

# LEFT VENTRICULAR HYPERTENSION IN CARDIOLOGY

Samandar Kochiboyev Ismatulla ugli  
Guliston State University

## Abstract

Left ventricular hypertension (LVH) is a pathological condition associated with an increase in the activity or tension of the left ventricle of the heart, which has a negative effect on the normal functioning of the heart. This condition usually occurs as a result of high blood pressure, heart valve disease, or other heart conditions. Left ventricular hypertension can cause heart failure, shortness of breath, fatigue and other clinical symptoms. The diagnosis is made using tools such as echocardiography and electrocardiogram. Treatment is mainly through medication and lifestyle changes, which help improve the patient's health. Timely detection and treatment are important in the management of this disease.

**Keywords:** Left ventricular hypertension, Heart failure, Blood pressure, Pulmonary hypertension, Myocardial infarction, Arterial hypertension, Heart rhythm disorders, Echocardiography, Angiotensin converting enzyme inhibitors (ACE inhibitors), Beta-blockers, Diuretics, Heart valve diseases, Fatigue, Shortness of breath.

## Introduction

The main symptoms of toxicosis of pregnancy include loss of appetite, nausea, vomiting, left ventricular hypertension, as a result of increased pressure in the pulmonary artery, burdens the work of the left ventricle and interferes with its full functioning. This condition is caused by a narrowing or narrowing of the pulmonary artery, which puts excess pressure on the left ventricle of the heart. In the long term, this condition can lead to weakening of the heart. However, left ventricular hypertension can also affect other parts of the heart and can lead to heart failure in severe cases.

Clinical manifestations of left ventricular hypertension can often be unclear, but in the late stages of the disease, patients have symptoms such as shortness of breath, fatigue, and pulmonary edema. It can often be associated with lung disease, heart failure, or other cardiovascular disease, so early detection and treatment is very important.

Left ventricular hypertension (LVH) is a disease in which the left ventricle of the heart is overloaded by increased pressure in the pulmonary artery. This disease can develop for various reasons and often requires an in-depth study of the condition of the heart and lung system. The main part includes the following aspects:

### 1. Causes of Left Ventricular Hypertension

The main causes of left ventricular hypertension are:

**Pulmonary Artery Narrowing:** A narrowing or change in a pulmonary artery increases blood flow and pressure.



Heart failure: When the left ventricular heart becomes weak, pressure in the pulmonary artery may increase.

Pulmonary diseases: Pulmonary fibrosis, pulmonary embolism, or other lung pathologies can increase the pressure in the pulmonary artery.

Atherosclerosis: A buildup of fat in the blood vessels can increase resistance in the pulmonary artery.

Genetic factors: In some cases, CHG can be hereditary, which means that the changes can be due to genetic defects that cause the changes.

## 2. Pathophysiology

Left ventricular hypertension occurs as a result of increased blood pressure in the pulmonary artery. When the pulmonary artery is narrowed, the heart has to work harder to supply the pulmonary circulation to the left ventricle.

This, in turn, causes the left ventricle to overwork, and over time can weaken the left ventricle itself. Long-term pressure deprives the heart of the ability to work fully and can lead to heart failure.

## 3. Clinical signs

Left ventricular hypertension often does not cause symptoms in the early stages. But with the development of the disease, the following clinical signs may appear:

Shortness of breath: As a result of high pressure in the pulmonary artery, the exchange of oxygen in the lungs becomes worse, which leads to shortness of breath.

Fatigue: As a result of an overworked heart, the patient often feels tired and lacks energy.

Bone pain and swelling: Left ventricular hypertension can affect the lungs and heart, causing swelling in the legs and bone pain.

Nausea and dizziness: Sometimes high blood pressure can alter the blood flow in the brain.

## 4. Diagnosis

The following diagnostic methods are used to determine left ventricular hypertension:

Echocardiography: It is used to check the function of the heart and the condition of the left ventricle. It also helps to determine the pressure in the pulmonary artery and changes in the heart.

EKG (Electrocardiogram): Checks the heart's rhythm and electrical activity.

X-ray: Shows the condition of the lungs and changes in the large blood vessels.

Blood tests: Used to determine heart and lung function.

## 5. Methods of treatment

There are several ways to treat left ventricular hypertension:

Medical treatment: Medicines such as vasodilators, ACE inhibitors or diuretics are used to lower pulmonary artery pressure.

Treatment of lung diseases: If lung diseases are the cause, their treatment will be the main problem.

Treatment of heart failure: Treatment of heart failure is necessary to improve the functioning of the left ventricle.

Surgery: Surgery may be necessary for narrowing or other abnormalities in the pulmonary artery.



## 6. Prevention and Prognosis

In the prevention of left ventricular hypertension, it is important to monitor the health of the heart and lungs, maintain a healthy lifestyle, treat high blood pressure and heart disease in time. The prognosis of the disease depends on its delay and how it responds to treatment. If detected in the early stages and treated effectively, the patient's condition can improve.

If left ventricular hypertension is not diagnosed and treated in time, it can lead to serious heart and lung problems. Therefore, regular medical examinations and proper treatment are important.

Left ventricular hypertension is a condition of increased blood pressure inside the left ventricle, which disrupts the normal functioning of the heart. It often occurs as a result of heart failure or high blood pressure. Symptoms include fatigue, shortness of breath, and leg swelling. Treatment requires medication and lifestyle changes, and in severe cases, surgery may be required. If detected and treated in time, it is possible to improve the functioning of the heart.

## References

1. "Heart Disease: A Textbook of Cardiovascular Medicine" by Douglas L. Mann, Douglas P. Zipes, and Peter Libby
2. "Clinical Cardiovascular Medicine" by Dr. Michael H. Crawford
3. "Manual of Cardiovascular Medicine" by Brian P. Griffin
4. "Pulmonary Hypertension: Pathophysiology and Treatment" by Mario M. D. Dinh and Marc Humbert
5. "Harrison's Principles of Internal Medicine" by Dennis L. Kasper et al.

