

## IMAGE IN CARDIOLOGY



Figure 1.

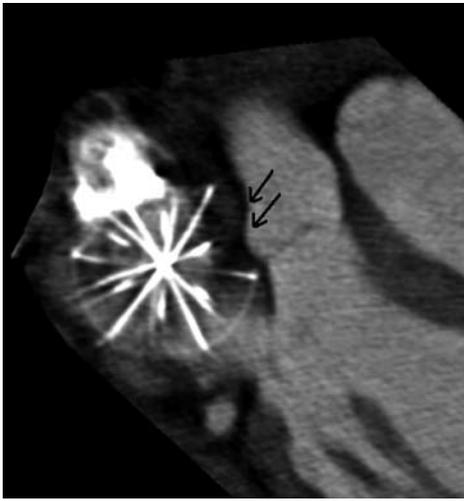


Figure 2.

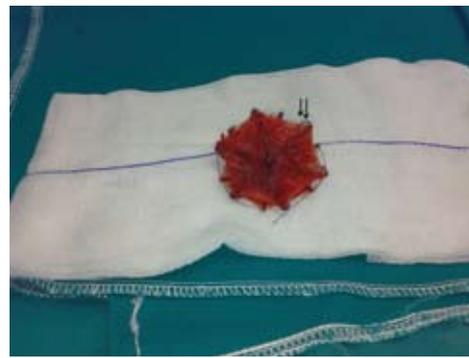


Figure 3.

## Fracture of an Atrial Septal Defect Occluder as a Cause of Cardiac Tamponade

A 19-year-old girl with a large (26 mm) atrial septal secundum defect (ASD) underwent successful percutaneous closure of the defect using a 28 mm Intrasept ASD Cardia occluder. Post-procedural transeosophageal ultrasound (TEE) confirmed the right position of the device (Figure 1A) (LA: left atrium; Ao: aortic root). Four hours later the patient felt a sudden dizziness and collapsed due to cardiac tamponade. Pericardiocentesis and cardiopulmonary resuscitation did not result in patient improvement so rescue thoracotomy was performed. An arm of the device was found emerging out of the left atrium and penetrating ascending aorta suggesting that device had been broken. After atrial and aortic stitching, a glu was applied between them by the surgeon to amplify atrial wall and to protect the aorta. The patient dramatically improved. TEE (Figure 1B) and multi-slice CT (Figure 2) also provided evidence of fracture of the device nitinol ring

that was confirmed after device explantation (Figure 3) a few days later.

The broken device ring is the interesting point of our case and it is thought to be a device failure after implantation. TEE just after implantation showing an intact, well positioned device and the sudden collapse of the patient, hours after implantation without any previous symptoms, support the theory of device failure.

We propose that the large size of the occluder and the small rim might have a particular role for the event possibly because of high forces applied to the device

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