

**Ruptured Sinus of Valsalva Complicated by Right and  
Left Sided Endocarditis,  
R → L – Shunt and Congestive Cardiac Failure**

The Editor,

Sir

A 42-year old man presented in early 2007 with a month's history of dyspnoea, palpitations, swelling of the lower limbs and distended abdomen. On examination, there was oxygen saturation 82%, tachycardia, pulse 110/minutes, tachypnoea, bilateral pitting oedema to the tibial tuberosity and shifting dullness (ascites), a thrill second left intercostal space and grade 5/6 continuous machinery murmur.

Tentative diagnosis was congestive cardiac failure (CCF) secondary to patent ductus arteriosus (PDA). Echo-cardiogram showed a ruptured Sinus of Valsalva. He was treated for heart failure and surgery was scheduled for later. He subsequently presented with high fever and night sweats and was diagnosed as infective endocarditis with CCF. Echo-cardiogram showed vegetations in aortic and pulmonary valves plus ruptured Sinus of Valsalva. Blood culture grew methicillin resistant *Staphylococcus epidermis*. He was treated with vancomycin and gentamycin and had urgent surgery. Aortic and pulmonary valves were excised, vegetations in right ventricular outflow tract (RVOT) and a right sided Sinus of Valsalva were removed. The aneurysmal sac of Sinus of Valsalva was also excised and the defect closed. Valves were replaced with St Jude's medical prostheses. Antibiotics continued for six weeks.

Complications of ruptured Sinus of Valsalva include myocardial infarction from coronary artery compression, complete heart block, RVOT outflow tract obstruction, sudden cardiac death, infective endocarditis, cardiac tamponade and cerebrovascular emboli. Although rupture may occur into any chamber and most commonly into the aortic, right ventricular communication, rupture into the right atrium is the second most common. Rupture into the left-sided chambers, pulmonary artery and pericardium are rare. This case of ruptured Sinus of Valsalva demonstrates: simultaneous right and left-sided infective endocarditis, endocarditis of the pulmonary valve which is extremely rare and right and left side chamber shunt mimicking patent ductus arteriosus.

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