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Constrictive pericarditis: a forgotten cause of heart failure

Authors:
C Pemberthy Lopez¹, PJ Espinosa Martinez¹, JC Rendon Isaza², CI Saldarriaga Giraldo², ¹Universidad Pontificia Bolivariana, Antioquia - Medellin - Colombia, ²Clinica CardioVID, Antioquia - Medellin - Colombia,

Topic(s):
Heart Failure with Reduced Ejection Fraction

Citation:
A 49 year old man with dyspnoea and lower extremities oedema was admitted the hospital. The past medical history was negative for cardiovascular disease. The physical exam was relevant for the presence of signs of congestive heart failure, the EKG showed atrial fibrillation. The echocardiogram showed an EF of 33%. Medical treatment for HFrEF was started. Coronary artery disease was ruled out with left cath and tachycardiomyopathy was considered the most probably aetiology. After one year of treatment his clinical condition doesn’t improve, he developed worsening heart failure and had 2 more hospital admissions. A new echocardiogram showed an EF of 35%, with severe dilatation of atria, right ventricular dysfunction and a dense image compressing extrinsically both ventricles. A CT showed pericardial calcification and a MRI showed compression of both ventricles at the mid third by the pericardium. The diagnosis of constrictive pericarditis was confirmed by right heart cath that showed diastolic equalization of the right atrial pressure, right ventricular pressure, pulmonary artery pressure and pulmonary capillary wedge pressure. The myocardial biopsy was negative for infiltrative disease or myocarditis. An anterior pericardectomy was performed. After surgery, our patient had a good evolution, with resolution of the heart failure symptoms and with an improve of the EF to 50%. The pericardium pathology reported degenerative changes with calcification and fibrosis, tuberculosis or malignancy were ruled out.

This patient did not have an evolution compatible with heart failure induce tachycardiomiopathy. This reveal the need of look for another cause of his symptoms. The new echocardiogram showed a dense image compressing cardiac chambers, which pointed to a restrictive pathology. The CT was very useful in order to identify the calcium in the pericardium and the right heart cath confirmed the presence of constrictive physiology and the only effective treatment was offered: pericardiectomy.

Constrictive pericarditis was not suspected at the beginning because he did not debuted with normal ejection fraction, which is more common in this pathology. This drive to a late diagnosis which can favour complications due to multiples episodes of decompensation, which turns in a worst prognosis. As a differential diagnosis there are toxic and hormonal cardiopathies and myocarditis; with further impairment, pulmonary thromboembolism, restrictive myocardopathy and tumoral cardiac compression must be considered. In Colombia, tuberculosis is the main cause of constrictive pericarditis, however the pathological study ruled out this diagnosis.

Constrictive pericarditis is an important differential diagnosis in patients with heart failure with an unclear cause, in whom identification and treatment drives to a dramatic improvement in symptoms and ventricular function; therefore, a high grade of suspicion is required to make a prompt diagnosis.
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