МЕДИЦИНСКИЕ НАУКИ

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ASPECTS OF DISTURBANCE OF THE VEGETATIVE STATE IN CARDIOVASCULAR PATHOLOGIES

During the last decades of the pathology of the cardiovascular system occupy a special place in medicine and therefore in our work aspects of the vegetative state are revealed in this pathology on the basis of a literary review.

***Key words**: death, autonomic nervous system, heart, ischemia.*

Despite significant success in addressing the prevention, therapy and prognosis of cardiovascular disease, mortality from this pathology is increasing, and for example in Russia, they account for up to 57 %, and about half of CVD deaths are sudden. The main cause of sudden cardiac death (SCD) is considered to be ventricular tachyarrhythmias.Considering the fact that 80 % of patients with ventricular arrhythmias have cardiovascular pathology, its presence in the patient can be considered as a marker of high risk of SCD. Of particular concern is the increase in the incidence of coronary heart disease (CHD) and high mortality among people of working age, which is associated with large socio-economic losses [4].

No less urgent is the problem of chronic heart failure (CHF). It develops in 0.5-2 % of the adult population, the annual incidence of up to 300 people per 100 thousand of the population. As the statistics show, the mortality rates for CHF vary considerably depending on the severity of the course of the disease – from 15 to 50 %. Mortality in heart failure is high, despite the fact that recent medical treatment has undergone significant changes. Analysis of the level of annual mortality and causes of death in various functional classes of CHF showed that half of patients with I-II functional class (FC) of CHF die suddenly without the growth of cardiac decompensation. According to the results of the Framingham study, the presence of CHF increases the risk of sudden death by 6-9 times [4].

Foreign and domestic authors noted that the development of coronary heart disease is associated with the limitation of coronary blood flow, which determines the occurrence of ischemia, necrosis of cardiomyocytes, cardiosclerosis and heart failure. The Framingham study showed that in patients who underwent myocardial infarction (MI), CHF develops for 3 years in 9 % of cases, and for 10 years in 25 %, and its frequency doubles every decade. Death of a part of cardiomyocytes as a result of MI leads to the activation of regulatory neurohumoral systems that trigger LV remodeling, which continues after direct damage to the myocardium of the ischemic factor [3].

As well as in literary sources, it is noted that the state of the autonomic nervous system (ANS) has a great influence on cardiac activity and can, to a certain extent, determine the course and prognosis of chronic heart failure (CHF). The most specific and sensitive technique that allows determining the influence of the autonomic nervous system for the activity of the heart is the assessment of heart rate variability with the help of 24-hour ECG monitoring by Holter [2].

As noted in the literature, that the term «heart rate variability» (HRV) is understood to mean the variability of normal RR intervals, as well as the power of heart rate fluctuations in the high and low frequency range, determined by spectral analysis of the daily ECG. Numerous studies have shown that power in the low frequency range is related to the activity of the parasympathetic link of the autonomic nervous system, and high ones is sympathetic [6].

Analysis of the literature showed that the imbalance of the autonomic nervous system (ANS) is an important mechanism for the formation of arterial hypertension and its complications. According to the Framingham study, a decrease in heart rate variability (HRV) increases the risk of developing hypertension. Hart rate variability is a marker of vegetative activity. Over the past two decades, significant relationships have been found between the ANS and cardiovascular mortality.

The results of the work described in foreign sources that the multicentre postinfarction study led to the discovery that the decrease in heart rate variability is a predictor of sudden death after acute myocardial infarction. This caused an increased interest in the analysis of heart rate variability and in other diseases, including with arterial hypertension. The results of a five-year, large-scale study by Japanese scientists have been published, which showed a link between the reduction in heart rate variability and the risk of sudden death with arterial hypertension. Reduction of heart rate variability with arterial hypertension is noted in many works [1].

In recent years, the fact of a decrease in parasympathetic and an increase in sympathetic activity in the progression of chronic heart failure has been established.

Thus, summing up the results of the literature review, one can come to the conclusion that the relationship between changes in heart rate variability with the level of physical performance and the clinical state of chronic heart failure patients has not been sufficiently studied. However, the literature data on the possibility of increasing the total heart rate variability in the appointment of various drugs.

REFERENCES

1. Ageev F.T., Belenkov Yu.N., Mareev V.Yu., Skvortsov A.A. Heart failure with ischemic heart disease: some issues of epidemiology, pathogenesis and treatment // Russian Medical Journal. – 2000. – N. 8 (15). – P. 622–627.
2. Akchurin, P.C., Shiryaev A.A., Lepilin M.G. [et al.] Multivessel coronary artery bypass graft surgery in patients with ischemic left ventricular myocardial dysfunction // Thoracic and Cardiovascular Surgery. – 2007. – № 5. – P. 24–27.
3. Alekhin M.N. Tissue doppler in clinical echocardiography. – Infolinkpublishing, 2005. – 117 p.
4. Atroshchenko E.S. New ischemic syndromes – a new goal for cardiologists // The Heart. – 2006. – N. 5 (2). – P. 73–78.
5. Doven O., Sayin T., Guldal M. [et al.] Heart rate variability in hypertrophic obstructive cardiomyopathy: association with functional classification and left ventricular outflow gradients // Int.J.Cardiol. – 2001. – Feb, vol. 77. – N 2-3. – P. 281-286.
6. Andersen N.H., Karlsen F.M., Gerdes J.C. [et al.] Diastolic dysfunction after an acute myocardial infarction in patients with antecedent hypertension // J Am SocEchocardiogr. – 2008. – Vol. 21. – P. 171–177.

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АСПЕКТЫ НАРУШЕНИЯ ВЕГЕТАТИВНОГО СОСТОЯНИЯ ПРИ СЕРДЕЧНО-СОСУДИСТЫХ ПАТОЛОГИЯХ

В последние десятилетия патология сердечно-сосудистой системы занимает особое место в медицине, и поэтому в нашей работе на основе литературного обзора выявлены аспекты вегетативного состояния в данной патологии.

Ключевые слова: *смерть, вегетативная нервная система, сердце, ишемия.*