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EFFICACY AND RISK FACTORS IN ARTERIAL HYPERTENSION

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ABSTRACT

Relevance of the research: Cardiovascular diseases (CVD) are the main causes of death in the population of economically developed countries, including Russia. According to official statistics in 2010, Cardiovascular Diseases, as the cause of death, were registered in our country in 52.0% of cases among deceased men and 61.5% among deceased women. Arterial hypertension (AH) is one of the main risk factors (RF) that determine the prognosis of morbidity and mortality in the population of Uzbekistan. The incidence of hypertension throughout the world is in the nature of a pandemic. Increased blood pressure (BP) is a strong and independent risk factor for Cardiovascular Disease, the role of which exceeds the contribution of smoking, hyperglycemia, dyslipidemia and obesity. This risk has no threshold: the higher the blood pressure, the greater the risk, starting with prehypertension. According to the Center for Preventive Medicine, the prevalence of hypertension in Uzbekistan is 39.2% among men, 41.1% among women, that is, about 42.5 million people.

KEYWORDS: *Arterial Hypertension, Risk Factors, Cardiovascular Disease.*

INTRODUCTION

The annual average number of deaths in the world reaches 7.5 million, associated with hypertension. A decrease of 5-6 mm only in diastolic blood pressure (DBP) can lead to a decrease in the frequency of strokes by 38%, coronary heart disease (CHD) - by 16%, complex cardiovascular events-by 21% and mortality from all causes — by 12% [1,2].

At the moment, there is indisputable evidence that many factors contribute to the development of cardiovascular diseases. In the practice of a doctor, patients with several risk factors are more often observed. In many epidemiological studies, it was determined that a significant part of patients with hypertension revealed the presence of additional risk factors for CVD, and only a small percentage of patients with hypertension registered only an increase in blood pressure [2].

In addition to the above, they work synergistically in our country, potentiating the negative impact of each other, and the total risk in this case is greater than the sum of individual components [4].

In the Republic of Uzbekistan, the main risk factors for CVD are high prevalence: smoking is registered in 53.2 % of adult men and 18.7 % of women, arterial hypertension is detected in 39.9 % and 42.1 %, elevated total cholesterol is determined in 65.9 % and 55.0 %, obesity is 21.8% and 26.5%, respectively [8]. The main part of the prevalence of FR CVD is determined by the high level of morbidity and premature mortality in the Republic of Uzbekistan and in the greater part is the city of Bukhara [3].

The mortality rate of the working-age population of the city of Bukhara exceeds the same indicator in Uzbekistan by 4.5 times, and according to scientific forecasts, from 2010 to 2019, the loss of the working-age population in Bukhara may amount to more than 8 million people [3,7]. Consequently, the problem of preserving the health of the able-bodied population of our country, which accounts for about 55% of the population, is raised within the framework of the most important state tasks that are extremely important for ensuring the successful socio-economic development of Uzbekistan.

The workplace is a big duty for carrying out preventive measures, since it allows covering a large number of people of working age. However, the presented algorithms lack a justification for a differentiated approach to preventive measures, taking into account the nature of production activities.

1.1 Prevalence and socio-demographic significance of cardiovascular diseases in the population.

Cardiovascular diseases (CVD) are the main causes of death of the population of economically developed countries, including Uzbekistan [4,5]. In 2015, more than 285 thousand people died from CVD in Uzbekistan, including 45.1% from coronary heart disease (CHD) and 34.5% from cerebrovascular disease (CVD), mainly from cerebral strokes (MI) [1,2]. In the Republic of Uzbekistan, the mortality rates from CVD are among the highest in the world.

Trends in economic development and well-being reflect the state of health of the population. According to many authors of the World Health Organization (WHO), among the factors affecting people's health, the following are determining: lifestyle (51%), genotype (20.4%), environmental quality (20%), health level (8.5%). The importance of lifestyle in the overall structure of factors that determine public health in the Republic of Uzbekistan, also makes up to 50% [1,2]. The level of low self-esteem of the importance of health in Bukhara, insufficient responsibility for strengthening their own health and the health of their children in the absence of a state system for promoting a healthy lifestyle and public tolerance for bad habits. This highlights the importance of measures for the primary prevention of cardiovascular diseases.

1.2 The significance of arterial hypertension in the population.

The frequency of AH occurrence apparently varies among the population of different countries and individual regions in each country. Since 2018, the program "Prevention and treatment of arterial hypertension" has been adopted in the Republic of Uzbekistan, but, as the monitoring data showed, the epidemiological situation associated with hypertension has practically not changed: the prevalence of hypertension is 39.2%" in men and 41.1% in women [3].

