Multidetector computed tomographic findings of an unroofed coronary sinus

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Images in cardiovascular ultrasound

An unroofed coronary sinus (CS) communicates between the left and the right atrium and is one of the most uncommon (<1%) types of atrial septal defect (ASD). Diagnosis is more difficult than for other forms of ASD. A 37-year-old male without a relevant medical history presented with mild exertional dyspnoea. Transthoracic echocardiography (TTE) revealed an enlarged right ventricle, large proximal part of a CS, and pulmonary hypertension. The bubble test on TTE was positive. A definitive shunt site was not visualized by TTE and transoesophageal echocardiography (TEE), because it was difficult to discriminate the huge dilated CS from the left atrium. Cardiac multidetector computed tomography (MDCT) provided accurate anatomic details about the location and anatomic changes associated with the CS. MDCT could define that a persistent left superior vena cava (PLSVC) was not combined. Supplementary data are available at European Heart Journal – Cardiovascular Imaging online.

Figure 1. (A) A suspicious unroofed CS (arrow) was shown. However, it was difficult to discriminate the huge dilated CS from the LA by TEE. (B–D) Cardiac MDCT images in the sagittal axis plane showing the dilated and completely unroofed CS communicating with the left atrium. (E and F) Volume-rendered image and four-chamber view obtained by cardiac MDCT showing the unroofed CS. (G) Cardiac MDCT showed that PLSVC was not combined in our case. This case was classified as Type II unroofed CS completely unroofed without a PLSVC. AVG, atrioventricular groove; RBCV, right brachiocephalic vein; LBCV, left brachiocephalic vein.