

**LEFT VENTRICULAR HYPERTROPHY: DIAGNOSIS IN 40-60-YEAR-OLD WOMEN WITH HYPERTENSION**

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**Annotation**

This article describes a clinical study conducted among patients on an outpatient basis on the basis of the "Bukhara Regional Cardiology Dispensary". The features of hypertrophy of the left ventricle of the heart by concentric, eccentric types were revealed.

**Keywords:** 40-60 years old, left ventricular hypertrophy, echocardiography, type of left ventricular hypertrophy, arterial hypertension.

**Introduction**

Severe and clinically significant left ventricular hypertrophy is one of the defining signs in the diagnosis of such a widespread disease as systemic arterial hypertension [1, p. 9].

Left ventricular hypertrophy (LVH) is a clear increase in the mass of the left ventricular myocardium (LVMI) that develops with arterial hypertension (AH), aortic heart disease, mitral valve insufficiency and other diseases accompanied by prolonged overload of the left ventricle (LV). Currently, LVH is considered not only as a specific lesion of the heart in AH, but also as a risk factor for the development of heart failure (HF) and sudden death [4, p. 5]. According to the Framingham study, LV hypertrophy occurs in 17-19% of the population and in at least 60% of patients with arterial hypertension. Patients with increased ventricular mass also have a higher risk of cardiovascular death (15%) and all-cause mortality (16.5%) [5, p. 1556].

The hypertrophied myocardium is characterized by a significant number of electrophysiological disorders: slowing down of repolarization, impaired propagation of the electrical excitation wave in LVH [6, p. 1280].

LVH is currently regarded as a major link in the chain of the cardiovascular continuum and in the development of heart failure. Signs of hypertrophy on the ECG are accompanied by a 15-fold increase in the incidence of CHF syndrome [3, p. eighteen].

The aim of the work is to study the level of lipids, ECG and EchoCG data depending on the presence of LVH in women with hypertension.

73 patients with GB were examined on an outpatient basis at the Bukhara Regional Cardiological Dispensary in 2020-2021. We have created questionnaires to study social factors and risk factors. The examination included anthropometry during a doctor's appointment, measurement of systemic arterial pressure. A biochemical blood test and instrumental methods - echocardiography (EchoCG), ECG were also carried out. The criterion for LVH was LVMI > 95 g/m<sup>2</sup> (women) [2, p. 162]. LV dilatation was considered LV EDR greater than 5.5 cm (O.Yu. Atkov, 2009). The geometric model of left ventricular hypertrophy was determined according to echocardiography data, based on the determination of the mass index of the left ventricular myocardium (LVMI) and the relative wall thickness (RHT) of this ventricle.

Depending on the level of LVMI and OPV, four different types of geometric adaptation of the left ventricle to hypertension are distinguished: concentric left ventricular hypertrophy (increased LVMI and OPV); eccentric hypertrophy (increased LVMI with normal OTS); concentric remodeling (increased OTS with normal LVMI); normal geometry of the left ventricle [6, p. 1279].

62 patients with GB were examined. All patients who participated in the study did not have concomitant cardiovascular diseases. The average age of women was 66.9 years. Obesity was 27 (43.5%) women, the average BMI was 28.8. 5% of women smoked. Only one woman suffered from diabetes mellitus (DM). Basically, the patients did not work 93%. The disability group had 2 (3.17%) patients. Only 15% had higher education. The mean systolic blood pressure is 150.8 mmHg and the diastolic blood pressure is 85.6 mmHg.

All patients were divided into 2 groups: the first group included 38 (61.3%) women with LVH, and the second group included 24 (38.7%) women with normal geometry of the left ventricle. There were no differences between the groups in terms of age, disease duration, SBP and DBP levels. All patients participating in the study had no concomitant cardiovascular disease.

Among the patients of the first group, 18 (47.4%) people had obesity, and in the second group - in 9 (37.5%) people. The mean BMI was 29.3 and 28 respectively in the first and second groups. In the group of patients with LVH, there was a tendency to more pronounced obesity. Lipid levels were high in most patients. In group 1, the average level of LDL - 2.92 mmol / l, HDL - 1.38 mmol / l, triglycerides - 1.77 mmol / l, in group 2 LDL - 3.41 mmol / l, HDL - 1.56, triglycerides - 1.73 mmol / l.

According to echocardiography, it is natural that the average myocardial mass and myocardial mass index were higher in women with LVH. So, in the first group, the average mass of the myocardium is 248.7 g, and in the second - 183.4 g. IMMI in the first group was 140.5 g / sq.m, and in the second - 92.2 g / sq.m. In group 2 without LVH, concentric remodeling was not detected. In group 1 with LVH, the concentric type of hypertrophy was more often detected - in 37 (97.4%) patients and only one patient had eccentric hypertrophy. Dilatation of the left ventricle was not detected in anyone (LV EDD).

Thus, there was a tendency in patients with LVH to become obese. Most patients did not control blood lipids. The most common type of LV hypertrophy was found to be concentric.

Since LVH is an independent risk factor for cardiovascular events, preventive measures such as weight loss, blood lipid control, and research on the benefits of cardiac supplements are needed. It is also necessary to single out a separate dispensary observation group with EH and LVH.

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