Multislice Spiral Computed Tomography of Subacute Myocardial Infarction

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A 62-year-old man presented to our emergency room with severe retrosternal pain. An ECG showed an acute lateral myocardial infarction, and the patient was referred for cardiac catheterization. One and a half hours after the onset of acute chest pain, coronary angiography revealed a thrombotic occlusion of the intermedial branch of the left coronary artery. Mechanical recanalization of the infarct-related artery was performed, and the underlying stenosis was treated with stent implantation. Immediately after the procedure, the patient was free of pain, and the electrocardiographic changes improved.

The next day, the patient complained of short episodes of chest pain without any changes in the ECG or biochemical cardiac markers. A contrast-enhanced chest CT was performed using a multislice CT scanner (Somatom Volume-Zoom, Siemens) 24 hours after initial hospital admission. ECG-triggered arterial phase images focused on the ascending aorta (not shown) ruled out an aortic dissection. Conventionally acquired axial venous phase images (Figure, A and B) and sagittal-oblique reconstructions (Figure, C) of the entire thorax revealed a hypodense area within the posterolateral wall and both papillary muscles of the left ventricle. The non–contrast-enhancing myocardial areas were attributed to the subacute infarcted zone, and an echocardiogram 1 week later confirmed the diagnosis by showing morphological changes and hypokinesia of the posterolateral wall and of both papillary muscles.

Axial images (A and B) and sagittal-oblique reconstruction (C) reveal the infarcted zone as non–contrast-enhancing area within the posterolateral wall (arrows) and both papillary muscles (arrowheads) of the left ventricle.
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