Clinical vignette

Potential of multislice CT in the follow-up of Kawasaki coronary disease

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Coronary artery aneurysms in Kawasaki disease (KD) develop in 20% of cases and may lead to myocardial ischemia, myocardial infarction, or sudden death. Coronary lesions are dynamic, with resolution in about 50% of cases within 1 year after onset, occurring by myointimal proliferation or thrombus organization.

A 29-year-old man with diagnosis of KD and coronary artery aneurysms underwent coronary CT (MSCT). One year before the patient was submitted to percutaneous coronary intervention (PCI) and LAD thrombectomy with RESCUE catheter (RESCUE, Boston Scientific) for acute myocardial infarction due to LAD obstruction. Recombinant t-PA (20 mg) was injected into LAD to complete the lysis of the thrombotic material. Procedural success was obtained, achieving TIMI flow grade-3 with an open artery and complete perfusion within three cardiac cycles and early resolution of ST-segment elevation [PCI of the LAD before (Panel A) and after (Panel B) fibrinolysis treatment].

MSCT showed a giant aneurysm of LAD (diameter 8.4 mm), a limited aneurysm of the first diagonal (3 mm) and in-serie aneurysms of right coronary artery (8.1 mm). The coronary wall was thickened (LAD 1.7 mm, first diagonal 0.7 mm, right coronary 1.8 mm) with a plaque density of 90.2 ± 13, 87.2 ± 16 and 72.7 ± 9.2 Hounsfield Units, respectively, consistent with fibrosis [Coronary-CT of LAD (Panels C–F) and first diagonal (Panels G and H)].

MSCT can depict all the morphologic alteration of Kawasaki coronary disease showing abnormal wall thickness and characterize plaque component. These features may allow a non-invasive monitoring with clinical impact in optimizing anti-platelet or anti-inflammatory therapy.

See online Supplementary Material available at European Heart Journal online for a colour version of this figure.