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NURSING PROGRAM FOR THE PREVENTION OF CARDIOVASCULAR DISEASES IN WOMEN OF WORKING AGE

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Abstract

Arterial hypertension (AH) is a serious medical and social problem and a public health challenge due to its high prevalence and adverse impact on prognosis. Currently, more than one billion people worldwide suffer from this condition, and by 2025 this number is expected to increase to 1.5 billion. This article describes the characteristics of arterial hypertension in middle-aged individuals in combination with obesity.

Purpose of the study: To investigate the effect of obesity on the course of arterial hypertension and the achievement of target blood pressure levels in middle-aged outpatients.

Keywords

arterial hypertension, obesity, blood pressure, atherosclerosis.

Relevance

Arterial hypertension remains one of the most significant modifiable risk factors for cardiovascular diseases (CVD) and mortality worldwide. The presence of hypertension more than doubles the risk of acute myocardial infarction. An increase in systolic blood pressure by 20 mmHg increases stroke risk by 1.25 times, and an increase in diastolic pressure by 10 mmHg increases stroke risk by 1.21 times.

Approximately half of all deaths from cardiovascular diseases are associated with hypertension. In 2015, about 10 million deaths were linked to hypertension, including 4.9 million due to ischemic heart disease and 3.5 million due to stroke.

The high prevalence of hypertension and its complications, as well as insufficient control of blood pressure among middle-aged outpatients, necessitate further study of factors influencing the achievement of target blood pressure levels.

Materials and Methods

The study included 111 outpatients aged 45–59 years (mean age 51.8±4.2 years), examined at the Bukhara Regional Multidisciplinary Hospital between December 2017 and December 2018. Among them were 40 men (36%) and 71 women (64%). Higher education was reported in 71.2% of participants; 54.9% had a family history of early CVD.

Mean systolic blood pressure was 135.8±18.7 mmHg, diastolic blood pressure 87.9±10.9 mmHg, heart rate 76.2±12.1 beats/min, and median BMI 28 kg/m². BMI was calculated using the Quetelet formula.

Results and Discussion

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Obesity was identified in 24.3% of the study population. Among patients with hypertension, 43.5% had obesity (48.2% grade I, 40.7% grade II, 11.1% grade III).

Patients with obesity were more often male and more frequently had hyperglycemia and hyperuricemia. None of the obese patients achieved target blood pressure levels.

The threshold BMI associated with failure to achieve target blood pressure was 28.7 kg/m² (sensitivity 72%, specificity 72%).

Hyperuricemia was present in 31% of patients with hypertension. Obesity combined with hypertension was associated with hypertriglyceridemia, physical inactivity, and target organ damage including left ventricular hypertrophy and increased carotid intima-media thickness.

Conclusions

1. Nearly half (48.8%) of middle-aged outpatients with hypertension failed to achieve target blood pressure levels. Risk factors for inadequate control included obesity, comorbid conditions, and male gender.

2. Obesity was detected in 43.5% of hypertensive patients. The course of hypertension combined with obesity was characterized by failure to achieve target blood pressure levels in the presence of physical inactivity, hyperuricemia, hypertriglyceridemia, and hyperglycemia.

References:

1. Selected references from Russian cardiology journals (2014–2019) on hypertension, obesity, and cardiovascular risk factors.