64-slice computed tomographic monitoring of a repaired symptomatic aneurysm of the right coronary artery

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A previously healthy 28-year-old Chinese man presented with progressive exertional angina. He was a nonsmoker, nondiabetic and had a normal serum cholesterol level. There was no history of hypertension and no family history of coronary artery disease. A physical examination was unremarkable. No evidence of acute inflammatory disease or history of Kawasaki disease was elicited. The patient underwent coronary angiography, which demonstrated a proximal aneurysm of the right coronary artery (RCA) (Figure 1A). There were no distal RCA obstructions, and no lesions were identified in the left coronary artery.

The aneurysm was bypassed with a single right internal mammary artery (RIMA) graft to the right coronary artery, after which the symptoms resolved.

Follow-up angiography two years following surgery demonstrated regression of the aneurysm. The RIMA had a widely patent

anastomosis to the native RCA (Figure 1B). The patient remained symptom-free.

Four years after surgery, the patient underwent follow-up with a 64-slice computed tomography scan. Three-dimensional reconstruction (Figure 1C) and curved multiplanar reconstruction (Figure 1D) again demonstrated a patent RIMA to RCA anastomosis (Figure 1D inset), with distal flow in the native RCA. The aneurysm remains obliterated.

DISCUSSION

Coronary artery aneurysms must be included in the differential diagnosis of angina and myocardial infarction in young patients without traditional risk factors for coronary artery disease. Multislice computed tomography is a valuable noninvasive tool to monitor the regression of coronary aneurysms postoperatively.

Figure 1) Coronary angiography demonstrating a right coronary artery (RCA) aneurysm that was treated surgically with a right internal mammary artery (RIMA) graft (A). Follow-up angiography at two years revealed regression of the aneurysm (B), which was confirmed four years after surgery by three-dimensional 64-slice computed tomography (C) and curved multiplanar reconstruction (D). The RIMA-to-RCA anastomosis remained patent with distal RCA flow

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