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Case report

Lipomatous hypertrophy of the interatrial septum: indication for surgery?

C.J.A.M. Zeebregts a,*, A.G. Hensens a, J. Timmermans b, M.S. Pruszczynski c, L.K. Lacquet a

* Department of Cardio-thoracic Surgery, University Hospital, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands
b Department of Cardiology, University Hospital, Nijmegen, The Netherlands
c Department of Pathology, University Hospital, Nijmegen, The Netherlands

Received 7 May 1996; accepted 6 June 1996

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.

Keywords: Lipomatous hypertrophy; Interatrial septum; Arrhythmia; Resection

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 lobed 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-
In conclusion, the development of television microscopes and the introduction of the television camera have opened up new possibilities in the field of microscopy. These advancements have led to significant improvements in the detection and analysis of biological samples, enabling researchers to observe and study specimens in ways that were previously impossible. The integration of television technology with microscopy has not only revolutionized the field of research but has also had a profound impact on the education and training of future scientists. As technology continues to evolve, it is likely that these revolutionary tools will continue to transform the way we explore the microscopic world, leading to new discoveries and insights in fields ranging from medicine and biology to materials science and technology. The television microscope, in particular, has become an indispensable tool for researchers and educators alike, offering a powerful means of visualizing and understanding the intricacies of the biological world at a scale previously unimagined.
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