Cardiol Young 2007; 17: 572–573
© Cambridge University Press
ISSN 1047-9511
doi: 10.1017/S1047951107000911

Images in Congenital Heart Disease

Crossed pulmonary arteries

Kothandam Sivakumar,[1] Ravikanti Prasad,[2] Edwin Francis[1]

Departments of [1]Pediatric Cardiology, [2]Radiology, Apollo Hospital, Colombo, Srilanka

Keywords: Pulmonary artery anomaly

Crossed pulmonary arteries are a very rare form of pulmonary arterial malposition, usually found in association with abnormalities of the ventricular outflow tracts or common arterial trunk. The left pulmonary artery originates from the pulmonary trunk to the right and usually above the origin of the right pulmonary artery.[1] Pulmonary angiography in a four month old female (Fig. 1a) demonstrated this relationship and showed a small amount of radiographic contrast passing into the aorta through a large communication (arrow) between the aorta and pulmonary trunk. Her aortogram (Fig. 1b) revealed a left sided cervical aortic arch, giving off an aberrant right subclavian artery as its final branch (5) after the left subclavian (4), left vertebral (3), left carotid (2) and right carotid (1) arteries. In this picture, a guidewire passes from the pulmonary trunk through the communication into the first branch of the cervical aortic arch. Axial slices of a contrast computed tomographic study, moving from top (Fig. 2a) to bottom (Fig. 2b), show origin of left pulmonary artery (L) from the pulmonary trunk (M) in a plane superior to that of the right pulmonary artery (R). Viewed from above, three dimensional reconstruction (Fig. 2c) demonstrates fusion of contrast

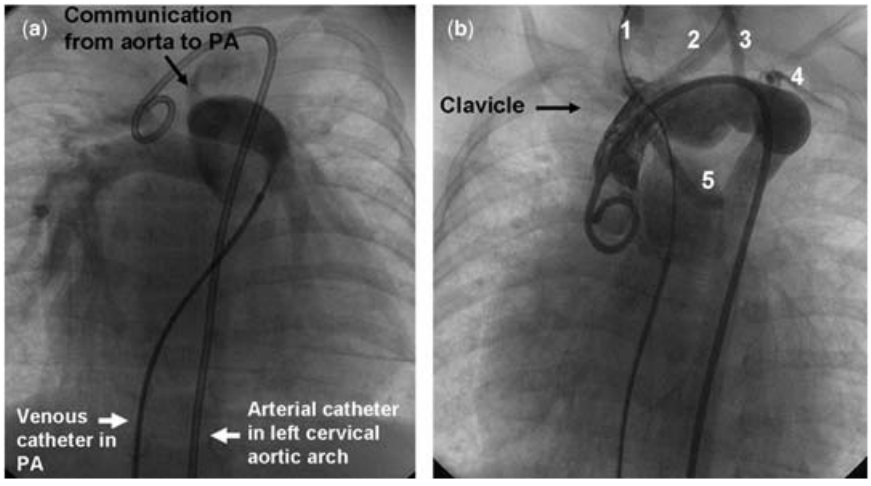


Figure 1.
*(**a**) Pulmonary angiogram. (**b**) Aortogram.*

Correspondence to: Dr K. Sivakumar, MD DM, Senior Consultant Pediatric Cardiologist, MIOT Centre for Children Heart Care, Chennai, India. Tel: +91 4422492288; Fax: +91 4422491188; E-mail: drkumarsiva@hotmail.com

Accepted for publication 16 March 2007

https://doi.org/10.1017/S1047951107000911 Published online by Cambridge University Press

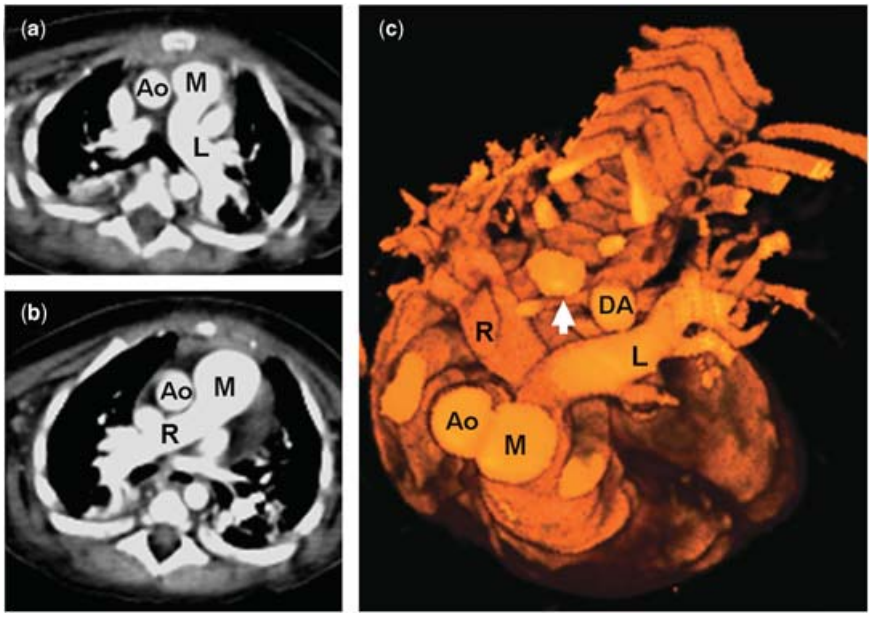


Figure 2.
*Axial computed tomogram (**a**, **b**) and 3-dimensional reconstruction of computed tomogram (**c**).*

between the aorta (A) and pulmonary trunk (M) through a large communication, with the crossing pulmonary arteries lying posteriorly. The retro-esophageal aberrant subclavian artery (arrow) is also seen arising from the descending aorta, and passing anterior to the vertebral column. Knowledge of these abnormalities of the pulmonary arteries will help minimise technical difficulties in surgical repair and further catheter interventions.

Reference

1. Jue KL, Lockman LA, Edwards JE. Anomalous origins of pulmonary arteries from the pulmonary trunk (crossed pulmonary arteries). Am Heart J 1966; 71: 807–812.

https://doi.org/10.1017/S1047951107000911 Published online by Cambridge University Press