

Figure 1.

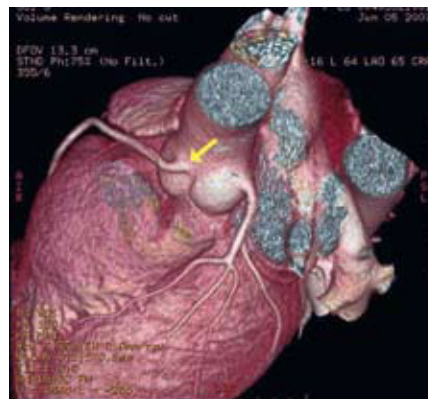


Figure 2.

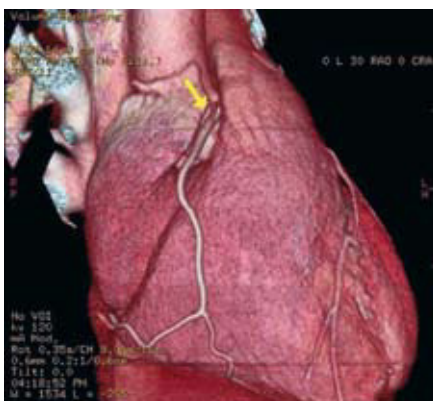


Figure 3.

Where Does the Right Coronary Artery Originate?

A 25-year-old woman came to the emergency room for an episode of oppressive nonradiating pain in the middle of the chest triggered by moderate exertion, which lasted for 30 minutes and was accompanied by sweating and nausea. Her clinical history included palpitations and nonspecific chest pain on strenuous effort, a restrictive perimembranous ventricular septal defect, and a family background of ischemic heart disease. The electrocardiogram and chest radiographs showed no relevant abnormalities. Nonetheless, the analytical data included slightly elevated markers of myocardial injury, and transthoracic echocardiography revealed mild hypokinesis of the inferior aspect. Based on these findings, coronary angiography was performed to rule out coronary disease. The hemodynamic study excluded significant angiographic lesions, but raised the suspicion of an anomalous origin of the right coronary artery (RCA) in the left aortic sinus (Figure 1), although it did not define the course of the vessel. To determine the precise trajectory of the RCA and rule out an interarterial course (because of the therapeutic implications), multislice coronary computed

tomography (CT) was performed. The origin of the RCA was documented in the right aortic sinus (Figure 2), displaced medially; a possible interarterial course was excluded (Figure 3). Subsequent stress echocardiography was negative for ischemia at high loads and showed an excellent functional capacity. Hence, the patient was discharged.

Currently, multislice coronary CT provides a great deal of diagnostic information regarding anatomic variants and anomalous origin of the coronary arteries. Patients with congenital heart disease (in whom there is a higher prevalence of coronary anomalies) and evidence of myocardial ischemia will particularly benefit from this imaging technique, which precisely defines the anatomy of the coronary vasculature.

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