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Main Risk Factors for Cardiovascular Diseases

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Abstract:
Cardiovascular disease (CVD) is the leading cause of death worldwide, and people with or at high risk of CVD require early detection and care. Most cardiovascular diseases can be prevented by addressing risk factors such as unhealthy diet and obesity, physical inactivity, tobacco use, physical inactivity and harmful.

Keywords: cardiovascular morbidity, risk factors, coronary heart disease, primary health care, prevention.

Introduction

For many years, cardiovascular diseases (CVD) have firmly held the first place among all causes of death in the world. It is known that three risk factors for cardiovascular diseases, including arterial hypertension, smoking and dyslipoproteinemia are responsible for more than 75% of all cardiovascular mortality. The likelihood of developing coronary heart disease and other cardiovascular diseases increases with the number and strength of these risk factors [1]. Cardiovascular diseases are the most common cause of death in industrialized countries. These include coronary heart disease, cerebrovascular diseases, and diseases of peripheral arteries. The most significant forms of cardiovascular pathology in terms of morbidity and mortality are coronary heart disease and stroke, since they are associated with more than 70 % of all deaths of cardiovascular origin. That is why the fight against cardiovascular diseases and their causes is the main task of cardiology [2]. Cardiovascular diseases affect a large number of the population. As WHO notes, the main risk factors for heart disease and stroke are poor diet, physical inactivity, tobacco use and harmful use of alcohol. This pathology occurs at an earlier age than in previous years and is the leading cause of death worldwide. A third of all deaths are due to cardiovascular diseases. The most common diseases of the cardiovascular system include coronary heart disease, hypertension, and vascular lesions of the brain. Men are significantly more likely to die from myocardial infarction than women. One of the most dangerous diagnoses is acute coronary syndrome. In addition to damage to health and life, cardiovascular diseases cause large annual economic losses to the state, which amounts to 3.2%. [3]. Achieving this goal is possible with the mass involvement of citizens in the practice of a healthy lifestyle (HLS). Creating conditions for maintaining and promoting a healthy lifestyle, reducing the effect of the main risk factors (RFs) of non-communicable diseases

(NCDs), conducting screening and early detection of diseases, involving employees in health promotion programs [4].

Purpose: The purpose of the study is to analyze the main risk factors, study the prevalence, assess the dynamics of CVD risk factors and preventive measures to reduce the risk of cardiovascular diseases, and study the incidence of cardiovascular diseases. According to V.I. Kharchenko, at present, three blocks of risk factors for diseases, including CVDs, should be distinguished: classical traditional, socio-psychological, socio -economic. It is the successes in the comprehensive elimination or reduction of the multiplicity and intensity of the impact of risk factors of all three blocks that will make it possible to achieve success in reducing the morbidity and mortality of the population, which confirms the successes in reducing the morbidity and mortality from most diseases, including CVDs, in economically developed countries. The insufficient effectiveness of work to reduce the incidence of CVD and mortality from them is determined by the multiplicity of risk factors, the high degree of their severity, the lack of success in the fight against unhealthy lifestyles and risk factors, including socio-economic and socio-psychological ones. Classic risk factors for the development of CHD, the genesis of which has been well studied, include high levels of total cholesterol and low-density lipoprotein cholesterol in the blood serum, low levels of high-density lipoprotein cholesterol, arterial hypertension (AH), smoking, physical inactivity, excess body weight, etc. Dyslipoproteidemia (DLP) plays a leading role [5]. A moderate risk of developing atherosclerosis and coronary heart disease is defined as the presence of one lipid risk factor in combination with any other factor. A high risk of developing coronary heart disease exists in the presence of two lipid risk factors (for example, a total cholesterol content of more than 7.8 mmol/l is taken as two risk factors) or one lipid risk factor and two other risk factors for coronary heart disease [6]. Age, male gender and genetic predisposition are irreversible risk factors. Elimination of other risk factors not only significantly reduces the likelihood of developing atherosclerosis, but also delays the progression of its existing manifestations. The main reversible risk factors are smoking, physical inactivity, obesity, hypertension, and hyperlipidemia. Excess body weight is considered in a number of publications as one of the risk factors for the development of coronary heart disease and atherosclerosis. It is often combined with risk factors such as a sedentary lifestyle, diabetes mellitus, and lipid metabolism disorders. It is now considered proven that excess body weight (EBW) is an independent risk factor for the development of coronary heart disease and mortality from it. In addition, a clear connection was found between EBW and other risk factors (AH, DLP). In our country, obesity occurs in 20–30% of the adult population; in its genesis in 80% of cases, the main role is played by excess food consumption, increased consumption of refined and high- calorie foods, as well as physical inactivity. Currently, physical inactivity is considered as one of the independent risk factors for coronary artery disease. Some sources indicate a greater risk of developing coronary heart disease in the presence of physical inactivity. Thus, it was found that among people in sedentary

