

## Images in Congenital Cardiac Disease

# Echocardiographic diagnosis of coronary sinus thrombosis complicating left internal jugular cannulation

Chee Wen Terence Lim,<sup>1,2</sup> Martin J. Elliott,<sup>1</sup> Sachin Khambadkone<sup>1</sup>

<sup>1</sup>Cardiothoracic Unit, Great Ormond Street Hospital for Children NHS Trust, London, United Kingdom;

<sup>2</sup>Department of Paediatrics, National University Hospital, Singapore, Singapore

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**A** NEONATE WITH DOUBLE-OUTLET RIGHT VENTRICLE and severe pulmonary stenosis was referred to our hospital with central venous access through the left internal jugular vein. This line, a standard 4 French double-lumen catheter had been in place for 2 days before transfer.

Echocardiographic examination at our hospital confirmed the cardiac diagnosis. In addition, we saw a mass that appeared to lie within the left atrium on standard subcostal and parasternal long- and short-axis views (Fig 1). This mass was clarified as a thrombus by imaging parasagittally from the suprasternal region (Fig 2) and extending just distal to the tip of the central venous cannula, which entered the coronary sinus from a left superior caval vein.

These findings were confirmed at surgery. The structural defects were repaired, and the thrombus was removed. The child had uneventful recovery. As the cultures from the thrombus grew coagulase negative staphylococcus, antibiotics were given for 6 weeks. The child was also empirically anticoagulated for 6 months. There were no electrocardiographic changes to suggest myocardial ischaemia, and post-operative echocardiograms documented continued patency of the coronary sinus.

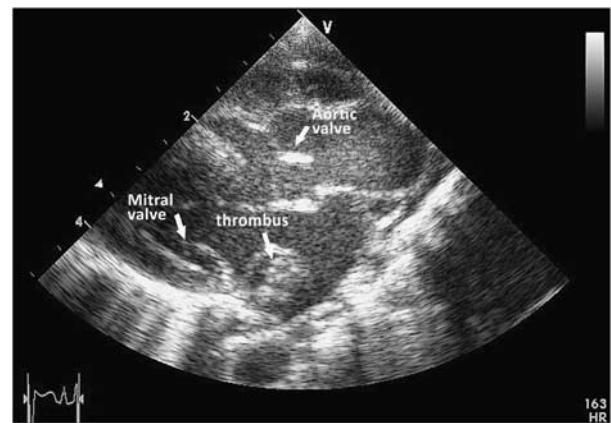


Figure 1.

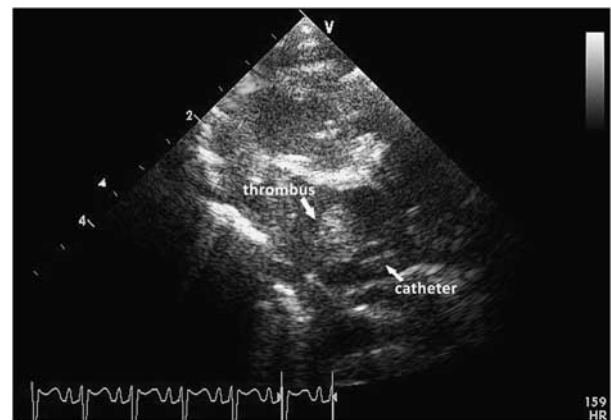


Figure 2.

Correspondence to: S. Khambadkone, Consultant Paediatric Cardiologist, Cardiothoracic Unit, Great Ormond Street Hospital for Children NHS Trust, Great Ormond Street, WC1N 3JH, London, United Kingdom. Tel: 44 020 7405 9200; Fax: 44 020 7829 8643; E-mail: KHAMBS@gosh.nhs.uk

Thrombosis in the coronary sinus may be mistaken for a mass within the left atrium on echocardiography. The presence of a catheter in a relatively small coronary sinus places young infants at risk, and clinicians should

be vigilant for this complication whenever a left-sided neck catheter is seen within the cardiac shadow on chest radiographs. In this case, infection also may have contributed to clot formation.