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THE IMPORTANCE OF OBESITY IN THE DEVELOPMENT OF CORONARY HEART DISEASE

Ismailov Kanjaboy Yangabaevich
Candidate of Medical Sciences, Tashkent Medical Academy Urganch Branch, Internal Medicine, Rehabilitation and Folk Medicine. Republic of Uzbekistan.
Bobojonov Adhambek Ozimboy o'g'li
Aassistant, Tashkent Medical Academy Urganch Branch, Internal Medicine, Rehabilitation and Folk Medicine. Republic of Uzbekistan.

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Abstract:

Obesity is one of the most common chronic diseases in the world, which leads to the development of cardiovascular diseases. Epidemiological studies have established that there is an association between the prevalence of obesity and the increase in other diseases. This article examines the development of coronary heart disease in overweight and obese adult patients by interpreting the results of electrocardiography and body weight by measuring weight (kg) and height (cm^2).

Keywords: Obesity, overweight, ischemic heart disease, arterial hypertension, heart failure, comorbidity.

INTRODUCTION. According to the World Health Organization, more than one billion people are overweight, of which 300 million suffer from obesity. This increase may reach 1 billion people by 2030 (2). According to the results of a study conducted jointly with the World Health Organization (WHO) among the population of the Republic of Uzbekistan aged 18-64 years, half of the population is overweight, and 20% are obese (3). Overweight and obesity contribute to the development of cardiovascular disease (CVD) in general and coronary heart disease (CHD) in particular in part by their association with traditional and nontraditional CVD risk factors. Obesity is also considered to be an independent risk factor for CVD (1,4,6,7). An increase in body weight of 1 kg increases the risk of developing cardiovascular diseases by 3.1% . The risk of developing arterial hypertension (AH) in obese patients is 3 times higher than in people with normal body weight. There is abundant epidemiologic evidence of an association between both overweight and obesity and CHD (1,4,5).

THE PURPOSE OF THE STUDY. The purpose of the study is to determine overweight and obesity, which cause the development of coronary heart disease, in the population living in the Southern Aral Sea region, Uzbekistan (Karakalpakstan).

METHODS AND MATERIALS. 80 patients admitted to the Scientific and Practical Medical Center of Cardiology and Cardiac Surgery of the Aral Sea region were examined. According to the age classification adopted by WHO, the world is divided into age groups of 18-44, 45-59, 60-74 and 75-90 years. The incidence of coronary heart disease in different age groups was analyzed: The patients' weight was measured in kilograms and their height in centimeters. Body mass index, developed by the Belgian sociologist and statistician Adolphe Quetelet, was calculated in kg/m^2. A commonly accepted body mass index (BMI) was used to determine overweight. The ratio of weight (kg) to height (cm2) was obtained. TVI-18.5 to 24.9 kg/m is normal, 25.0 to 29.9 kg/m is overweight, and body mass index above 30.0 is considered obese. Social-hygienic and sanitary-statistical methods were used in the analysis of the collected materials.

The patients' blood pressure was measured using a tonometer. According to the latest recommendations of the European Society of Hypertension and the European Society of Cardiology, blood pressure levels are distinguished. To detect cardiovascular diseases, a 6-channel electrocardiograph with a touch screen EKG-RB600 was used. The patient underwent a standard resting electrocardiographic study and was interpreted.

RESULTS. Out of 80 studied patients, 39 were men and 41 were women. 16 of them live in the city and 64 in the countryside. 2 people aged 18-44, 27 people aged 45-59, 48 people aged 60-74 and 3 people aged 75-90.

The analysis of the occurrence of coronary heart disease by age showed that (diagram 1), it was observed most often in patients aged 60-74 years (60%). It was followed by 45-59-year-olds (34%) and the least among 18-44-year-olds (2%).

