

Images in Congenital Cardiac Disease

Giant sinus of Valsalva aneurysm in a foetus

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WE REPORT THE CASE OF AN UNUSUAL presentation of an asymptomatic giant aneurysm of the right sinus Valsalva diagnosed prenatally and successfully treated at 8 weeks of age. Aneurysm of the sinus of Valsalva is a rare malformation, which contributes to less than 1% of congenital cardiac abnormalities.¹ It is uncommon during infancy. Thus, there are no previously reported cases of the presentation of aneurysm of the sinus of Valsalva in a foetus.

The presence of a gigantic cystic mass (Fig 1a) without obvious blood flow within the right atrium was suspected during the routine second trimester scan. There was no obstruction of blood flow or evidence of cardiac compromise. There were no additional cardiac or extracardiac abnormalities

found. The size of the mass was increasing proportionally to the size of the heart through the pregnancy.

The baby was delivered at term with no evidence of cardiac failure, heart murmur, or arrhythmia. A postnatal echocardiogram (Fig 1b) confirmed prenatal findings. The infant was thriving and remained asymptomatic. Computed tomography revealed the diagnosis of sinus Valsalva aneurysm with dislocation of the right coronary artery (Fig 1c). In order to prevent rupture of the aneurysm and risk of sudden death, elective surgery was performed. Using cardiopulmonary bypass, the aorta was clamped and the aneurysm opened. This revealed a 10-millimeter communication with the aorta. The aortic valve was normal but the right

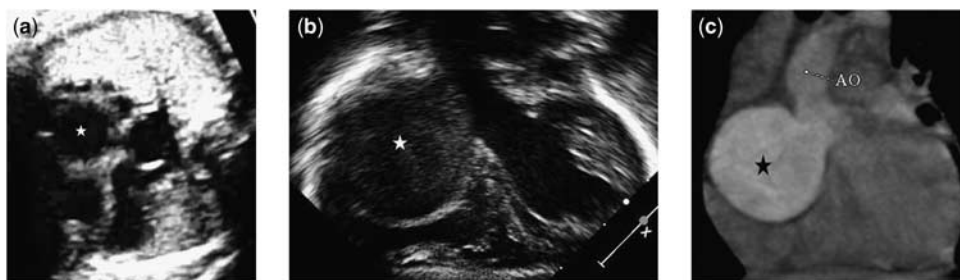


Figure 1. Foetal (a) and postnatal (b) echocardiogram. Computed tomography (c). The asterisk shows giant aneurysm. Ao = the aorta.

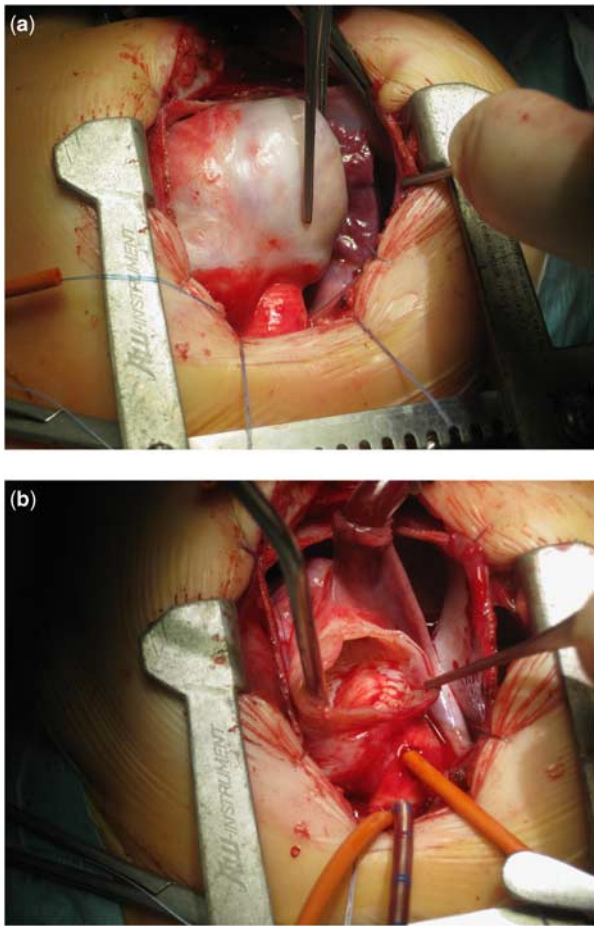


Figure 2.
(a) The unopened aneurysm; (b) The pulmonary artery patch in position before weaning from bypass.

coronary arose from the non-coronary sinus very close to the commissure. The aortic defect was closed with a patch of donor pulmonary artery homograft. The aneurysm sac was excised. The bypass time was 49 minutes and cross-clamp 32 minutes (Fig 2a and b).

The post-operative course was uneventful. The baby remains well and asymptomatic 6 months after the surgery. A follow-up echocardiogram confirmed no evidence of aortic regurgitation and an otherwise normal heart.

Reference

1. Ring WS. Congenital Heart Surgery Nomenclature and Database Project: aortic aneurysm, sinus of Valsalva aneurysm, and aortic dissection. *Ann Thorac Surg* 2000; 69: S147–S163.