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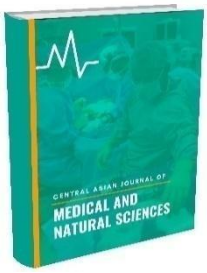

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Development of a Special Algorithm for Monitoring the Cognitive Status of Patients with Chronic Heart Failure

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Annotation: Cognitive impairment in patients with chronic heart failure remains one of the most pressing problems in neurology, and the urgency of the problem is determined by the frequency of complications resulting from this pathology and the lack of adequate effective treatment.

Key words: cardiovascular disease, chronic heart failure, prevalence, etiology, prognosis, mortality.

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 (3.14) 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 (12). 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 (12). 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 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 (11).

The need for repeated hospitalization due to decompensated chronic heart failure significantly increases the financial cost of treating such patients (7.16). 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. (13). 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 (19). Cognitive disorders are manifested by disturbances of individual norms, such as memory, speech, counting, spatial-temporal disturbances, decreased ability to abstract thinking (17).

There is also a close association between cognitive impairment and chronic heart failure (14). 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 (12). 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 (18). 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. (16) 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 (14). 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 (12).

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% (15). 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 (15). 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 (11).

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 (18).

The modern classification of cognitive disorders divides them into mild, moderate, and severe (dementia). Criteria for identifying one or another type of disease are related to the disorder of occupational, domestic, and social adjustment, taking into account the patient's age, social status, and level of education (14). Mild cognitive impairments are detected only by the most sensitive neuropsychological tests and do not affect daily activities, but, as a rule, they are subjectively aware and cause anxiety. (13) Cognitive disorders of moderate severity are detected not only by special technical means, but also by daily contact with the patient. They lead to difficulties in the most difficult types of professional or social activities, and in general, such changes in patients remain independent (20). Moderate cognitive impairment is an indicator of current stress conditions that may indicate a serious and long-term prognosis (11).

Cognitive impairments can also be seen in the background of arterial hypertension. Arterial hypertension is currently an important predictor of dementia and cognitive impairment in general (3.5). Cognitive impairment in hypertension can only be due to extensive ischemic injury of the brain and its multiple infarct status. Often their development is followed by limited damage such as lacunar infarction in a strategically important area. Functions that are important for cognitive function include the following areas of the brain: frontal lobes; parieto-temporo-occipital regions; middle-basal parts of the temporal lobe; anterior and middle parts of the visual cortex associated with the frontal lobes and limbic system; the dentate nucleus of the posterior-inferior-lateral region and cerebellar hemisphere, opposite the dominant cerebellar hemisphere; pale nets (18).

Another morphological substrate of cognitive impairment in hypertension may be diffuse injury of this white matter, cortical atrophy, and cerebral hypoperfusion caused by specific structural changes in small intracerebral arterioles. Cortical (granular) atrophy of the hemispheres develops due to the death of neurons, which explains the functional disorders. Several small focal lesions in the deep parts of the brain, spongiosis of the white matter, impairment of higher mental functions lead to scattering of brain structures, particularly the temporal, parietal, as well as limbic-reticular complex structures of the frontal regions (16).

A theory of "hypoperfusion dementia" has also been developed. The urgency of its occurrence depends on the complex set of changes in blood vessels and brain structure that are detected in patients with hypertension, including those associated with atherosclerosis. Specific hypertensive changes in cerebral vessels are accompanied by a decrease in perfusion, primarily in the frontal and parietal regions of the brain, and later in the temporal regions. Separate hypoperfusion is located in the deeper parts of the brain (white matter of the semi-oval center). However, in patients with cerebral circulatory disorders caused by hypertension, blood pressure levels directly affect the blood supply to the brain, and a relatively small decrease in blood pressure in cases of impaired cerebral blood flow autonomy leads to exacerbation of perfusion disorders and exacerbation of neurological disease. Stenotic injury of the main arteries is more pronounced in patients with intracranial vascular pathology than in patients with isolated hypertension (15).

REFERENCES

1. Samadova S. I., Ibragimova M. K. Improvement of Complex Treatment of Red Lichen Planus of the Oral Mucosa //Annals of the Romanian Society for Cell Biology. – 2021. – Т. 25. – №. 1. – С. 5072-5080.
2. Sobirov S. S., Khabibova N. N., Samadova S. I. Clinical effectiency of application of the combined method of treatment of the red plane lichen in mucous cavity of mouth //Journal of Natural Remedies. – 2021. – Т. 22. – №. 1 (2). – С. 128-131.
3. Самедова С. И. Показатели качества жизни у пациентов с кариесом и заболеваниями пародонта различной степени интенсивности и тяжести //Клиническая стоматология. – 2020. – №. 1. – С. 94-98.
4. Хамраева Д. Ш., Самадова Ш. И. Сравнительная оценка у больных пародонтитом отягощенной геперлипидемией //Теория и практика современной науки. – 2018. – №. 4. – С. 726-727.
5. Хабибова, Н. Н., Д. Ш. Хамроева, and Ш. И. Самадова. "оптимизация эффективности лечения генерализованного пародонтита у больных ожирением." *Международный журнал прикладных и фундаментальных исследований* 12-9 (2015): 1628-1632.
6. Hamroeva D. S. Factors affecting the dental status of the popu lation //Journal For Innovative Development in Pharmaceutical and Technical Science (JIDPTS). – 2021. – Т. 4. – №. 3.
7. Sh, Hamroeva D. "Comparative Analysis Of The Effectiveness Of The Treatment Of Parodontitis In Patients With Obesity." International Journal of Progressive Sciences and Technologies International Journal of Progressive Sciences and Technologies *(IJPSAT) ISSN*: 2509-0119.
8. Mukhsinova L. A., Sharopov S. G. Immunological status in sick children with congenital cleft upper lip and palate //Euro-Asia Conferences. – 2021. – Т. 4. – №. 1. – С. 135-136.
9. Mukhsinova L. A. et al. Cytokine Profile in Patients with Congenital Cleft Upper Lip and Palate //European Journal of Research Development and Sustainability. – Т. 2. – №. 4. – С. 91-93.
10. Mukhsinova L. A., Sh I. A. Physiological and Pathological Aspects of Teeth Cutting and Formation of Bits in Children (Literature Review) //American Journal of Medicine and Medical Sciences. – 2020. – Т. 10. – №. 9. – С. 674-678.
11. Sh, Inoyatov A., and L. A. Mukhsinova. "Peculiarities of the identification and early diagnostics of the pathology of cultivation of teeth and formation of the chest in children." Proceedings of the VI International Scientific and Practical Conference. International Trends in Science and Technology. Warsaw, Poland. 2018.
12. Эргашов А. Р. Характеристика острой травмы грудопоясничного отдела позвоночника //central asian journal of medical and natural sciences. – 2021. – С. 150-153.
13. Эргашов, А. Р. "Отдаленные Результаты Хирургического Лечения при Острой Травме Грудопоясничного Отдела Позвоночника." *Central asian journal of medical and natural sciences* 3.2 (2022): 256-260.
14. Мехриддинов, М. К. "Современный Взгляд На Проблемы Этиопатогенеза И Лечение Деструктивных Форм Пневмонии У Детей." *Central asian journal of medical and natural sciences* 3.2 (2022): 248-255.
15. Мехриддинов, М. К. "Роль Иммунологических Факторов В Патогенезе Развития Деструктивных Форм Пневмоний У Детей." *Central asian journal of medical and natural sciences* 3.2 (2022): 234-238.