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Images in Congenital Cardiac Disease

The modified Blalock–Taussig shunt revisited

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As a systemic to pulmonary conduit that connects the subclavian artery to the ipsilateral branch pulmonary artery, the modified Blalock–Taussig shunt has become the most frequently used surgical palliation for cyanotic patients with right ventricular outflow tract obstruction or the hypoplastic left heart syndrome. It generally improves arterial saturation by augmentation of pulmonary blood flow, and has been shown to enhance growth of the branch pulmonary arteries. Our patient underwent a modified right Blalock–Taussig shunt for tetralogy of Fallot at the age of 3 months, but his saturations did not improve. The postoperative echocardiogram suggested that the shunt was functional. However, at cardiac catheterisation, where the Blalock–Taussig shunt was "revisited", angiography showed flow from the right subclavian artery to the right pulmonary vein and thence into the left atrium (Fig 1).

The suprasternal view (Fig 2) of a repeat echocardiogram with this new information at hand clearly showed the same findings (arrow); RUPV, right upper pulmonary vein; RLPV, right lower pulmonary vein; LUPV, left upper pulmonary vein; LLPV, left lower pulmonary vein; RPA, right pulmonary artery; Ao = aorta.

Such an iatrogenic "complication" of the modified Blalock–Taussig shunt is uncommon and tends to happen when a small pulmonary artery is not clearly identified at the time of operation. It is important to appreciate that, given the similarities

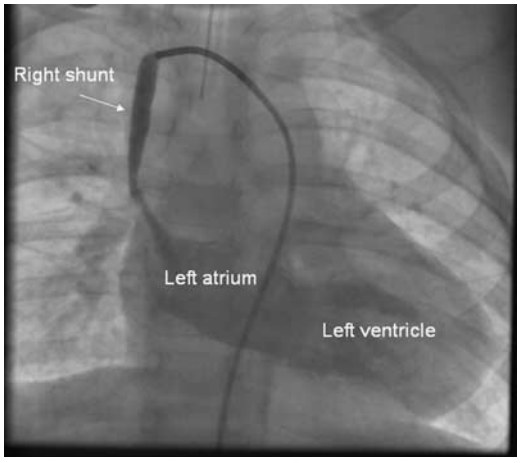

Figure 1.

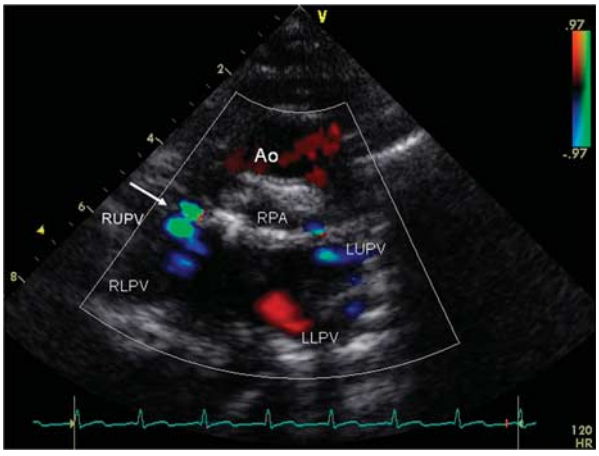

Figure 2.

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in a high pressure (arterial) to low pressure (pulmonary artery or, in this case, pulmonary vein) communication, the echocardiogram can easily be misinterpreted despite the colour flow mapping and Doppler interrogation.[1]

Reference

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