Clinical picture

Angina caused by a giant coronary artery fistula

A 49-year-old woman presented with 3 weeks of exertional chest pain. A trans-esophageal echocardiogram with color Doppler was suggestive of a large coronary artery fistula ~3.1 × 2.4 cm in size, originating from the left main coronary artery and emptying into the superior vena cava–right atrial junction. Coronary angiography demonstrated a dilated left main coronary artery with a giant fistulous channel draining into the high right atrium with otherwise normal coronary artery anatomy. Coronary steal was postulated as the etiology of the patient’s symptoms. She underwent surgical ligation and resection of the coronary fistula with an uneventful postoperative course.

Coronary artery fistulae are defined as vascular connections from a coronary artery, bypassing the myocardial capillary bed, to a cardiac chamber or major central blood vessel. It is a rare condition occurring in 0.2% of the general population. Coronary artery fistulae are associated with complications such as pulmonary hypertension, heart failure, endocarditis, spontaneous rupture, thrombosis and myocardial ischemia secondary to a steal phenomenon. In patients with significant shunting, treatment strategies include percutaneous coiling, balloon embolization or surgical ligation.

Supplementary material

Supplementary material is available at QJM online.

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References