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Article Commentary

Response to commentary: Anomalous origin of the left pulmonary artery from the internal carotid artery

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We appreciate the commentary by Bamforth and Anderson[1] on our case report "Anomalous left pulmonary artery origin from internal carotid artery: prospective echocardiographic diagnosis of a previously unknown variant".[2] We agree with them that this case highlights the importance of three-dimensional reconstruction in aiding the recognition of unusual patterns of arterial supply; however, we emphasise that a high degree of suspicion in addition to a thorough understanding of abnormal patterns in CHD can provide clues to an unusual diagnosis that may otherwise be missed. Once the abnormal pattern is recognised, either CT or MRI may be performed to better demonstrate the anatomical finding. The embryological description and images of the persistent left carotid duct provide fascinating insight into the mechanism of this malformation. We agree with Bamforth and Anderson that this better explains the origin of the left pulmonary artery from the internal carotid artery in our patient.

We would like to clarify our use of the segmental combination {S,D,L}. The provided reconstructed images of the CT angiogram do not adequately demonstrate the aortic valve. Additional echocardiographic images in this response show that the aortic valve and the pulmonary valve were visualised simultaneously, side-by-side, in the subcostal coronal plane (Fig 1a and b), with the aortic valve to the left of the pulmonary valve. This was confirmed by additional echocardiographic views, CT angiography, and by intra-operative inspection; thus, the segmental anatomy of {S,D,L} was assigned.[3] On the other hand, we recognise that the assigned segmental annotation of {S,D,L} may be interpreted as anatomically corrected malposition of the great arteries, a cardiac defect in which the ventriculo-arterial connection is abnormal but concordance is maintained in the setting of mitral-aortic discontinuity,[4] which our patient did not have. Thus, if the assignment of D,L, or A for arterial positions is reserved for those with abnormal ventriculo-arterial

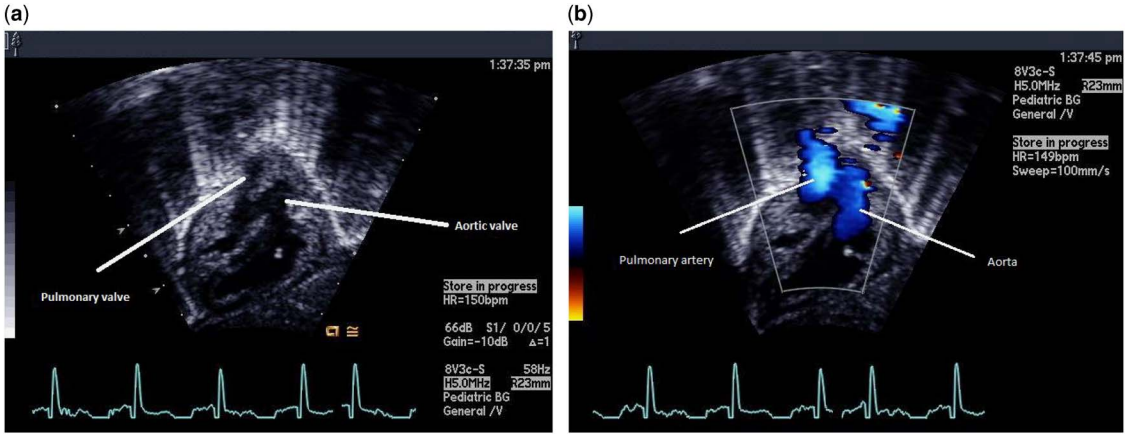

Figure 1.
Echocardiographic subcostal coronal view demonstrates the aortic valve is to the left of the pulmonary valve in two dimensional imaging (a) and color Doppler (b).

Correspondence to: P. P. Thankavel, MD, Division of Pediatric Cardiology, UT Southwestern Medical Center, Children's Medical Center of Dallas, 1935 Medical District Dr, Dallas, TX 75235, United States of America. Tel: +214 456 2333; Fax: +214 456 8066; E-mail: poonam.punjwani@childrens.com

connections, then our patient would be better described as having tetralogy of Fallot {S,D,S}, dextrocardia, with a leftward aorta.

Poonam P. Thankavel,[1,2] *Laura C. Martho,*[1] *Ilana Zeltser*[1,2]
[1]*Department of Pediatrics, Division of Cardiology*
Children's Medical Center
Dallas, Texas, United States of America

[2]*Department of Pediatrics, Division of Cardiology*
UT Southwestern Medical Center
Dallas, Texas, United States of America

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