True Saphenous Vein Graft Aneurysm on Cardiac CT

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Key words: saphenous vein graft, aneurysm, multislice computed tomography

(DOI: 10.2169/internalmedicine.51.7464)

A 72-year-old woman with recurrent chest pain was referred for cardiac computed tomography angiography (CTA). Fourteen years previously she had undergone venous coronary artery bypass grafting [saphenous vein grafts (SVGs) to the left circumflex artery and right coronary artery (RCA)]. CTA showed an extracardiac mass (Picture 1, Picture 2, Picture 3, Picture 4).

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Received for publication February 2, 2012; Accepted for publication February 8, 2012
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arrow) and 3D image revealed that the mass corresponded to a SVG aneurysm to the occluded RCA with a massive mural thrombus (Picture 2, asterisk). Curved multiplanar reformatted image of the SVG aneurysm clarified the maximum vessel diameter of 43 mm and the maximum luminal diameter of 17 mm (Picture 3). Selective angiography of the SVG confirmed a dilated, yet patent graft to the RCA (Picture 4). After surgery, histologic study of the resected SVG revealed the true aneurysm.

Most SVG aneurysms are reported to have mural thrombus. For this reason, graft angiography can underestimate the size of the aneurysm if the aneurysmal sac contains a large amount of clot (1). The main advantage of CTA is to combine vessel wall imaging and luminography. Therefore, CTA is considered as a useful technique for characterizing the nature and components of SVG aneurysm (2).

The authors state that they have no Conflict of Interest (COI).

References