Caseous calcification of the mitral annulus: a silent cause of intracardiac mass

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INTRODUCTION

Caseous calcification of the mitral annulus (CCMA) is a very rare variant of mitral annular calcification with a central liquefaction necrosis, being an uncommon echocardiographic finding (0.5 to 1%) which may be mistaken for an intracardiac tumor, thrombus or vegetation. This chronic degenerative process can occur at advanced ages, particularly in women, and patients with hypertension, chronic renal failure or calcium metabolism abnormalities. Since patients often remain asymptomatic, conservative treatment for this lesion is generally sufficient.

CASE REPORT DESCRIPTION

We report a case of an 86-year-old female with a known history of hypertension and diabetes, who was referred to our department in order to investigate the diagnosis of an intracardiac mass visualized through a routine transthoracic echocardiography. She reported effort dyspnea, but refused to have other cardiovascular symptoms.

In order to study this intracardiac mass, the patient was submitted to a transthoracic echocardiogram that showed a rounded mass of 16×22 mm in the anterior mitral annulus, mainly in P1 scallop, not causing valve stenosis and with a mild mitral regurgitation. This prompted the need for transesophageal echocardiography which revealed a spheroid mass of heterogeneous content with calcification points, regular edges and with a faint central echo-lucent area without acoustic shadowing, attached to the anterior mitral valve leaflet. No communication with any cardiac chamber could be detected. The mass did not determine any restriction to the opening of mitral valve cusps. A cardiac MRI was requested to complete the diagnostic evaluation revealing that the lesion was located at the base of the anterior leaflet. In the T1 and T2 sequences the mass was hypointense, whereas in the perfusion sequence, no contrast penetration was detected in the mass and in the late enhancement. These findings, as well as the presence of a calcified envelope in the cardiac computed tomography scan, confirmed the suspicion of caseous calcification of the mitral annulus.

DISCUSSION AND CONCLUSIONS

We present an unusual case of caseous calcification of the mitral annulus in which the multi-modal approach was crucial to confirm the diagnosis. Although transthoracic echocardiography can be sensitive in the diagnosis of this entity, the diagnosis may sometimes still be inconclusive. Thus, multi-modality with transesophageal echocardiography, cardiac MRI or CT can lead to a definitive diagnosis, avoiding an mistaken diagnosis with the need of a surgical approach. Since this pathology is most frequently detected in asymptomatic patients, the patients should be treated medically and monitored clinically and echocardiographically for an early recognition of possible complications.
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