- 34 Kliks BR, Burgess M, Abildskov J. Influence of sympathetic tone on ventricular fibrillation threshold during experimental coronary occlusion. *Am J Cardiol* 1975;36:45-9.
- 35 Brown G, Lee A, Bolson E, Dodge H. Reflex constriction of significant coronary stenosis as a mechanism contributing to ischaemic left ventricular dysfunction during isometric exercise. *Circulation* 1984;70:18-24.
- 36 Vatner S, Hintze T, Macho P. Regulation of large coronary arteries by beta adrenergic mechanisms in the conscious dog. *Circ Res* 1982;51:56-66.
- 37 Chierchia S, Lazzari M, Freedman B, Brunelli C, Maseri A. Impairment of myocardial perfusion and function during painless myocardial ischaemia. *J Am Coll Cardiol* 1983;1:924-30.
- 38 Shakespeare CF, Crowther A, Cooper IC, Katritsis D, Coltart DJ, Webb-Peploe MM. Autonomic reflexes initiated by balloon angioplasty [abstract]. *Circulation* 1991;84(II):268.

SHORT CASES IN CARDIOLOGY

Acute pulmonary oedema: an unusual clinical presentation of unruptured sinus of Valsalva

Rashid Shahrabani, Rabindranath Chakraborty, John Valliathu

Department of Cardiology and Cardiovascular Surgery, Royal Hospital, Muscat, Sultanate of Oman
R Shahrabani
R Chakraborty
J Valliathu

Correspondence to
Dr Rashid M Shahrabani,
Department of Cardiology,
Royal Hospital,
P.O. Box 1331 Seeb,
Sultanate of Oman.

Accepted for publication
20 September 1993

Cross sectional echocardiograms in the long axis parasternal view showing (A) a dilated, unruptured aneurysm of the right sinus of Valsalva dissecting into the upper part of interventricular septum and (B) complete obliteration of the aneurysm in the interventricular septum after operation. AO, aorta; LV, left ventricle; RCS, right coronary sinus; RV, right ventricle.

echocardiography confirmed the diagnosis of a dilated, unruptured aneurysm of the right coronary sinus dissecting into the interventricular septum and producing a cystic mass (fig A). Cardiac catheterisation confirmed the presence of an unruptured aneurysm of the right sinus of Valsalva dissecting into the upper part of the interventricular septum with grade 2/6 aortic regurgitation. There was no gradient across the outflow tract. The results of selective coronary angiography were normal.

The patient was treated for heart failure with intravenous frusemide and supplementary potassium and a transvenous temporary pacing wire was inserted. He underwent cardiopulmonary surgery. The ostium of the aneurysm was closed with Dacron patch and a permanent pacemaker was implanted. Postoperatively cross sectional echocardiography showed signs of mild aortic regurgitation. The cystic cavity in the septum had been completely obliterated (fig B).

Unruptured aneurysm of sinus of Valsalva is a rare anomaly that commonly affects the right coronary sinus.¹ The aneurysm may present clinically as aortic regurgitation² or as a mediastinal mass,³ cerebrovascular accident,⁴ or complete heart block.⁵ Some patients have presented with dyspnoea on exertion (NYHA functional class II).^{5,6} Our patient was orthopnoeic (NYHA functional class IV) with clinical and radiological features of frank pulmonary oedema. His condition improved considerably after successful surgical repair.

- 1 Fisbein MC, Obma R, Roberts WC. Unruptured sinus of Valsalva aneurysm. *Am J Cardiol* 1975;24:918-22.
- 2 London SB, London RE. Production of aortic regurgitation by unperforated aneurysm of sinus of Valsalva. *Circulation* 1961;24:1403-6.
- 3 Reid PG, Goudevenos JA, Hilton CJ. Thrombosed sacculary aneurysm of a sinus of Valsalva: Unusual cause of a mediastinal mass. *Br Heart J* 1990;63:183-5.
- 4 Shahrabani R, Jairaj PS. Unruptured aneurysm of the sinus of Valsalva: a potential source of cerebrovascular embolism. *Br Heart J* 1993;69:266-7.
- 5 Ahmed RAS, Struman S, Watson RDS. Unruptured aneurysm of the sinus of Valsalva presenting with isolated heart block: echocardiographic diagnosis and successful surgical repair. *Br Heart J* 1989;61:375-7.
- 6 Metras D, Coulbaly AO, Ouattara K. Calcified unruptured aneurysm of sinus of Valsalva with complete heart block and aortic regurgitation. *Br Heart J* 1982;48:507-9.