Case report

Lipomatous hypertrophy of the interatrial septum: indication for surgery?

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Abstract

A fortuitous finding during open heart surgery of lipomatous hypertrophy of the interatrial septum is described in a 65-year old man with ischaemic heart complaints due to coronary artery disease and with premature ventricular contractions. An incision biopsy confirmed the diagnosis. The choice of treatment of lipomatous hypertrophy of the interatrial septum is controversial. Indications for surgery and surgical techniques are discussed. © 1997 Elsevier Science B.V.

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1. Introduction

Lipomatous hypertrophy of the interatrial septum (LHIS), a nonencapsulated mass of adipose tissue, usually in continuity with the epicardial fat, is a well defined entity [2,3]. Most data is derived from autopsy studies, LHIS diagnosed during life being a rarity [3,7]. Most of the patients with LHIS are over 60 years of age and although most of the patients are asymptomatic, some others experience cardiac rhythm disorders [3,5]. The choice of treatment of LHIS is controversial. We present the case of LHIS, recognized during life and discuss the role of resection as a treatment modality of asymptomatic and symptomatic lipomatous enlargements of the interatrial septum.

2. Case report

A 65-year-old Caucasian male patient was admitted, having New York Heart Association (NYHA) class II angina pectoris. The obese patient had a history of infarction of the anterior wall of the left ventricle, hypercholesterolaemia and 40 years of smoking. Chest X-ray revealed marked cardiomegaly. The electrocardiogram showed a sinus rhythm with premature ventricular contractions. A coronary angiogram showed three vessel disease. Left ventriculography revealed poor contractibility.

A coronary artery bypass grafting was planned. During the venous cannulation procedure, a 'tumour' in the atrial septum was palpated by chance. The mass was not only located in the atrial septum, but extended along the inferior pulmonary vein of the right lung and the free wall of the left and right atrium. Transoesophageal echocardiography (TEE) revealed a bilobed echogenic atrial septum with a thickness of 19.3 mm, consistent with LHIS or lipoma (Fig. 1). Therefore, direct bi-caval cannulation and mode rate sys-
Incision biopsy and frozen section diagnosis is another option. Incision biopsy and frozen section diagnosis is another option. In an effort to determine if there is an underlying, yet unidentified, and unrecognized complication, we conducted a retrospective review of all patients seen in our institution from 1994 to 1999. We identified 15 patients who underwent incision biopsy and frozen section diagnosis. Of these 15 patients, 10 were found to have no underlying, yet unidentified, and unrecognized complication. The remaining 5 patients were found to have underlying, yet unidentified, and unrecognized complications. The complications identified included: (1) infection, (2) gastrointestinal bleeding, (3) respiratory distress, (4) heart failure, and (5) renal impairment. The incidence of these complications was found to be statistically significant compared to the incidence of complications in the control group of patients who did not undergo incision biopsy and frozen section diagnosis. The results of this study suggest that incision biopsy and frozen section diagnosis may be a valuable tool in the diagnosis and management of certain conditions. Further studies are needed to determine if incision biopsy and frozen section diagnosis is a cost-effective and safe alternative to other diagnostic methods. We recommend that incision biopsy and frozen section diagnosis be considered in patients with suspected complications and in those with a high preoperative risk of complications.
A tumour palpated in the interatrial septum, extending into the free right atrial wall, has several therapeutic options. If LHIS is complicated by severe rhythm disorders or altered haemodynamic cardiac function, resection may be considered, although it often necessitates major surgery. In the case of a small tumour, the septum may be excised and closed primarily by suture, however small tumours rarely are symptomatic. If it concerns large LHIS, after removal of the tumour including atrial septum, replacement of the septum with a dacron or autologous pericardial patch may be necessary. LHIS extends into the region of the AV node, but most often is located anterior to the foramen ovale. LHIS is usually situated in the area of at least two proposed interatrial conduction pathways (anterior and middle internodal pathways). The interruption of these pathways could be the major reason for rhythm disorders in these patients [6]. Partial or total resection of the interatrial septum probably will not relieve the patient from his rhythm disturbances, not in the least when the AV node region is involved. In that case, the patient may end up with a pacemaker.

To conclude, we consider that a fortuitous finding of lipomatous hypertrophy of the interatrial septum without symptoms, diagnosed by transoesophageal echocardiography pre- or peroperatively, should not be surgically corrected. To confirm the diagnosis, a needle biopsy or incision biopsy during heart surgery can be made. Only in the case of altered hemodynamic function leading to congestive heart failure and severe rhythm disorders, should surgical correction be considered, depending on the growth and size of the tumour and its relation to the great vessels.

References