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GENDER FUNCTIONAL FEATURES OF THE CARDIOVASCULAR SYSTEM IN ELDERLY PEOPLE

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Background: Cardiovascular disease is the leading cause of death worldwide. The main risk factors are poor diet, physical inactivity, and bad habits. Risk factors increase with age. A feature of older people is the combination of damage to organs and systems and the presence of several diseases. Currently, when studying diseases of the cardiovascular system, risk factors, clinical manifestations, diagnostic criteria and treatment approaches are identified that are common to patients, regardless of gender. But there are also specific factors that are characteristic only for men or only for women. These issues are studied by gender cardiology.

Keywords: Cardiovascular disease, gender medicine, cardiovascular system, clinical manifestations, diagnostic criteria.

Introduction. Gender medicine integrates not only biological, but also social differences between men and women. Scientific research and analysis of statistical data in medicine should be planned taking into account gender differences. A separate problem that needs to be addressed is the inclusion of women in clinical trials. Nonspecific, gender-independent risk factors for cardiovascular diseases (CVD) are well known: age (for men over 55 years old, for women over 65 years old), smoking, cholesterol level above 6.5 mmol/l, family history of CVD, diabetes mellitus, a decrease in the level of high-density

lipoproteins below 1.0 mmol/l in men and below 1.2 mmol/l in women, an increase in the level of low-density lipoproteins, obesity (waist circumference more than 102 cm in men and more than 88 cm in women), sedentary lifestyle. Among women-specific risk factors, it is customary to highlight arterial hypertension (HTN) and metabolic disorders during pregnancy, hormonal contraception, menopause, and hysterovariectomy.

Male-specific risk factors for CVD include testosterone deficiency and male menopause. In the 1970s it was objectively believed that the male gender is vulnerable to coronary heart disease (CHD), therefore, mainly men were included in clinical studies. This information has improved preventive measures and therapeutic approaches, which has significantly reduced mortality among men. But findings from studies on men cannot automatically be transferred to women. At the end of the last century, there was a persistent trend towards a decrease in the incidence of death from CVD among men, while in women, on the contrary, an increase in morbidity and mortality from coronary artery disease and complications of hypertension was detected. For example, in 1980 in the USA, the standardized mortality rate from IHD was 398.4 per 100 thousand population for men, 129.9 for women; in Canada – 520.1 and 194.9; in Denmark – 392.1 and 111.9; in Finland – 599.1 and 121.0; in Sweden – 386.5 and 90.4; in England and Wales – 481.8 and 136.4; in Australia – 420.7 and 132.8; in Hungary – 409.7 and 134.2; in Czechoslovakia – 437.0 and 135.6 (in 1981); in Germany – 314.1 and 75.4; in France – 136.9 and 29.6; in Japan – 65.0 and 24.1, respectively [3]. Issues of specific “female” cardiology still remain insufficiently studied. The percentage of women participating in studies for CAD has increased since the mid-1980s and currently corresponds to the actual prevalence of CAD in women, but women still remain underrepresented in studies of hypertension and heart failure. In severe hypertension, treatment significantly reduces mortality and complications in both men and women. At the same time, with degrees I and II of hypertension in men, a more pronounced decrease in mortality and complication rates is observed, apparently associated with a higher initial risk. In the last decade of this century, individualized approaches to the detection and treatment of CVD began to be intensively studied in women.

Special programs for women were carried out by the American Society of Cardiology “Emphasis on Women” (Red in Women) (2004) and the European Society of Cardiology “Women at Heart” (2005). The most common cardiovascular pathology among both men and women continues to be hypertension. In most countries of the world, women live longer than men, so the number of women with essential hypertension significantly exceeds that of men. Among secondary symptomatic hypertension in women, fibromuscular dysplasia, which is the cause of renovascular hypertension, is more common. The prevalence of other causes of secondary hypertension does not depend on gender. Among women taking oral contraceptives, hypertension occurs in 5% of cases. Complications of hypertension occupy first place in the structure of mortality in the female population. The prevalence of hypertension is low among young women, but increases significantly after menopause. Numerous studies have established the fact of an increase in the incidence of coronary artery disease and hypertension during this period.

Purpose of work: Assessing the gender-functional characteristics of the cardiovascular system in elderly people suffering from arterial hypertension.

Materials and methods of research: 78 elderly patients were examined who applied to the cardio-rheumatology department of a city hospital with arterial hypertension, from 55 to 80 years old, of which: 42 men and 36 women. Patients who came to the department underwent clinical and laboratory examinations. Additionally, the adaptation potential (AP) was determined according to the Baevsky hemodynamic index and the level of physical condition (ULS). The Morisky–Green questionnaire was used to assess patients for early drug treatment for hypertension. Elderly patients were distributed by

gender and severity of the disease. Patients were divided into 2 groups depending on gender, age and clinical course of the disease.

Research results. The first group included elderly men (42 men), representatives of the second group included elderly women (36 women). In the study, the risk factors for morbidity were higher (8%) than in the second group. Systolic blood pressure in men was higher than in women, but diastolic blood pressure was higher in women. In men, the sympathetic tone of the autonomic nervous system predominated; in women, the parasympathetic tone predominated. Unsatisfactory adaptation to cardiovascular diseases is higher than 37.5% in men. In women, tension in adaptation mechanisms was more common. Most patients took various antihypertensive therapy for a long time; women were more adherent.

Conclusion: The results obtained confirmed the presence of gender functional characteristics in elderly people. Women showed greater adherence to therapy. In men, the risk of cardiovascular disease is higher due to social activity, lifestyle, diet and bad habits.

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