

Can Multidetector CT Angiography Detect Coronary Artery Dissection?

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A patient presented with exertional angina that was not responding to maximal medical therapy. Five years earlier, he had undergone coronary angioplasty in treatment of an inferior myocardial infarction. No documentation of this coronary intervention was available.

Multidetector computed tomographic (MDCT) angiography (Philips Brilliance CT 40-Slice, Philips Medical Systems; Best, The Netherlands) of the coronary arteries in this patient showed dissection of the right coronary artery (Fig. 1). After considering the MDCT images, we performed conventional coronary angiography. The left coronary artery appeared normal on both MDCT and coronary angiography. Dissection of the right coronary artery was confirmed by coronary angiography (Fig. 2), which technique appeared to indicate that the dissection was an old event; we deemed it a catheter-induced coronary dissection. The distal extent of the dissection was not clear on MDCT angiography when the images were analyzed retrospectively. As a result, we consider the quality of the coronary angiographic images to be superior to that of their MDCT angiographic counterparts in the evaluation of this case of coronary dissection.

Comment

Multidetector computed tomographic angiography is a noninvasive diagnostic cardiac imaging method, useful in particular for inspecting the coronary arteries.¹ It helps physicians to diagnose coronary artery disease and to see coronary artery aneurysms that have resulted from Kawasaki disease.^{2,3} To date, it has not been clear that MDCT angiography could detect coronary artery dissection.

We believe that MDCT angiography is a promising cardiac imaging method that can detect coronary artery dissection, in addition to usual diagnostic indications. However, as demonstrated by the present case, a diagnosis of dissection on MDCT should be confirmed by use of coronary angiography.

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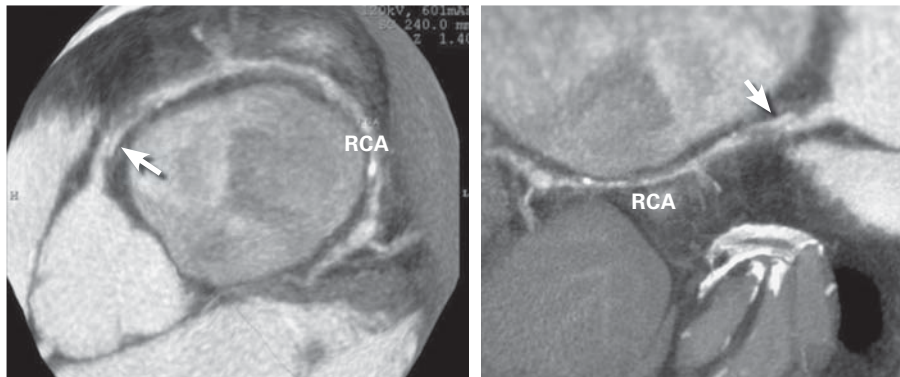


Fig. 1 Multidetector computed tomographic angiography reveals the dissection of the proximal segment of the right coronary artery (RCA) (arrows).

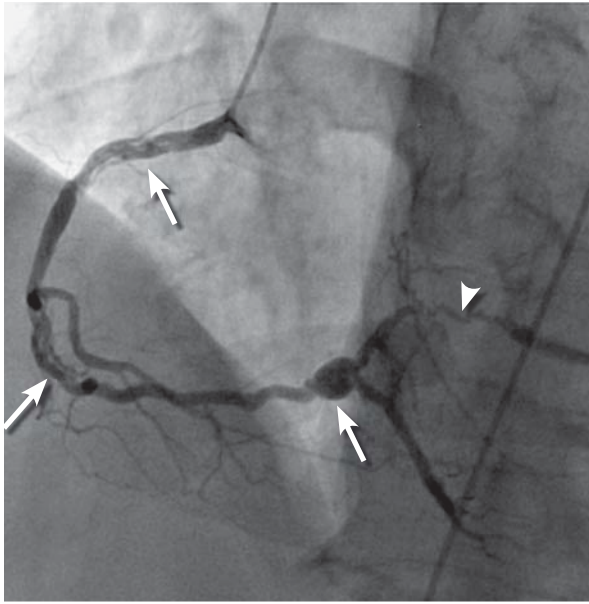


Fig. 2 Coronary angiography shows the dissection of the right coronary artery (arrows) at the proximal and middle segments. The dissection was probably old and consequent to the coronary catheterization of 5 years before. The stenosis of the posterolateral branch (arrowhead) might be the culprit lesion associated with the patient's earlier myocardial infarction.

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