We present the evolution of cardiac imaging findings in a female Caucasian teenager with a diagnosis of Kawasaki’s disease since age 5. She had remained asymptomatic throughout most of her life although stress myocardial perfusion imaging had shown myocardial ischaemia in the anterior and anterior septal left ventricular wall (Panel A) at age 11. Low-radiation dose 64-slice CT coronary angiography (CTA) performed for non-invasive disease surveillance at age 13 showed giant coronary artery aneurysms (Panel B) in the proximal left anterior descending coronary artery (LAD), as well as in the proximal and mid-right coronary artery (RCA), the two former of which showed wall calcification and thrombus formation, however, without flow-limiting stenosis. Functional analysis based on cine-CT reconstructions showed left ventricular function deficits in good correlation with prior myocardial perfusion imaging. On the basis of the CTA results, chronic anticoagulation therapy was initiated. The patient started developing a smoking habit at age 13. At age 15, she complained about exertional retrosternal pain. Echocardiography with Doppler flow evaluation of the coronary arteries was performed but deemed inconclusive due to heavy vessel wall calcifications within the giant coronary aneurysms. Subsequently, ultra-low radiation dose dual-source coronary CTA was performed, which showed essentially unchanged appearance of the RCA aneurysms (Panels B–E). However, the LAD aneurysm showed extensive progression of thrombus with interval near-complete occlusion (Panels C, G, and H) and only faint contrast enhancement of the LAD beyond the aneurysm. Invasive catheter angiography (Panels F and I) was subsequently performed with the intent of revascularization, which confirmed the findings at CTA and showed extensive collateralization of the LAD lesion. However, the nature of the lesion was deemed too complex for successful interventional revascularization, and an indication for surgical coronary artery bypass grafting was established.

U.J.S. is a medical consultant to Bayer-Schering, Bracco, General Electric, Medrad, Siemens, and TeraRecon, and receives research support from Bayer-Schering, Bracco, General Electric, Medrad, and Siemens.

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2008. For permissions please email: journals.permissions@oxfordjournals.org