

# Hypertrophic cardiomyopathy complicated by massive pulmonary embolism

T. Milunovikj1, A.M. Taseva Vasileva1, M. Klincheva2, Zh. Mitrev2  
1Faculty of Medical Sciences, "Goce Delchev" University, Shtip, North Macedonia  
2PZU Zhan Mitrev Clinic, Skopje, North Macedonia

## Introduction:

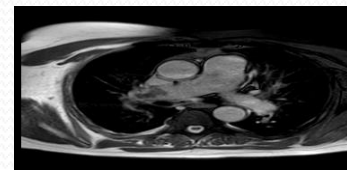
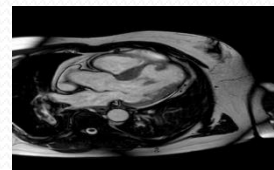
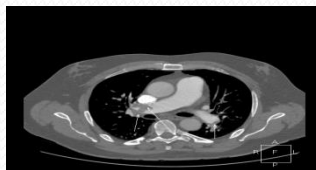
Hypertrophic cardiomyopathy is a thickening of the heart muscle ( $\geq 15\text{mm}$ ) symmetric or asymmetric, often genetically determined. The disease can be asymptomatic for many years before signs of ischemia and arrhythmias appear, which can lead to sudden death. The existence of multiple cardiovascular risk factors leads to increased morbidity and mortality.

## Patient presentation:

Transthoracic echocardiography was performed in a 67-year-old man with symptoms of suffocation and fatigue (NYHA 3) "recently", a history of myocardial infarction and placement of a circumflex artery stent. Cardiovascular risk factors: arterial hypertension, diabetes mellitus type 2, benign prostatic hyperplasia, chronic renal failure. Transthoracic echocardiography showed marked hypertrophy with obstruction in midsections and apical dyskinesia. Laboratory analyzes and magnetic resonance of the heart were performed.

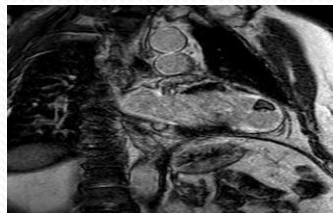
## Initial work up and results:

Magnetic resonance of the heart as an incidental finding showed a massive pulmonary embolism in the main pulmonary arteries and a thrombus in the apex of the left ventricle, eccentric marked hypertrophy (septum 23 mm) and non-viable myocardium in 41%. The patient was hospitalized, oral anticoagulant therapy with apixaban was prescribed according to the protocol. After discharge from the hospital, the patient's clinical condition has improved (NYHA 1).

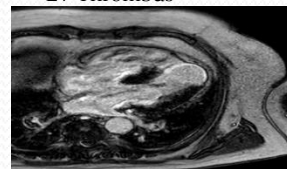


MR Early Gadolinium  
LV Thrombus

Thrombus in the right  
pulmonary artery



MR Heart LV Thrombus



MR LV Ischemic apical  
myocardial enhancement

## Conclusion:

Thorough investigations are needed in complex patients. Oral anticoagulant therapy with xabanes has been shown to be an effective therapy in patients with pulmonary embolism and left ventricular thrombus.