

Images in Congenital Heart Disease

Congenital aortocaval fistula responsible for congestive heart failure. Closure with the Amplatzer duct occluder

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A 3-YEAR-OLD GIRL WAS REFERRED FOR continuous murmur on her lower abdomen. On echocardiography, this appeared to be due to a large aortocaval fistula. She had a past history of cardiomyopathy, well controlled by medication, but no history of trauma or vascular puncture. Aortography (Fig. 1) showed a fistula between the abdominal aorta (AA) and the inferior caval vein (ICV), 5.5 millimetres in diameter at its narrowest portion, and dilation of both femoral veins. The left-to-right shunt was calculated at 3:1 on oxymetry, and the left ventricle was enlarged, with a normal ejection fraction as judged from the ventriculogram.

Transcatheter closure was performed using an Amplatzer duct occluder, usually employed for occlusion of large arterial ducts. This was successfully implanted using an arteriovenous circuit. Control angiography (Fig. 2), showed the absence of any significant protrusion into the aorta, and only a tiny residual shunt through the occluder. The child left the hospital two days later, with no abdominal murmur. One month after the procedure, control echocardiography showed complete occlusion of the fistula, and good femoral pulses suggested the continued absence of aortic obstruction.

To our knowledge, this is the first report of embolisation of an aortocaval fistula using the Amplatzer duct occluder, although Saliba et al.¹ successfully closed a fistula between the aorta and the azygos vein

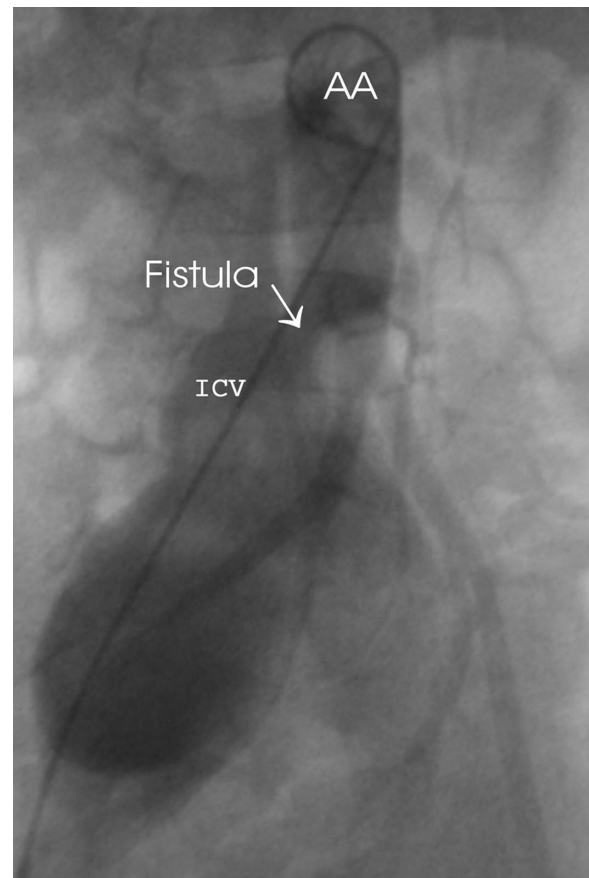


Figure 1.

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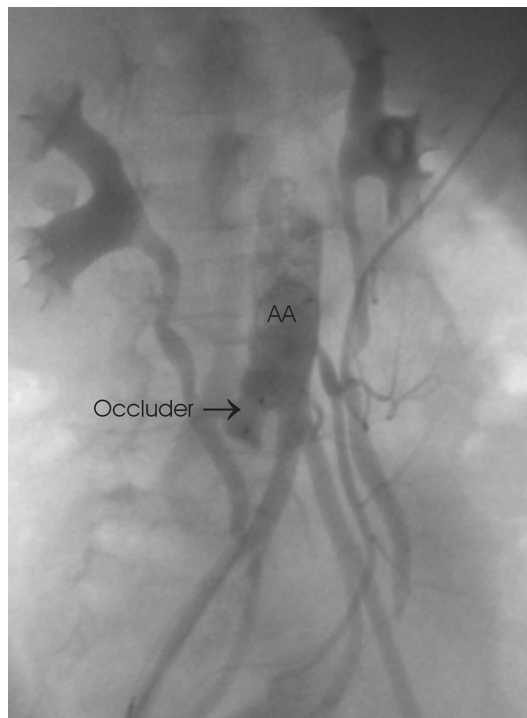


Figure 2.

with this device implanted through an arterial approach. Our report also emphasizes the fact that extracardiac arteriovenous fistulas may be responsible for congestive heart failure in childhood. Transcatheter closure appears to be a safe and effective therapeutic option, which avoids the need for surgery.

Reference

1. Saliba Z, Bonnet D, Hausse A, Aggoun Y, Bonhoeffer P. Transcatheter occlusion of a large aortoazygos fistula using the Amplatzer device. *J Interventional Cardiol* 2002; 15: 205–207.