

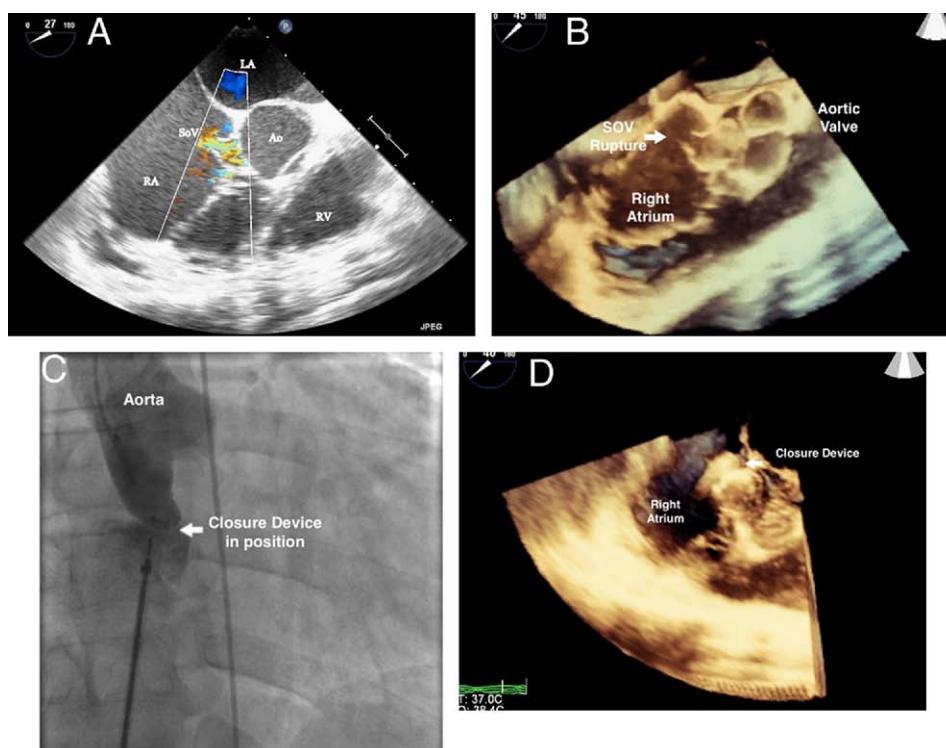
IMAGES IN CARDIOLOGY

Sinus of Valsalva Rupture

Percutaneous Closure With Real-Time 3-Dimensional Echocardiography

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An asymptomatic 23-year-old man was noted to have a harsh pansystolic murmur on examination. Transthoracic echocardiography revealed a ruptured sinus of Valsalva (SOV), which was confirmed on transesophageal echocardiography (TEE) (A, [Online Video 1](#)). The relation between the rupture, right atrium (RA), and aortic valve (Ao) can be clearly seen (B, [Online Videos 2 and 3](#)). Using fluoroscopic and real-time 3-dimensional TEE guidance, the defect was closed with an Amplatzer septal closure device (C and D, [arrows, Online Videos 4, 5, 6, 7, 8, and 9](#)). This case demonstrates the utility of real-time 3-dimensional TEE in assisting the diagnosis and percutaneous treatment of cardiac defects.

Sinus of Valsalva rupture is rare (1). Untreated, it carries a risk of development of right ventricular (RV) overload and pulmonary hypertension. Aneurysms arising from the right coronary sinus are the most common, and usually extend and rupture into the right-side heart chambers (1). LA = left atrium.

REFERENCE

1. Dong C, Wu QY, Tang Y, et al. Ruptured sinus of Valsalva aneurysm. *Ann Thorac Surg* 2002;74:1621-4.