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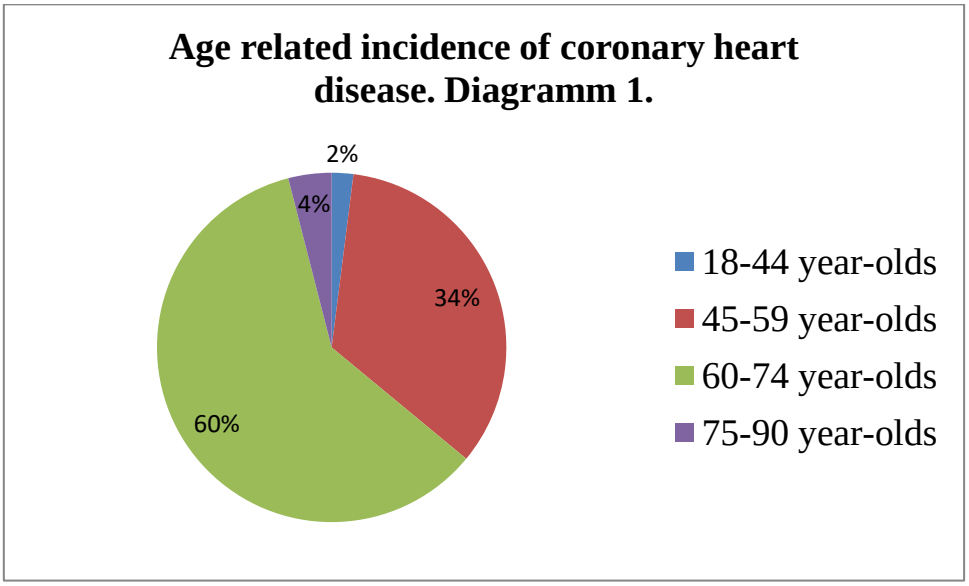
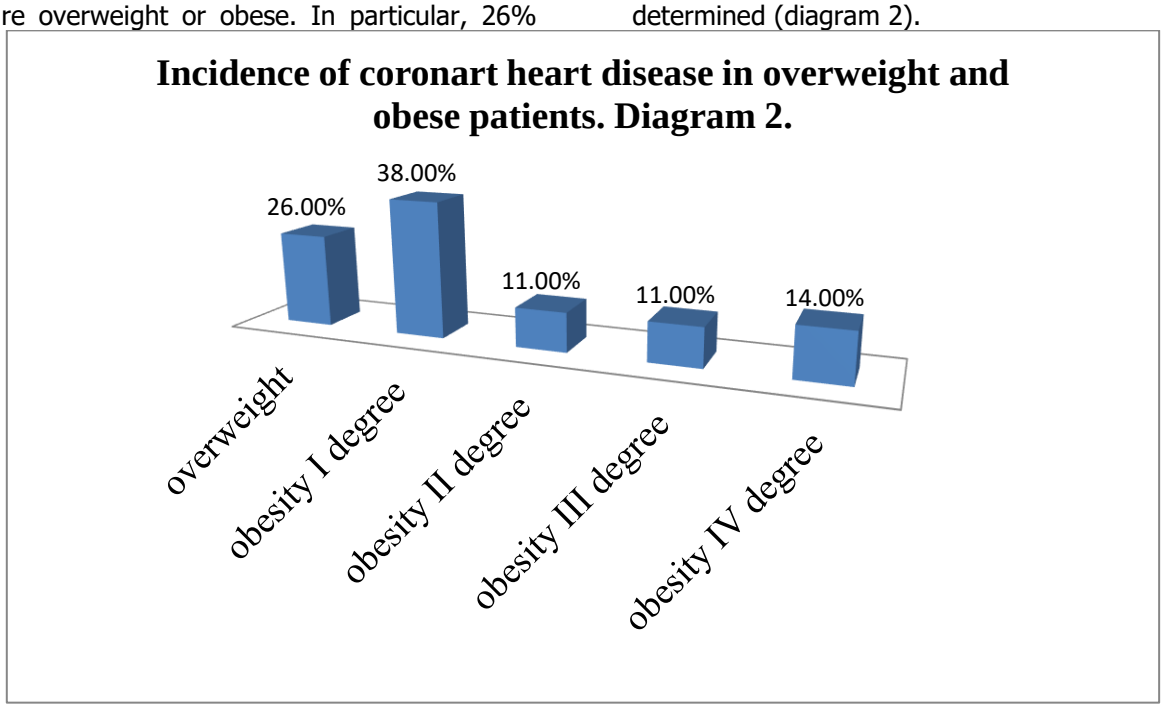


Cases of overweight and obesity among the studied group were analyzed. The obtained results showed that all patients suffering from coronary heart disease are overweight or obese. In particular, 26% have excess body weight, 38% have I-degree obesity, 11% have II-degree obesity, 11% have III-degree obesity. and in 14%, IV degree of obesity was determined (diagram 2).



Also, 28.57% have stage 2 hypertension, and 42.86% have stage 3 hypertension. 42.86% of patients had 1 degree of arterial hypertension, 14.29% had 2 degrees, 14.29% had 3 degrees. It is important to note that stage I hypertension was not detected in any patient.

In 57.14%, angina pectoris of the 3rd functional class was detected, in 4.76%, angina pectoris of the 2nd functional class was determined. One patient had coronary artery stenosis and coronary artery stenosis, coronary artery atherosclerosis in 4 patients, coronary artery atherosclerosis in 3 patients. Myocardial infarction with Q wave was detected in two patients. Ischemic cardiomyopathy was diagnosed in 2 patients, idiopathic pulmonary artery hypertension and tricuspid insufficiency were detected in 1 patient. During an electrocardiographic study, sinus rhythm was regular in 76.19% of cases, tachycardia - in 4.76%, extrasystole - in 4.76%, atrial fibrillation - in 14.29%. When analyzing the risk level of coronary disease,

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66.67% of patients were identified as risk 4, 28.57% as risk 3 and 4.76% as risk 2.

During an electrocardiographic study, sinus rhythm was regular in 76.19% of cases, tachycardia - in 4.76%, extrasystole - in 4.76%, atrial fibrillation - in 14.29%. When analyzing the risk level of coronary disease, 66.67% of patients were identified as risk 4, 28.57% as risk 3 and 4.76% as risk 2.

DISCUSSION. It is clear from this that the conditions of excess body weight and obesity led to the formation of ischemic heart disease and later comorbid conditions.

In a number of studies, obesity is considered a risk factor for the development of cardiovascular diseases, and the presence of obesity in patients with ischemic heart disease contributes to its development and increased mortality. There is abundant epidemiologic evidence of an association between both overweight and obesity and CHD (1,4,5). It can be seen that the number of people suffering from coronary heart disease increases with age.

Therefore, it was noted that the studied patients had comorbidity, and it was noted that coronary heart disease and hypertension. This indicates that patients did not pay attention to the first clinical signs due to overweight and obesity and did not consult a doctor.

It should be noted that in our studies, it was shown that overweight and obesity caused the development of ischemic heart disease and hypertension (37.5%). It can be seen that the number of people suffering from coronary heart disease increases with age. The reason for the low number of people aged 75-90 may be due to the fact that there are few people who have reached this age. Comorbid conditions were also analyzed during the study. 1.25% of the studied 80 patients suffer from the I stage of hypertension, 25.0% from the II stage, 61.25% from the III stage.

CONCLUSION: It has been established that overweight and obesity increase the risk of developing cardiovascular diseases in residents of the Southern Aral Sea region. There is a correlation between the state of obesity and the development of coronary heart disease.

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