According to the data of the Institute of Family Health, the greatest contribution to the premature mortality of the population of our country is made by: hypertension (35.5%), high cholesterol 23%, smoking 17.1%, insufficient consumption of vegetables and fruits 12.9%, high body mass index 12.5%, alcohol 11.9%, low physical activity 9%, urban air pollution 1.2%, lead 1.2%, drugs 0.9% [4].

Hypertension is the leading risk factor for coronary heart disease, including myocardial infarction, brain stroke, mainly determining the high mortality rate in the country [2]. About 2.5 million annual number of deaths associated with hypertension. According to many literature data, even a decrease of 5-6 mm in diastolic blood pressure (DBP) alone can lead to a decrease in the frequency of strokes by 38%, coronary heart disease (CHD) - by 16%, complex cardiovascular events - by 21% and mortality from all causes - by 12% [1]. Patients with high blood pressure are 3-4 times more likely to develop coronary heart disease and 7 times more likely to have a stroke [4].

The incidence of hypertension varies depending on age, gender and race. Also, the patterns common to all countries are an increase in the incidence of hypertension with age [1]. The prevalence of hypertension increases with age and reaches 50-80% in people older than 65 years, and men are more likely to suffer from hypertension before the age of 40, and women after 40 years [3].

In addition to this high prevalence, a significant contribution to the incidence associated with hypertension is made by the low frequency of monitoring of elevated blood pressure. Despite certain successes in the treatment of the disease, hypertension remains a difficult condition to control all over the world, and the achievement of target blood pressure figures does not exceed 53% in the most successful countries [3]. At present, the epidemiological situation in our country indicates a continuing stable trend towards high rates of cardiovascular morbidity and mortality [1, 2].

1.3 Risk factors for diseases of the circulatory system.

Изучение исследований о ФР позволили развитым странам спланировать и осуществить программы по оздоровлению образа жизни, что привело к снижению сердечно-сосудистой заболеваемости. На сегодняшний день под фактором риска понимают признак, предшествующий заболеванию, способствующий его прогрессированию и неблагоприятному исходу, имеющий с ним самостоятельную, устойчивую, вероятностную связь, которая обладает практическим значением, как минимум для его прогнозирования. Применение концепции факторов риска позволяет прогнозировать вероятность заболевания и смерти как в популяции (популяционный риск), так и для отдельных лиц (индивидуальный риск).

It is no secret that FRS are not the cause of the disease, but if they are present, and even more so a combination, the individual risk of the disease significantly increases, without determining its inevitability. At a more initial level, the concept of FR is rather epidemiological, since there is a relationship between FR with a higher frequency of prevalence and occurrence of new cases of CVD in the population, and the fight against them can lead to a decrease in morbidity and mortality [3].

1.3.1 Physical inactivity.

Studies of FR affecting physical activity on the level of cardiovascular and general mortality began in the late 60s of the last century. During this time period, a large number of epidemiological studies were conducted that proved the effectiveness of moderate physical activity in reducing the risk of cardiovascular death by 28-33% [5]. The metabolic syndrome is the most common FR in Bukhara. It is registered in 60% of people with hypertension [4]. Hypodynamia is a type of hypertension, coronary heart disease and insulin-independent diabetes mellitus (INSD). All the scientific studies that have been carried out in recent years have convincingly shown that the growth of metabolic syndrome, diabetes mellitus and obesity is steadily increasing [3].

1.3.2 Smoking.

Among the FR, CVD is the second most common smoking. According to the results of our survey of the national representative sample of the population [2], 63.2% of men and 9.7% of women smoke at the age of 20 years and older [1].

Steady growth the intensity of tobacco smoking in the city of Bukhara is quite high, a negative attitude to quitting smoking is widespread, especially among the male part of the population. There is a universal fact of passive smoking-both in public places and in the workplace [4]. In several clinical studies, a pattern is noted - people with a higher level of education are less likely to register the fact of smoking [4].

No secret, according to the results of smoking, the coagulation system is activated — the thrombin-forming ability of thrombin increases, platelet aggregation increases. Women are particularly sensitive to the effects of nicotine, regardless of the intensity of smoking [3]. According to literature data, the blood lipid spectrum changes during tobacco smoking - atherogenicity increases due to an increase in the level of triglycerides (TG) and total cholesterol (OH) [1]. In the composition of the smoker's blood, the level of carboxyhemoglobin increases, which worsens the adaptive capabilities of the myocardium [2]. Under the influence of the receptors of the sinocarotide zone, nicotine has an exciting effect - it increases the respiratory rate and increases blood pressure, activating the n-cholinergic departments of the adrenal glands increases the production of catecholamines. Under direct exposure, nicotine excites sympathetic nodes, affects smooth muscle receptors and leads to vasoconstriction, including in the coronary arteries [3].

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