Multimodality imaging and management of an asymptomatic saccular LAD aneurysm

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DESCRIPTION

An incidental saccular left anterior descending (LAD) coronary artery aneurysm was detected in a 72-year-old patient undergoing non-gated chest CT evaluation for the development of a seroma post-mastectomy for invasive lobular carcinoma. The LAD aneurysm (arrowhead) was confirmed on gated CT imaging with three-dimensional reconstructions (figure 1A, B) and detected on sagittal oblique reformats (figure 1C).

The incidence of coronary aneurysms ranges from 1.5% to 5% of angiographic studies.¹ Multivessel coronary aneurysms have been described and are more common in Kawasaki disease.¹ Atherosclerosis is the most common aetiology of this condition in the developed world.² Guidelines for management of an asymptomatic population are not available. Medical therapy, if possible, should be directed to the specific cause of the coronary aneurysm.

Covered stenting is the primary therapeutic consideration in uncomplicated symptomatic aneurysms. Surgical treatment options (eg, total aneurysm resection, coronary artery bypass graft, proximal and distal end ligation) are reserved for complications such as fistula formation and compression of adjacent structures.

In our case, given the absence of symptoms and low risk of rupture, we elected to follow the patient at 6 months, then annually with CT to ensure stability of the aneurysm. Features associated with favourable prognosis include location, size <8 mm, absence of mural thrombus and no history of distal coronary aneurysm.³ Medical management for our patient, who had hypertension, included the use of acetylsalicylic acid, statin and a β -blocker. The patient remained asymptomatic with no change in aneurysm size by computed tomography angiography (CTA) 2 years since its detection.

Learning points

- ▶ Atherosclerosis is the most common aetiology of coronary aneurysms in the developed world.
- ▶ CT imaging with three-dimensional reconstruction can yield reliable images for follow-up of coronary aneurysms.
- ▶ Treatment options include observation versus percutaneous intervention (eg, covered stent) versus surgical repair.

Figure 1 Left anterior descending (LAD) aneurysm (yellow arrowhead) depicted on gated CT imaging three-dimensional reconstructions (A and B) and a sagittal oblique reformat (C). Coronary angiography of the LAD saccular aneurysm shown in the cranial right anterior oblique view (D) and cranial left anterior oblique view (E) measuring 8×6 mm.

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