

## Images of Percutaneous Closure of Ruptured Sinus of Valsalva

Muhammad Arif Khan<sup>1</sup> · Khalaf Al Kalaf<sup>2</sup> · Abdul Majeed Al Otay<sup>2</sup> · Tarek Sulaiman Momenah<sup>1</sup>

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**Abstract** The images of transcatheter closure of ruptured sinus of valsalva are presented.

**Keywords** Ruptured sinus of valsalva · Amplatzer duct occluder · Percutaneous closure

### Case Report

27 years old presented with clinical features of heart failure for 10 months. He had continuous murmur at left sternal border. Transthoracic echocardiography showed ruptured sinus of valsalva measuring 10 mm at the aortic end and 6 mm at the site of rupture into the right ventricle (Fig. 1a). The computed tomogram showed same finding (Fig. 1b). Aortic root angiogram showed left-to-right shunt between ruptured right coronary sinus and right ventricle (Fig. 2a). The Judkin right catheter 5 Fr size was advanced from arterial access into aortic root which crossed to right ventricle (Fig. 2a).

After balloon sizing, the defect was closed by Amplatzer duct occluder size 8/6 mm (Amplatzer Duct occluder, AGA Medical corporation, USA). Repeat aortic root angiograms showed device in good position and no residual shunt (Fig. 2b). There was no early or late complication. During 4-year follow up, transthoracic echocardiography showed the device maintained its position and no evidence of residual shunt (Fig. 3a, b).

The aneurysm of sinus of valsalva usually ruptures into right atrium or right ventricle [2]. The conventional management is surgical repair [4]. Different devices are used to seal the ruptured sinus of valsalva [1]. The complications of such procedure can be residual shunt, aortic incompetence, tricuspid regurgitation, coronary artery compression, ischaemia, complete heart block, embolization and infective endocarditis [3].

Transcatheter closure of ruptured sinus of valsalva with a device is effective, safe and avoids complications of surgery.

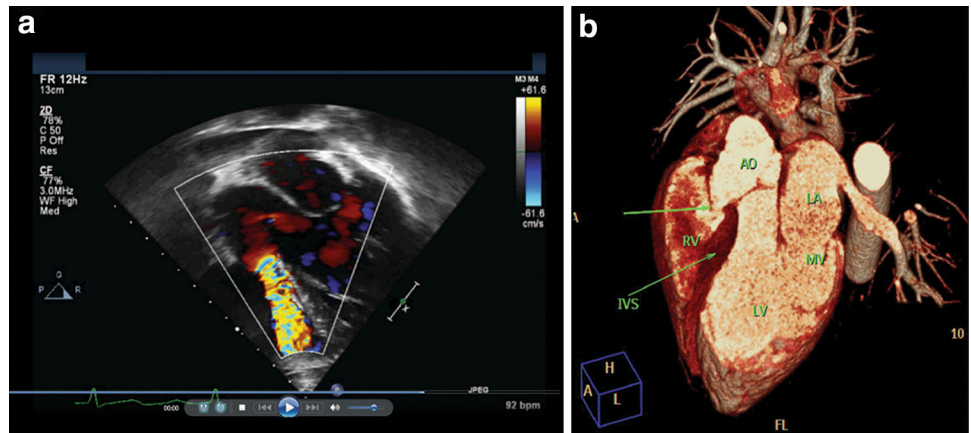
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✉ Tarek Sulaiman Momenah  
tarekmomenah@me.com

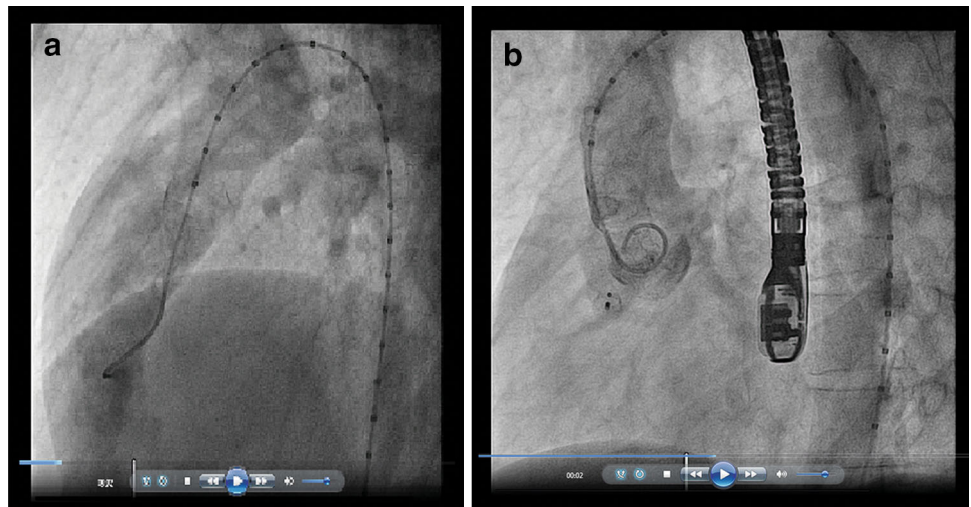
<sup>1</sup> King Salman Heart Centre, King Fahad Medical City Riyadh,  
PO Box 59046, Riyadh 11525, Kingdom of Saudi Arabia

<sup>2</sup> Prince Sultan Cardiac Centre, Riyadh,  
Kingdom of Saudi Arabia

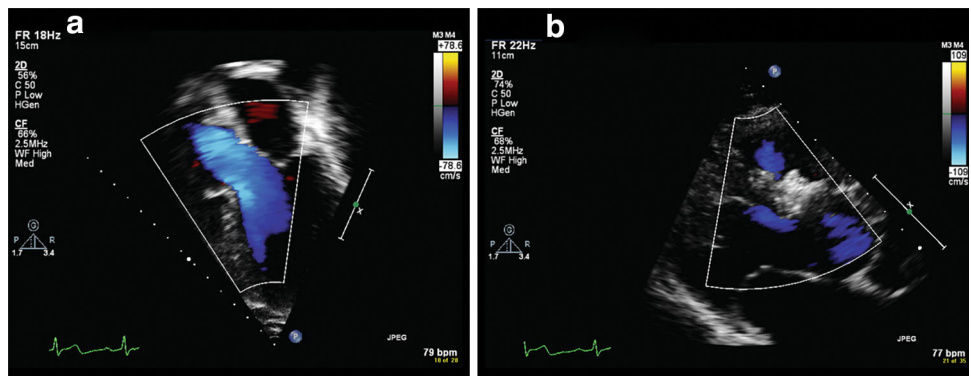
**Fig. 1** **a** Transthoracic 5 chamber colour image showing ruptured *right sinus* of valsalva into *right ventricle*. **b** CT heart showing same finding as transthoracic echo



**Fig. 2** **a** Cine lateral view static image showing marked pigtail catheter crossing from sinus of valsalva to *right ventricle*. **b** Cine static image lateral view showing Amplatzer duct occluder in place



**Fig. 3** Transthoracic echo Apical 5 chamber view **a** and parasternal long-axis view **b** colour image showing device in place with no residual shunt



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