Multimodality cardiac imaging of a giant left ventricular pseudoaneurysm

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Introduction

A 56-year-old male with a history of myocardial infarction (9 years before) was admitted to our hospital because of dyspnoea, cough, and fever. A chest X-ray revealed a rounded opacity silhouetting the left cardiac border (Panel A). Transthoracic echocardiography showed a saccular structure with a 4.0 cm neck in the lateral wall of the left ventricle, with an appearance compatible with a pseudoaneurysm (Panel B, see Supplementary material online, Video S1 and S2). Multidetector computed tomography (MDCT) showed a giant pseudoaneurysm (Panel C). Cardiac magnetic resonance imaging (CMRI) clearly demonstrated the communication to left ventricle and the size of pseudoaneurysm with a partially stratified thrombus (Panel D and see Supplementary material online, Video S3). The potential risks and benefits of the operation were extensively discussed with the patient and her family, but they refused the surgery. The echocardiographic features like the thickness of the cavity wall and narrow neck suggested it as pseudoaneurysm. However, MDCT and CMRI provided a full depiction of the LV and the adjoining pseudoaneurysm, enhancing the preoperative evaluation of the extent of the defect.

Panel A. Antero-posterior chest X-ray showing a rounded opacity silhouetting the left cardiac border.
Panel B. Transthoracic echocardiographic modified five-chamber view showing a saccular structure (asterisks) with a wide neck in the lateral free wall of the LV, with an appearance compatible with a pseudoaneurysm. (LA, left atrium; LV, left ventricle; Ao, aorta).
Panel C. Pseudoaneurysmatic dilatation (asterisks) seen on reconstruction image of multidetector computed tomography.
Panel D. On cardiac magnetic resonance imaging, a thin wall without myocardial layer of pseudoaneurysm (arrow) and thrombus formation (star) in the pseudoaneurysm was seen.

Supplementary data
Supplementary data are available at European Journal of Echocardiography online.

Conflict of interest: none declared.