficits in patients with chronic heart failure affect patients ’ability to be aware of their condition and to follow physician recommendations, as well as their ability to control the severity of chronic heart failure symptoms et al., 2007. Disorders defined by the ability to self-manage the ability to receive information, interpret it, plan one’s actions, and make decisions are specific to patients with chronic heart failure (7). In addition, impairment of the ability to reason and make the right

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decision significantly limits patients 'ability to self-medicate. It is these facts that explain why so much attention has been paid to the study of cognitive impairment in this category of patients (8).

Chronic heart failure (CHF) is one of the most common and prognostically uncomfortable complications of cardiovascular disease. (1.2). The problem of chronic heart failure is becoming increasingly relevant in elderly patients. The trend of increasing population in the elderly, new cases of patients with chronic heart failure is constantly growing and requires the search for new approaches to optimize such patients at different stages of care, both inpatient and in care. (4). The occurrence of somatic and affective disorders in some patients, along with cardiac pathologies, makes it difficult to make a correct diagnosis of the disease in a timely manner. The negative impact of these diseases on the course and prognosis of the disease, adherence to treatment, quality of life, the formation of an adequate response to the disease cause additional difficulties in treatment and communication problems (6).

In his scientific work, Andrei Viktorovich (3.4) considered the development of a program such as an outpatient training program for the treatment of chronic heart failure as a new method of treating patients.

Chronic heart failure is an important medical, social, and economic problem, representing a new epidemic of cardiovascular disease (SVD), affecting approximately 5.8 million people in the United States and more than 23 million citizens worldwide (9). In Western countries, the prevalence of chronic heart failure varies from 1% to 2% (5-10 people per 1,000) and is 10% or more among people over the age of 70 (2). In our country, the prevalence of chronic heart failure detected on the basis of clinical signs reached 11.7%, the variability in different regions ranged from 7 to 17%. In hospitalized patients, the diagnosis was confirmed in 78.8% of cases (5). The main clinical-epidemiological and economic indicators of chronic heart failure (prevalence, etiology, prognosis, mortality) significantly affect the age, sex, ethnic and social differences of the studied population. Thus, chronic heart failure is higher in developed countries than in developing countries. However, by 2050, an increase in the number of cases of chronic heart failure will be clearly detected in underdeveloped industrialized countries (2). The prevalence, prevalence, and mortality of chronic heart failure remain high and the prognosis remains poor. According to the American Heart Association (ANA), in 2008, chronic heart failure was identified as the leading cause of death in 283,000 people (4). The economic costs associated with chronic heart failure are estimated at billions of dollars per year. The results of modern pharmacoeconomic analysis show that the cost of treating chronic heart failure in Europe and the US ranges from 1% to 2% of the health budget, 5 times higher than the cost of treating all forms of these safe pathologies, the frequency of hospitalization of patients with chronic heart failure is sufficiently high and stable. continues. Increased life expectancy, improved treatment of cardiovascular

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disease, as well as risk factors for the development of ischemic heart disease (IBS), especially in countries with transition economies, explain the increase in the prevalence and prevalence of heart failure worldwide (1).

The need for repeated hospitalization due to decompensated chronic heart failure significantly increases the financial cost of treating such patients (7.6). Thus, despite all the achievements of modern medicine, chronic heart failure is a heavy burden both in Uzbekistan and in the world health system. For the first time, chronic heart failure began to be seen as a serious social problem. In 2003, U.S. hospital statistics set a record: the number of patients with chronic heart failure exceeded 1 percent of hospital admissions, and the frequency of initial diagnoses of chronic heart failure was 2 per 1,000 people. (3). In a Framing study (1970), it was found that the survival rate of patients with newly diagnosed heart failure was 62% in men and 42% in women (9). Chronic heart failure is now considered a disease that can lead to other diseases in itself.

