A patient with chronic dyspnea and episodes of paroxysmal atrial fibrillation in the presence of a right atrial mass

Georgios S. Papaetis (MD, PhD)[1,2], Antreas D. Antreou (MD)[3], Stylianos A. Karvounaris (MD,PhD)[4]

1: Internal Medicine and Diabetes Clinic, Eleftherios Venizelos Avenue 62, Paphos, Cyprus.

2: CDA College, 73 Democratias Avenue, Paphos, Cyprus.

3: Department of Radiology, Evangelismos Hospital, Vasileos Constantinou 87 Street, Paphos, Cyprus.

4: Department of Cardiology, Evangelismos Hospital, Vasileos Constantinou 87 Street, Paphos, Cyprus

Corrresponding author: Georgios S. Papaetis MD, PhD, Internal Medicine and Diabetes Clinic, Eleftherios Venizelos Avenue 62, Paphos, Cyprus. Tel:0035799273573, Fax:0035726220451, E-mail: gpapaetis@yahoo.gr

Abstract

Lipomatous hypertrophy of the interatrial septum (LHIS) is an unusual condition that can be presented as a mass-like bulge that typical spares of the fossa ovalis. We describe a 73-year-old overweight woman with dyspnea on exertion and two episodes of paroxysmal atrial fibrillation for the last eight months. A big sessile mass was detected in the interatrial septum measuring 3.7 x 4.7 cm during transesophageal echocardiography. The patient underwent resection of the mass and pericardial patch reconstruction of the defect with significant improvement of her clinical status during the follow-up period. The histopathological analysis suggested LHIS.

Running title: LHIS presenting as a right atrial mass

Keywords

Lipomatous hypertrophy of the interatrial septum, cardiac mass, arrythmia, dyspnoea.

Lipomatous hypertrophy of the interatrial septum (LHIS) is an unusual condition that is characterised by non-encapsulated accumulation of adipose tissue that was first described in 1964[1]. However, it can also be detected as a mass-like bulge that typical spares of the fossa ovalis and should be differentiated by other cardiac neoplasms [2,3].

A 73-year-old overweight woman presented complaining of dyspnoea on exertion (NYHA class II) for the last eight months. She also experienced two episodes of paroxysmal atrial fibrillation with rapid ventricular response and haemodynamic instability treated with amiodarone. Chest computed tomography (CT) scan disclosed a big lipomatous lesion arising from the right cardiac chambers (figure 1). CT pulmonary angiography was normal. Transthoracic echocardiogram (TTE) revealed a mass in the base of the right atrium originated from the interatrial septum (IAS) (figure 2). Transesophageal echocardiography (TEE) clarified the nature of this large sessile mass in the IAS measuring 3.7 x 4.7 cm that spared of the fossa ovalis (figure 3). Cardiac magnetic resonance imaging (MRI) was not performed because the patients' medical history of claustrophobia. Due to the unexplained dyspnea of our patient, the recent serious arrhythmia episodes and the lack of MRI data for further clarification of the tumour's origin, the patient was referred to a cardiac surgeon. She underwent resection of the mass and pericardial patch reconstruction of the defect. The histopathological analysis showed LHIS. Significant improvement of her clinical status was observed after two years of follow-up. To our knowledge this is the first published case of LHIS in Cyprus. Although LHIS is usually found as an incidental finding on echocardiography it has been suggested that patients referred for surgical therapy of other cardiac pathology, concomitant treatment for LHIS should be considered, even in the absence of superior vena cava obstruction or intractable

rhythm disturbances[4]. Surgical removal usually has excellent short-and long-term results like our patient.

Acknowledgments

Not to declare

Competing interests

The authors declare that they have no competing interests.

Funding

None

Ethical Issue

None

References

1. Prior JT. LIPOMATOUS HYPERTROPHY OF CARDIAC INTERATRIAL SEPTUM. A LESION RESEMBLING HIBERNOMA, LIPOBLASTOMATOSIS AND INFILTRATING LIPOMA. Arch Pathol 1964;78:11-5.
2. Shirani J, Roberts WC. Clinical, electrocardiographic and morphologic features of massive fatty deposits ("lipomatous hypertrophy") in the atrial septum. J Am Coll Cardiol 1993; 22: 226-38.
3. Kleiman AM, Harding LM, Bechtel AJ. Concomitant lipomatous hypertrophy and left atrial mass: distinguishing benign from malignant. Echocardiography 2018; 35:534-36.
4. Lentini S, Tancredi F, Monaco F, Gaeta R. eComment: Lipomatous hypertrophy of the interatrial septum: surgical indications refined. Interact Cardiovasc Thorac Surg 2008;7:717.

Figure 1. Chest computed tomography scan showed a big lipomatous lesion arising from the right chambers (red arrow). RT.A.: Right atrium; RT.V.: Right ventricle; LT.A.: Left atrium; LT.V.: Left ventricle; Ao: Aorta; M: Mass.

Figure 2. Transthoracic echocardiogram revealed normal left and right ventricle dimensions and contractility. A mass in the base of the right atrium originated from the interatrial septum was observed (red arrow). RA: Right atrium; RV: Right ventricle; LA: Left atrium; LV: Left ventricle.

Figure 3. Transesophageal echocardiography disclosed a large sessile mass in the interatrial septum measuring 3.7 x 4.7 cm that spared of the fossa ovalis (red arrow).