

Coronary artery ectasia causing ischemia

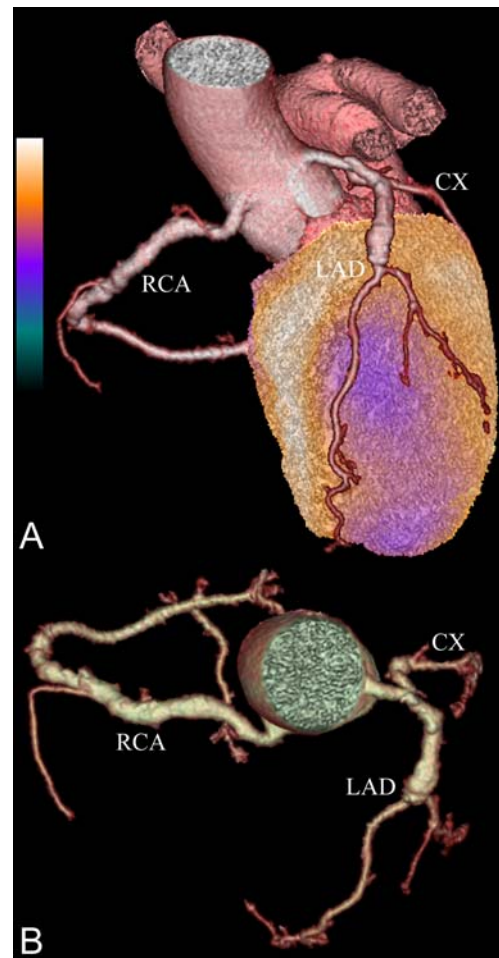
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A 46-year-old male smoker (70 kg, 175 cm) with no other cardiovascular risk factors presented with recurrent episodes of chest discomfort and breathing distress at physical exercise. Cardiac stress testing on a treadmill ergometer was clinically pathologic at 100 W, and the patient was subsequently referred to non-invasive hybrid cardiac imaging.

^{99m}Tc-Tetrofosmin single-photon emission computed tomography (SPECT) images were acquired using a 1-day adenosine-stress/rest protocol and fused with a low-dose, prospectively gated computed tomography coronary angiography (effective radiation dose 1.6 mSv) [1, 2]. The latter revealed ectasia in the left anterior descending, the circumflex, and the right coronary artery (LAD, CX, RCA in panel B), but no relevant coronary artery stenosis. However, a reversible perfusion defect (ischemia) in the anterior myocardium was demonstrated by adenosine-stress SPECT (bluish colors in panel A; rest scan not shown).

Both ectasia and the absence of significant coronary artery stenosis were confirmed by invasive coronary angiography, suggesting conservative treatment [3].



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