

Atypical presentations of right to left shunting in two individuals with anomalous venous connections.

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Introduction: We present two cases of patients with clinically significant right-to-left shunting via unusual anomalous venous connections not identified by transthoracic echocardiography pre-operatively.

Case 1: A 68-year-old woman with a history of two previous intracerebral abscesses and multiple cortical infarcts was admitted for aortic valve surgery. During an on table TOE, there was opacification of the left atrium following injection into a left antecubital fossa vein. Post-operative cardiac CT demonstrated her left SVC draining into the left atrium with the left upper pulmonary vein draining into her left SVC. The right upper pulmonary vein drained anomalously via the right SVC into the right atrium. Given the risk of further embolic phenomenon, percutaneous occlusion of the Left SVC was performed above the connection to the Left Upper Pulmonary Vein.

Case 2: A 12-year old boy underwent repair of unobstructed supracardiac total anomalous pulmonary venous drainage as a neonate following diagnosis by transthoracic echocardiography. He remained cyanosed throughout childhood and cardiac MRI ultimately showed an interrupted inferior vena cava with azygous continuation to the SVC but with drainage of the hepatic veins directly to the left atrium, creating the cyanotic shunt.

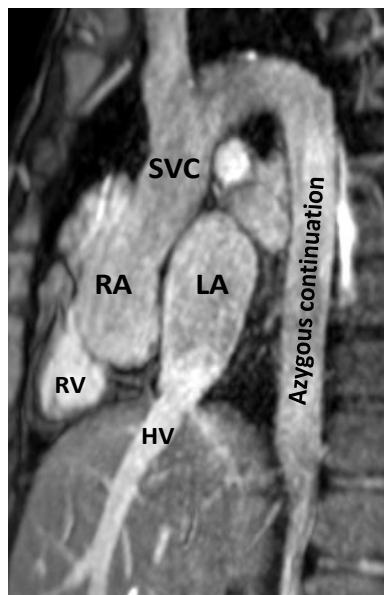


Figure 1: Cardiac MR image in the sagittal plane showing an azygous continuation and a cyanotic shunt created by hepatic venous drainage directly into the left atrium.

Conclusions: These cases demonstrate the importance of a comprehensive work-up, including cross-sectional imaging, to fully characterise pulmonary and systemic venous drainage in patients with signs of right-to-left shunting.