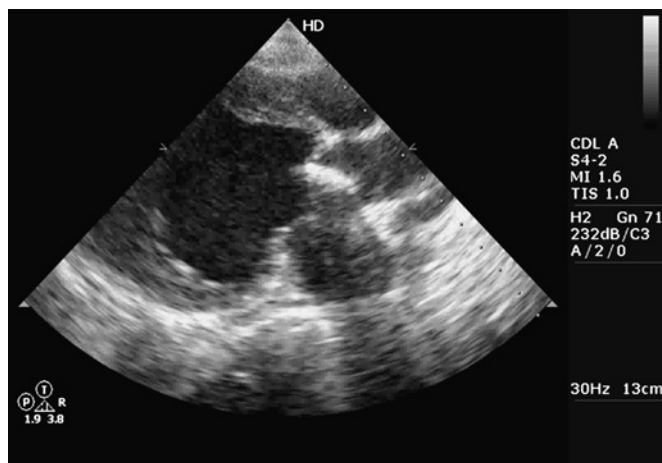


## Ruptured and calcified aortic valve resembling a prosthetic valve

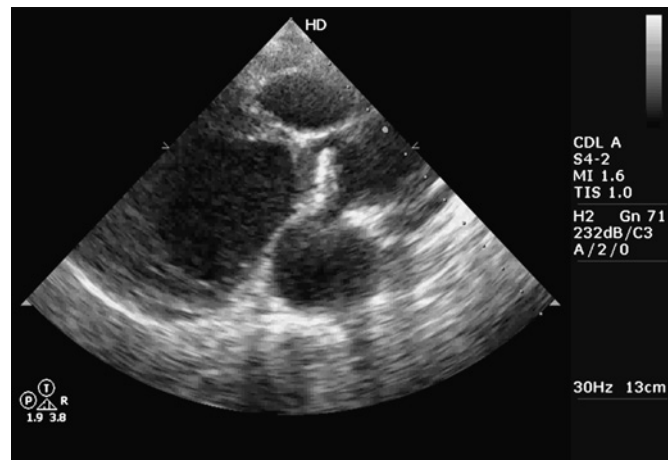
A 10-year-old girl presented with NYHA class II dyspnoea and palpitations experienced over the past 1 year. Elsewhere, in the past, she had undergone balloon aortic valvuloplasty for severe aortic stenosis followed by surgical ligation of a large patent ductus arteriosus (PDA), 3 days later. The postoperative period was complicated by infective endocarditis and embolic stroke that improved with antibiotics and physiotherapy, though with mild residual weakness.

A 2D echocardiography showed a calcified disc-like structure at the aortic valve position that was highly mobile, with its movement typically resembling a single-leaflet tilting disc mechanical valve. In systole (figure 1), it was aligned to the long axis of the ascending aorta mimicking the disc in open position, and in diastole (figure 2), it tilted back to the closing position. There was acoustic shadowing behind the calcified cusp that matched its mobility (online supplement, video 1). This was associated with severe aortic regurgitation (AR) and global left ventricular (LV) dysfunction, hence referred for aortic valve replacement (AVR).

Calcification of the aortic valve is attributed to inflammatory and degenerative processes which get accelerated in patients



**Figure 1** Systolic frame showing the calcified cusp in an open position.



**Figure 2** Diastolic frame with the calcified cusp in closed position. A sub-aortic membrane can be seen.

with a bicuspid aortic valve because of altered haemodynamics.<sup>1</sup> This case exemplifies the fact that injury, infection and altered flow pattern can lead to significant calcification within 3 years, even in valves as young as this patient's.

**Ravindran Rajendran,<sup>1</sup> Jayaranganath Mahimarangaiha,<sup>2</sup> Manjunath Nanjappa<sup>1</sup>**

<sup>1</sup>Department of Cardiology, Sri Jayadeva Institute of Cardiovascular Sciences and Research, Bangalore, India; <sup>2</sup>Department of Pediatric Cardiology, Sri Jayadeva Institute of Cardiovascular Sciences, Bangalore, India

**Correspondence** to Dr Ravindran Rajendran, Department of Cardiology, Sri Jayadeva Institute of Cardiovascular Sciences and Research, Jayanagar 9th block, Bannerghatta Road, Bangalore 560069, India; rravi\_dr@rediffmail.com

► An additional video is published online only. To view this file please visit the journal online (<http://dx.doi.org/10.1136/heartasia-2012-010120>).

**Contributors** All authors contributed equally to the writing of this case.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; internally peer reviewed.

*Heart Asia* 2012;90. doi:10.1136/heartasia-2012-010120

### REFERENCE

1. **Freeman RV**, Otto CM. Spectrum of calcific aortic valve disease: pathogenesis, disease progression, and treatment strategies. *Circulation* 2005;**111**:3316–26.