Clinical vignette

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Unruptured congenital aneurisms of the right and left sinuses of Valsalva

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Congenital unruptured aneurisms affecting both the right and left sinuses of Valsalva are extremely uncommon. We report the case of a 24-year-old male admitted to our institution with a 1-year history of chest pain, palpitations, and progressive exertional intolerance. During the past 10 days, he had experienced an acute exacerbation of these symptoms. The chest radiograph delineated an abnormal cardiothoracic ratio. Electrocardiogram showed no ischaemic changes and a first degree atrioventricular heart block associated with a complete right bundle branch block and an incomplete left bundle branch block. Transhoracic echocardiography showed two large aneurisms of the left and the right coronary sinuses of Valsalva. Transoesophageal echocardiography (TOE) was performed showing extension of the right sinus of Valsalva into the interventricular septum and the left sinus of Valsalva aneurysm appearing as an extracardiac saccular protrusion (Panel A). A multi-slice computed tomography (CT) confirmed the diagnosis (Panel B). Considering the large size of the right and the extracardiac extension of the left coronary sinus aneurysms, operative repair was indicated. The operation was performed through median sternotomy under cardiopulmonary bypass (Panel C). Both aneurysms were repaired through the ascending aorta by closing their orifices with circular Dacron patches. The native aortic valve was preserved. Per-operative TOE confirmed complete aneurysm exclusion without increase in the known aortic regurgitation (Panel D). The patient was discharged from hospital on day 8 and is doing well 11 months after operation.

Panel A. TOE before surgical repair.
Panel B. Multi-slice CT-scan reconstruction.
Panel C. Intra-operative view of the aortic valve with the orifices of the right and left coronary sinus aneurysms.
Panel D. Post-operative TOE with left and right coronary sinuses aneurysms obstructed. LA, left atrium; RA, right atrium; LcsA, left coronary aneurysm; RcsA, right coronary aneurysm; Ao, aorta; LV, left ventricle; S, interventriculaire septum; RV, right ventricle.