

Surgical Treatment of Atrial Septum Lipomatous Hypertrophy Associated with Syncopal Attacks

Abstract

Lipomatous hypertrophy of atrial septum (LHAS) is a rare benign cardiac condition characterized by fatty tissue infiltration located in the atrial septum. We presented a rare case of LHAS resulting in recurrent syncopal attacks.

Keywords: Cardiac surgery, lipomatous hypertrophy of atrial septum, syncopal attacks

Introduction

Lipomatous hypertrophy of atrial septum is a rare heart disorder with the typical feature of non-encapsulated hypertrophic fatty mass located into atrial septum sparing the membrane of fossa ovalis.

Interesting Image

A 77-year old overweight female (body mass index of 27.7 kg/m²), and a history of diabetes mellitus, hypertension, and dyslipidemia reported episodes of transient, self-limited loss of consciousness over the previous 2 years.^[1]

Diagnostic investigation included 24-h Holter test and chest X-ray without remarkable findings.^[2] She also underwent transthoracic echo study followed by

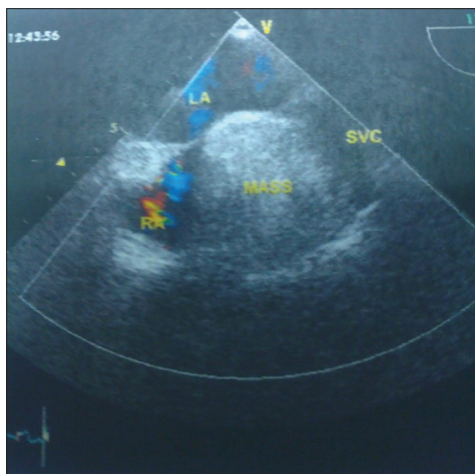


Figure 1: Transthoracic echocardiography study: large mass arising from atrial septum and sparing fossa ovalis (RA: right atrium, LA: left atrium)

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transesophageal echocardiography, which revealed a large interatrial mass arising from the atrial septum and the right atrial roof [Figure 1]. Superior vena cava (SVC) and right upper pulmonary vein (RUPV) appeared to be partially obstructed. SVC was dilated while Doppler study revealed turbulent flow in RUPV at the right atrium inflow level. Ejection fraction was normal [Figure 2]. Cardiac magnetic resonance imaging revealed a 3.6 cm × 3.6 cm × 5 cm mass compressing SVC. Both studies suggested the diagnosis of lipomatous hypertrophy of atrial septum (LHAS) [Figure 3]. Finally, on coronary angiogram, no critical stenosis was observed.

Differential diagnosis includes lipoma (encapsulation is against LHAS), myxoma (not sparing the fossa ovalis), and liposarkoma characterized by neoplastic features.^[1,3,4]

Surgical treatment was mainly decided because of repetitive life-threatening

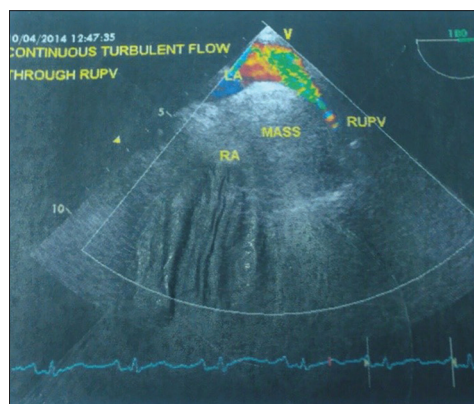


Figure 2: Transthoracic echocardiography Doppler study: turbulent flow through right upper pulmonary vein

How to cite this article: Ampatzidou F, Koutsogiannidis CP, Cheva A, Vasiliadis K, Drossos G. Surgical treatment of atrial septum lipomatous hypertrophy associated with syncopal attacks. *Ann Card Anaesth* 2018;21:319-20.

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Access this article online

Website: www.annals.in

DOI: 10.4103/aca.ACA_248_17

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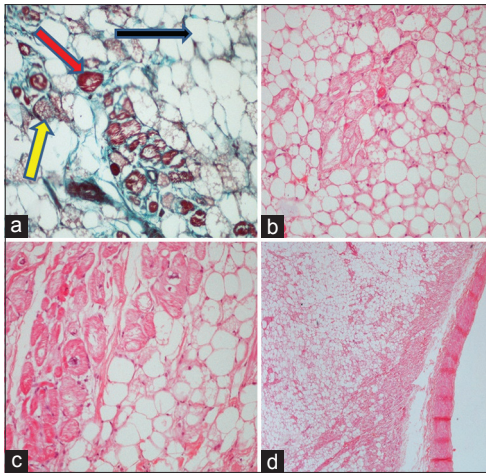


Figure 3: Microscopic pathologic findings with characteristic mixture of fat cells: (a) Masson's trichrome stain $\times 200$: normal fat cells (black arrow), hypertrophied myocytes or Purkinje fibers (red arrow) and vacuolated or brown fat cells. (b and c) H and E, $\times 200$. (d) H and E, $\times 40$

syncopal episodes. A right atriotomy was performed, and the interatrial mass was resected, followed by pericardial patch repair of the atrial septum.

Histopathology study from mass tissue samples confirmed the diagnosis of LHAS. The postoperative course was uneventful, and no arrhythmias were recorded during her ICU and high dependency unit stay. She is also free of syncopal attacks a year after her cardiac operation.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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