Coronary-pulmonary artery fistula: Heart-on-a-heart appearance

A 67-year-old man presented with left-sided chest discomfort to our department. His medical history was unremarkable. The physical examination revealed a continuous murmur at the left mid-sternal border. ECG imaging and cardiac enzymes were normal. The echocardiography revealed no wall motion abnormality. Coronary computed tomography (CT) angiography was performed to evaluate the coronary arteries. There was no significant stenosis in the coronary arteries. However, a serpiginous fistula from the left anterior descending (LAD) artery to the main pulmonary was detected (Fig. 1). Volume rendering images revealed a dilated proximal LAD associated with a plexus of vessels that communicated with the conal branch of the right coronary artery (RCA) and the main pulmonary artery. Surprisingly, a popular heart-shaped aneurysm adjacent to the pulmonary artery was realized (Fig. 2).

Coronary artery fistula (CAF) is defined as abnormal communication between the coronary artery and cardiac chambers or vessels around the heart. It is usually congenital, although it may be acquired due to cardiac intervention or trauma. All of the coronary arteries, including the left main coronary artery (LMCA), can be involved; however, the majority of them arises from the RCA. Coronary artery dilatation is a common finding. Dyspnea, fatigue, and angina are the most common symptoms. Approximately half of all patients with CAF remain asymptomatic according to the size and localization of the fistula. Surgical ligation of the fistula is the gold standard for treatment. Transcatheter coil occlusion is another choice in patients with CAF; however, recanalization of the fistula could rarely be seen.

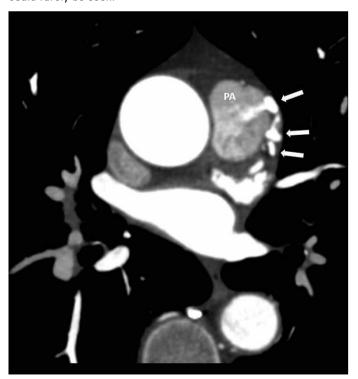


Figure 1. Coronary CT angiography image in the axial section shows serpiginous vessels (arrows) coursing from the left anterior descending artery to the main pulmonary artery

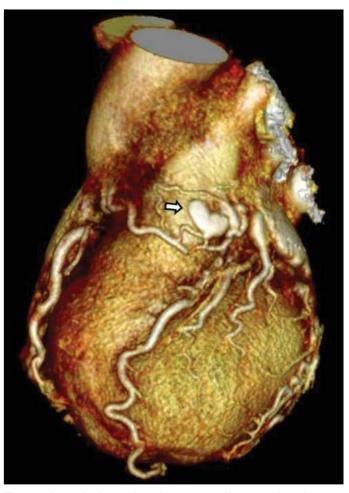


Figure 2. A popular heart-shaped aneurysm adjacent to the pulmonary artery in a volume rendering CT image (arrow)

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Ventricular tachycardia and syncope: A complication of an echinococcal cyst caused by left ventricular outflow tract obstruction

Echinococcosis is a human parasitic infestation that is caused by the larval stage of Echinococcus granulosus. A 55-year-old man was