

Images in Congenital Cardiac Disease

Coronary artery fistula: multidetector row computed tomography angiography in young child

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Keywords: Heart defect; congenital; image

Received: 3 June 2009; Accepted: 27 October 2009; First published online: 11 March 2010

CORONARY ARTERY FISTULAS ARE RARE MALFORMATIONS, accounting for 0.2–0.4% of all congenital cardiac anomalies. Invasive catheter

angiography has been the gold standard for evaluating coronary fistulae, together with echocardiography. However, multidetector computed tomography is an emerging non-invasive technique, the efficacy of which, for imaging coronary artery malformations, is demonstrated in this child.

A 2-year-old previously healthy girl was referred to the paediatric cardiology clinic for evaluation of a grade 3/6 continuous murmur at the left upper sternal border. Echocardiography revealed a coronary fistula arising from the left coronary artery and terminating in the right atrium, but its course was difficult to fully visualise. To obtain precise anatomical information, a multidetector computed tomography angiogram was performed. The child

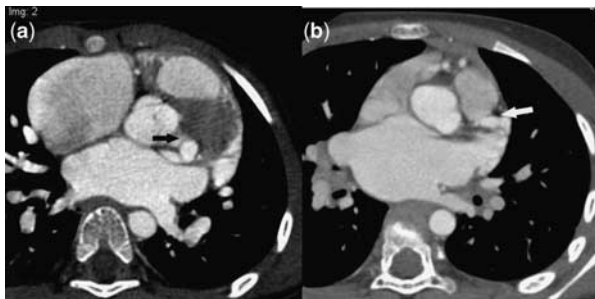


Figure 1.



Figure 2.

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required oral administration of chloral hydrate, 50 milligram per kilogram body weight, for sedation before the MDCT examination. Axial images (Fig 1) demonstrated a dilated left main coronary artery, arrow, giving rise to the fistula, which then ran rightward in front of the left atrium, towards the superior caval vein. Multiplanar reconstruction and

volume rendering (Fig 2) demonstrated termination of the fistula, arrow, at the junction between the superior caval vein and the right atrium; RA, right atrium; AO, ascending aorta; RCA, right coronary artery; SVC, superior caval vein; LAD, left anterior descending artery; LCX, left circumflex artery. This information facilitated uneventful surgical closure of the fistula.