occupations, the incidence of coronary heart disease and mortality from it is much higher than among people in working professions. [6,7].

Material and Methods:

The prevalence of traditional risk factors for cardiovascular diseases among the population was assessed in a representative sample from 30 to 59 years old (76 people in total). A complete analysis of information was carried out taking into account age characteristics, gender, social status, medical history, objective examination, measurement of blood pressure, anthropometric indicators, determination of body mass index (BMI), heart rate, respiratory rate of the heart, determination of pathological symptoms, and diagnosis.

Results

It was found that the average age of detection of CVD in the study was 46.3 years, the prevalence of overweight was 35.0%, and obesity was 30.3%. Abdominal obesity was detected in 53.8%. family history of early CVD (59.0%) of those examined. Smoking was confirmed by 21.2%, another 20.0% quit smoking (have not smoked for more than a year). Alcohol consumption more than 2 times a month was noted among respondents (10.5%). It should be noted that the prevalence of arterial hypertension (AH) was revealed in 27.9% of those examined; an increase in blood pressure was detected for the first time in this study in 4.8% of those examined. The prevalence of type 2 diabetes mellitus (DM) was 4.7%. It was found that most of the works were devoted to studies of heart and vascular diseases, arterial hypertension and coronary heart disease (CHD).

Results of the study and their discussion:

It is known that people who regularly experience high psycho- emotional stress, which serves as a trigger for cardiovascular response due to local and systemic activation of oxidative processes, are very prone to CVD [2,7]. Smoking is an independent predictor of mortality from CVD, as shown in studies conducted in Western and Eastern Europe, and a widespread behavioral risk factor that is undoubtedly modifiable. Regarding smoking, it should be noted that cigarette smoke has a very high content of free radical substances and unsaturated aldehydes [7]. For the prevention of CVD, the mineral composition of the diet is of great importance. Excessive consumption of salt (more than 6 g/day) contributes to the development of gout, atherosclerosis, hypertension, and stroke. It has been proven that limiting the intake of sodium, which it contains, can help reduce blood pressure in patients with hypertension. Even a moderate decrease in sodium intake by 1 g/day reduces SBP by 3.1 mmHg. in patients with hypertension and 1.6 mm Hg. This may have clinical significance, as reducing blood pressure by only 10 mmHg can significantly reduce the risk of major CVD, coronary heart disease, stroke, heart failure and mortality from all causes. In most Western countries, salt intake is 9–10 g/day, while the recommended maximum intake is 5 g/day. The optimal level of

intake can be up to 3 g/day, this amount corresponds to the current recommendations of the European Society of Cardiology for the prevention of CVD [6,7].

Conclusions:

Regardless of the changes occurring in society, the main indicator of the well-being of any country is the health of its citizens. The achievements of medical science and the successes of practical healthcare have not obscured the alarming trend of increasing morbidity and mortality of the world's population. According to WHO experts, negative dynamics of population health indicators have been recorded even in countries with a high standard of living: there is an increase in oncological and endocrine pathologies, and an increase in the prevalence of diseases of the cardiovascular system. An even higher increase in pathologies of these systems is observed in the population living in environmentally unfavorable areas. Of particular importance is the cardiovascular system, which, along with the delivery and transfer of various substances, is one of the first to respond to changing conditions. [8]. Currently, the concept of prevention of non-communicable diseases is based on the principles of risk factor prevention [1,8]. Widespread implementation of preventive measures based on the elimination of risk factors in order to form a healthy lifestyle reduces the risk of developing CVD. Epidemiologically confirmed and clinically proven scientific facts indicate that with properly organized preventive and therapeutic care for patients with CVD, the number of complications of the disease decreases, its prognosis improves and the quality of life of patients increases [7,9].

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