

Coronary Arteriovenous Fistula

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The images correspond to a 78-year-old woman, with a history of atrial fibrillation and bicuspid aortic valve progressing to severe stenosis with dilated aortic root, for which she underwent Bentall-De Bono surgery 13 years ago.

During follow-up, a cardiac echo-Doppler showed dilation of the coronary sinus (diameter > 23 mm), with systolic-diastolic retrograde hyperflow from a vessel of considerable dimensions, located on the surface of the anterior lateral wall of the left ventricle. A coronary angiotomography confirmed suspected diagnosis of AV fistulae from the circumflex artery to the coronary sinus (Figure 1).

In addition, a coronary angiography revealed the occlusion of the anterior descending artery, which received heterocoronary collateral circulation from the right coronary artery (Figure 2).

Right catheterization, which was performed to define therapy, showed mean pulmonary artery pressure of 29 mm Hg and QP/QS of 1.6. Due to the patient's high surgical risk and to the fact that she was asymptomatic, it was decided to continue with medical treatment and clinical follow-up.

Coronary fistula is a congenital or acquired birth defect characterized by an abnormal communication between a coronary artery and a cardiac chamber, the pulmonary artery, the coronary sinus or the pulmonary veins. (1) This malformation is uncommon, and represents 4% of congenital heart diseases, with an incidence of 0.1-0.2% among the adult population. Between 5% and 30% of coronary fistulae are associated with other congenital anomalies. (2) These fistulae may be diagnosed with angiography, CT angiography, NMR angiography or echocardiography, (3) as in the case of this patient.

Conflicts of interest

None declared

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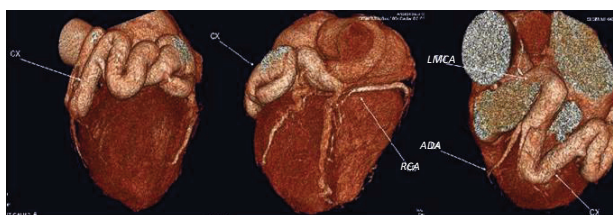


Fig. 1. 64-slice CT coronary angiography. Circumflex artery-coronary sinus AV fistula. LMCA: Left main coronary artery. Cx: Circumflex artery. RCA: Right coronary artery. ADA: Anterior descending coronary artery.

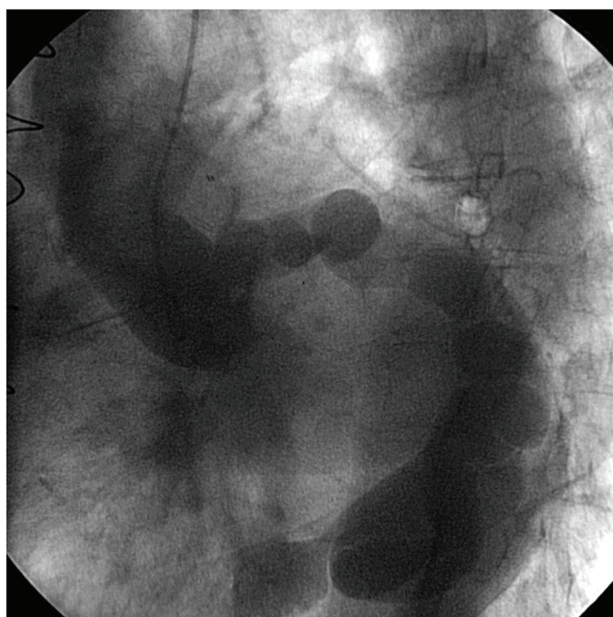


Fig. 2. Coronary angiography. Iodinated contrast injection in the left main coronary artery. A fistula of the circumflex artery to the right ventricle via coronary sinus is observed. The anterior descending coronary artery is not shown.

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