

Preoperative exclusion of significant coronary artery disease by 64-slice CT coronary angiography in a patient with a left atrial myxoma

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A 49-year-old man without any significant past medical history presented to the emergency department with complaints of diplopia, paresthesias in both arms, vertigo, tinnitus in the right ear, and dysarthria. Physical examination was unremarkable. A computed tomographic (CT) scan of the head was normal. These symptoms resolved within several hours, consistent with a transient ischemic attack. Magnetic resonance imaging of the brain revealed acute infarcts in the left cerebellar hemisphere and in the right occipital lobe, suggesting a thromboembolic source.

Transesophageal echocardiography disclosed a 2 × 2-cm mass attached to the left atrial aspect of the atrial septum, and surgical excision was planned. As the patient was considered to have a very low risk for the presence of significant arterial narrowing, he underwent a 64-slice cardiac CT scan rather than invasive coronary angiography. The scan demonstrated minimal plaque in the coronary arteries (*Figure 1*). The left atrial mass was also well visualized on both the axial slices and also with three-dimensional imaging (*Figure 2a–c*). Subsequently, the patient's left atrial mass was excised without complication, and the mass was a typical myxoma (*Figure 2d, e*).

This case demonstrates how, in the future, routine invasive coronary angiography may not be necessary as part of the workup for noncoronary cardiac surgery. In this instance, significant concomitant coronary artery disease was effectively excluded with multislice CT rather than an invasive procedure, thus allowing the surgery to proceed without a cardiac catheterization. In addition, CT imaging assisted with long-term prognostic information, as it suggested the need for the patient to be on cholesterol reduction therapy by demonstrating the early presence of coronary atherosclerosis.



Figure 1. Three-dimensional reconstruction of the patient's coronary arteries (3D) with multislice computed tomography. Curved reformat images of the left anterior descending (LAD) coronary artery, right coronary artery (RCA), and left circumflex coronary artery (LCCA) reveal only minimal plaque in the proximal LAD (arrows).

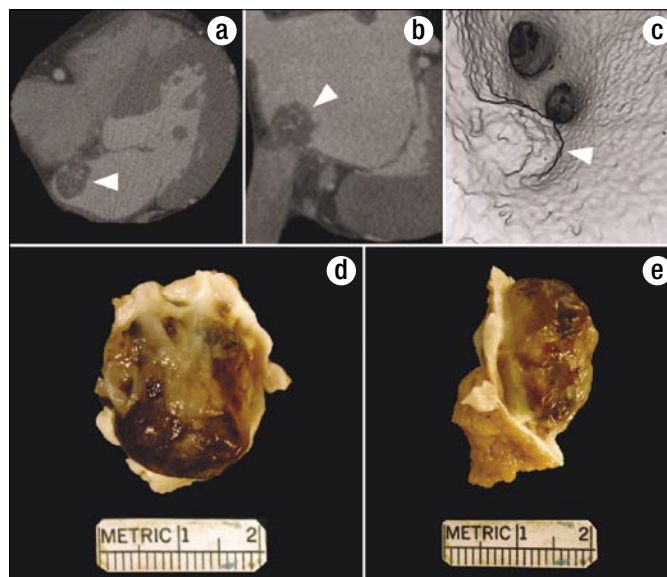


Figure 2. (a, b) Axial slices from the patient's multislice computed tomographic scan demonstrating the myxoma attached to the left atrial aspect of the atrial septum (arrowheads). (c) The myxoma (arrowhead) shown via a "navigator" view inside the left atrium. The orifices of the right pulmonary veins can also be appreciated. (d, e) The excised 2 × 2-cm myxoma.

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