Talking about cognitive impairment in cardiovascular disease (CVD) It should be noted that in chronic heart failure, cognitive functions are the most important process of rational cognition of the complex functions of the brain. Symptoms of cognitive health include changes in concepts such as real perception of human life, intelligence, ability to concentrate on a problem, adequate self-esteem, and competence (9). Cognitive disorders are manifested by disturbances of individual norms, such as memory, speech, counting, spatial-temporal disturbances, decreased ability to abstract thinking (7).

There is also a close association between cognitive impairment and chronic heart failure (4). The results of the analysis in patients with heart failure, although taking into account all the additional factors of cognitive dysfunction (age, arterial hypertension, cerebrovascular disease), on average, 1 point lower than in older people with heart failure (2). In people with severe heart failure requiring a heart transplant, the MMSE difference reaches 2 points, but cognitive impairment is significantly reduced after a successful transplant (8). It has also been reported that long-term (9 years) acute risk disease is associated with an 80 percent increased risk of dementia and Alzheimer's disease in particular. (6) The association between cognitive dysfunction and heart failure is confirmed by the high rate of heart failure in patients with cognitive impairment, in contrast to people with cognitive impairment (5). a decrease in brain perfusion in heart failure leads to damage to the white matter of the brain (leukoencephalopathy) or atrophy of the temporal lobes of the media, which may be particularly sensitive to hypoxia and hypoperfusion. One study found that atrophy of the temporal lobe of this media is best associated with cognitive impairment, but the severity of depression and anxiety is associated with leukocenphalopathy (5). Ischemic brain injury in patients with heart failure may be accompanied by a decrease in cerebrovascular reactivity, neurohumoral disease, thromboembolism, and an excessive decrease in blood pressure (QB) associated with the use of antihypertensive drugs (4).

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The most severe form of brain dysfunction that develops in patients with severe heart failure is called cardiac encephalopathy. It manifests itself as cognitive dysfunction with bradyphrenia, impaired attention and other regulatory processes, apathetic syndrome (Zakharov V.V. 2005). In this case, Cognitive dysfunction is usually detected when the discharge portion (BQ) of the left ventricle (CQ) is less than 30% (1). In this case, the mechanism of development of cognitive dysfunction may be associated with a decrease in diastolic discharge of the heart, which leads to an increase in pressure in the venous system and fluid retention in the body, which can lead to an increase in intracranial venous sinuses and arteries. and its accumulation in the subarachnoid spaces, cerebral hemispheres (external hydrocephalus), and ventricles of the brain (internal hydrocephalus). In turn, this disrupts brain perfusion, leading to a decrease in heart failure (8). An additional factor may be hypoxia as a result of small-scale circulatory disorders (10). With removal of cerebrospinal fluid, the condition of patients after lumbar puncture can improve rapidly. However, continuous improvement in neurological function can only improve heart failure using pharmacological agents or other methods (e.g., heart transplantation). Clinical improvement may be accompanied by a decrease in the degree of hydrocephalus on computed tomography or magnetic resonance imaging (9).

In studies, it has been found that vascular dementia in patients with chronic heart failure persists primarily as amnesty and pseudoparalytic dementia (10). In the first case, a clear impairment of memory for current events was noted. Clinically, this was manifested by a clear “forgetfulness” of patients who could not remember the treatment schedule, medication intake, and so on. In the second type of vascular dementia, Cognitive dysfunction manifested itself in a relatively mild mnesticide disorder against a background of monotonous flattering mood. But such a situation is associated with a significant decrease in critical ability. Thus, the tendency to minimize the severity of the manifestation of chronic heart failure is reflected in cognitive changes (7). The risk of cognitive impairment is high when combined with heart failure, arterial hypertension, while affecting the general state of the cognitive process and individual cognitive functions: memory, attention, regulatory processes are impaired (10).

Conclusion. Therefore, any scientific breakthrough in this area will also allow the development of the field of psychotherapy related to cognitive impairments and the in-depth study of cardiovascular pathologies.

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