CASE REPORTS

A Closed Interatrial Septum Aneurysm, Filled with Blood, Mimicking a Tumour in the Right Atrium

I. Ginon¹, C. Mestrallet¹, M. Barthelet², J. Robin³ and X. André-Fouët¹

¹Service de Cardiologie, ²Laboratoire d’Echocardiographie, ³Service de Chirurgie Cardiaque, Hôpital Cardio-Vasculaire Louis Pradel, BP Lyon-Montchat, 69394 Lyon Cedex 3, France

We report the case of a 70-year-old woman with rheumatic mitral stenosis and a transient ischaemic attack. Transoesophageal echocardiography revealed a cystic mass in the right atrium, hanging to the interatrial septum by a pedicle, not circulating. The mass was heterogeneous and suggested a tumour (myxoma) or a thrombus. Surgical resection showed it was an interatrial septal aneurysm, closed on itself, filled with blood. The usual causes of cardiac tumours and pathogeny of large interatrial aneurysms are discussed. (Eur J Echocardiography 2000; 1: 289–290) © 2000 The European Society of Cardiology

Key Words: interatrial septum aneurysm; tumour; mitral stenosis; transoesophageal echocardiography.

Case History

A 70-year-old woman was admitted for acute congestive heart failure. Her physical examination was typical for mitral stenosis, with an irregular pulse and apical diastolic rumble. Two-dimensional (2D) transthoracic echocardiography (TTE) showed a severe rheumatic mitral stenosis (area 1·2 cm²). Shortly after admission she developed a sudden transient aphasia. Transoesophageal echocardiography (TEE) was performed to look for a thrombus in left cardiac chambers, responsible for cerebral embolism.

TEE confirmed the calcified mitral stenosis, with dilated left atrium and light spontaneous echo contrast, but did not reveal any thrombus in left cardiac chambers. Unexpectedly, TEE showed a round cystic mass in the right atrium, measuring 23 × 25 mm, which was heterogeneous and hanging to the atrial septum by a thin pedicle (Fig. 1). No interatrial shunt was detected with contrast. Right atrium was not enlarged.

Diagnosis of myxoma or thrombus was discussed. The patient did not exhibit any clinical or biological feature of inflammation.

The patient was referred to surgery. A smooth blue-shaded mass was found attached to the atrial septum, close to the fossa ovalis. It was resected, and the section of the pedicle showed that the cavity (20 × 20 mm) was filled with blood. Microscopic analysis of the wall showed endothelial cells on both sides, separated by a

*Address for correspondence: I. Ginon, Hôpital Cardio-Vasculaire Louis Pradel, BP Lyon-Montchat, 69394 Lyon Cedex 3, France.
Our case is in accordance with several observations suggesting that the pressure gradient between both atria plays a role in the aetiology of aneurysms. Smith et al. reported a large cystic mass in a man with acute aortic valve endocarditis. It was thought that the persistent bulging of the aneurysm towards the right atrium may be related to high left atrial pressure due to severe and acute aortic regurgitation. Pena Tizon et al. also reported a case of an aneurysm associated with rheumatic mitral stenosis. In their case there was evidence of contrast filling the mass.

Our case points out some limitations of echocardiography in identifying a mass in the right atrium. Studies showed that TEE is largely superior (about 50%) to transsthoracic imaging in characterizing right atrial masses. In those retrospective studies, surgical or histological analyses were unfortunately seldom available. In our case, TTE was indeed unable to visualize the mass (subcostal window was very limited); TEE showed the mass, but surgical analysis was finally required.

Conclusion

In conclusion, this case history shows that interatrial septal aneurysms can mimic atrial tumours like myxoma and thrombus. Mitral stenosis was presumably contributory because of raised left atrial pressure. TEE incidentally showed this mass, but surgical analysis was necessary to identify it.

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References