

Complex Coronary Lesion Demonstrated With Multidetector CT

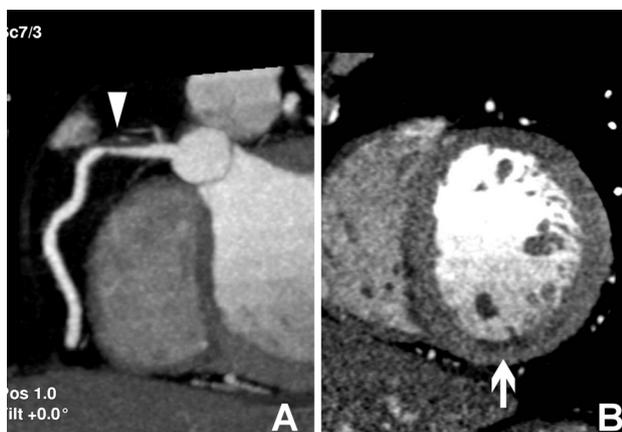


Fig. 1.

A 45-year-old male, smoker, and with no other cardiovascular risk factors was hospitalized for an inferior myocardial infarction. Fibrinolysis treatment was administered causing the clinical and electrocardiograph signs to disappear. A contrast-enhanced CT examination using a 16-multidetector CT was performed 3 days later. An atherosclerotic plaque with density measurements less than 50 HU (Hounsfield units) was observed in the proximal right coronary artery (RCA) (Figure 1A). Also, a small perfusion defect was observed in the inferior wall of the LV (Figure 1B). This plaque was classified as a complex lesion with 60% stenosis of the vessel lumen in a 60%. Several days later the patient presented with exertional angina and a SPECT was performed demonstrating a perfusion defect in the inferior myocardial wall with signs of viability. A coronary stent was implanted in the RCA. Two months later, when the patient presented with a typical chest pain a multidetector CT examination. The CT showed the coronary stent in a correct location (Figure 2A, 2B) with permeability within the lumen (Figure 3a, 3B). Thus, a conventional coronary angiogram was avoided.

Vulnerable plaques with a lipid-rich core can be demonstrated with this non-invasive imaging method, particularly when they have a density values less than 50 HU. In addition, in this case as in many others,

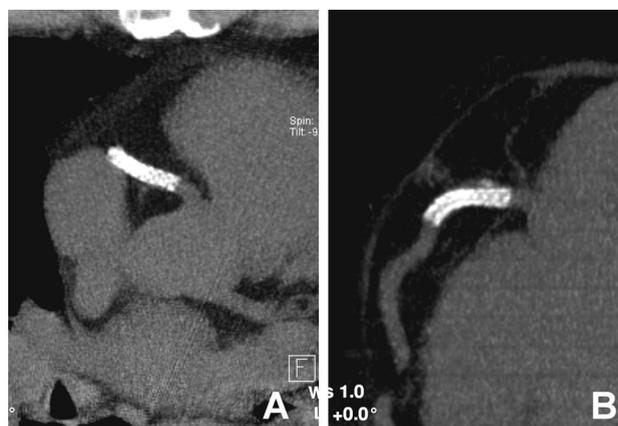


Fig. 2.



Fig. 3.

multidetector CT can be used to evaluate the location and permeability of a coronary stent.

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