

Evaluation of small coronary artery aneurysm by 64-slice multi-detector CT coronary angiography and virtual angioscopy

Küçük koroner arter anevrizmasının 64 dedektörlü BT ile yapılan koroner anjiyografi ve sanal anjiyoskopi ile değerlendirilmesi

A 77-year-old man presented to the cardiology clinic with the complaint of effort-induced chest pain without known ischemic heart disease. Physical examination was normal. Electrocardiographic recordings revealed non-specific ST-T changes in lateral precordial leads. There was no elevation of cardiac enzymes and no laboratory evidence of connective tissue disease or vasculitis. Multi-detector CT (MDCT) coronary angiography was performed with 64-slice CT scanner (Somatom Sensation 64, Siemens Medical Solutions, Forchheim, Germany). The scan was performed during 10-second breath hold, with a 0.6 mm collimation, 0.6 mm slice thickness reconstruction. During the image acquisition, 80 ml of non-ionic iodinated contrast agent (380 mg of iodine per milliliter) was injected intravenously at a rate 4 ml/sec followed by 40 ml of saline at 5 ml/sec. Imaging was obtained by retrospective ECG-gating. Curved multiplanar reformatted images showed small right coronary artery (RCA) aneurysm (Fig. 1). Conventional coronary angiography also showed a small aneurysm of the RCA (Fig. 2). Three-dimensional virtual angioscopic images revealed saccular aneurysmal neck and patent artery lumen (Fig. 3).

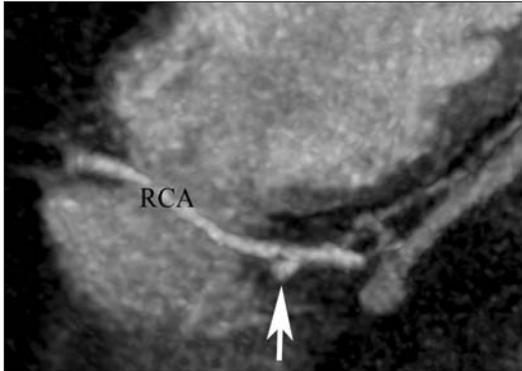


Figure 1. The 64-slice MDCT coronary angiography multiplanar reformatted image of small right coronary artery (RCA) aneurysm (arrow)

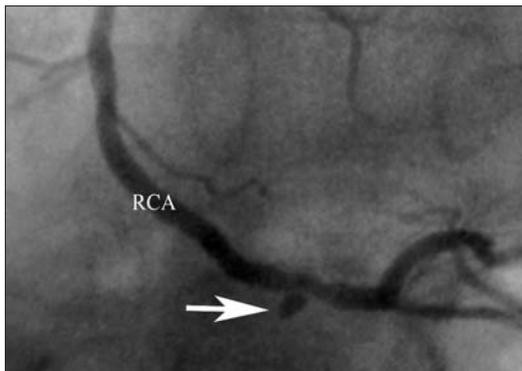


Figure 2. Conventional coronary artery angiography view of right coronary artery (RCA) aneurysm (arrow)

Although coronary angiography is considered the gold standard, MDCT angiography, which is less invasive technique, may be used for the diagnosis of CAA.

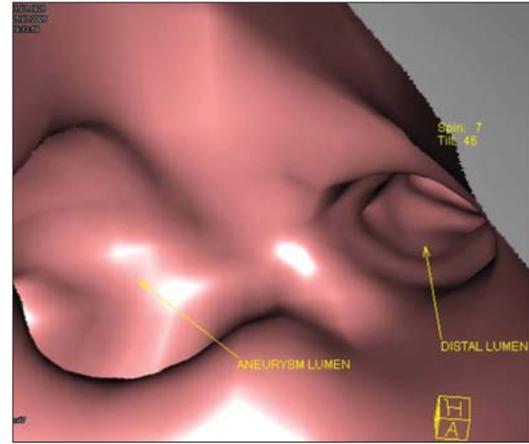


Figure 3. Three-dimensional virtual angioscopic image with 64-slice MDCT shows saccular aneurysmal neck and patent right coronary artery (RCA) lumen

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Coronary artery fistula associated with slow coronary flow: a rare cause of myocardial ischemia

Koroner arter fistülü ile koroner yavaş akım birlikteliği: Miyokard iskemisinin nadir bir nedeni

Coronary artery fistulas (CAF) and slow coronary flow syndrome (SCF) are rarely detected finding during coronary angiography. The coincidence of CAF with SCF is extremely rare and sometimes might cause myocardial ischemia.

We present a case of coronary-pulmonary artery fistula combined with SCF causing myocardial ischemia. A 55-year-old man presented with dyspnea on exertion of 6-months duration. Electrocardiogram showed diffuse T-wave inversion. Ischemia was revealed by radionuclide imaging. Coronary angiogram showed absence of significant narrowing; however, there was SCF on the left anterior descending coronary artery with TIMI frame count of 45 (Fig 1). In addition, a fistula between right coronary artery and pulmonary artery was observed (Fig. 2). Because the patient was symptomatic and myocardial ischemia was detected, we planned percutaneous closure of fistula; however, the patient refused this procedure and was treated medically. Coronary artery fistulas consist of a communication between a coronary artery and a cardiac chamber or