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IMAGE IN CARDIOVASCULAR MEDICINE

Ventricular aneurysm versus pseudoaneurysm: role of multi-imaging modality

Anévrisme ventriculaire ou pseudo-anévrisme :
rôle de l'imagerie multimodalité

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A 54-year-old patient without previous cardiac disease presented at emergency room with dyspnoea, left leg pain and clinical signs of peripheral artery occlusion. The thoracic computed tomography excluded pulmonary embolism but bilateral pleural effusion was visualized. An urgent Fogarty intervention with fasciotomy was performed. The transthoracic echocardiography obtained after surgery showed an enlarged and severely impaired left ventricle (ejection fraction < 40%) secondary to the presence of an extensive akinesia in the inferior and posterior walls. Surprisingly, the echo also revealed a voluminous cavity beneath the inferior wall which tethered the mitral leaflets at both ends and restricted their ability to close efficiently (Panel A, apical long axis view, no clear cavity border delineation). A severe mitral regurgitation was thus described (figure 1). This crater could be related to either ventricular aneurysm or pseudoaneurysm. The distinction between both is of clinical importance from a technical surgical point of view. As 2D echo was unable to carry out a clear diagnosis, a contrast-enhanced echo was performed. The left ventricular opacification perfectly identified the crater but a pseudoaneurysm could not be ruled out (figure 1 Panel B, possible neck (white arrow), doubt on the presence of pericardial effusion (yellow arrow)). Conversely, a multi-detector row cardiac computed tomography accurately identified the presence of a ventricular aneurysm (figure 1 Panel C-D, absence of neck (black arrows), no pericardial effusion) and a partial disruption of the posterior papillary muscle which were confirmed at the time of surgery.

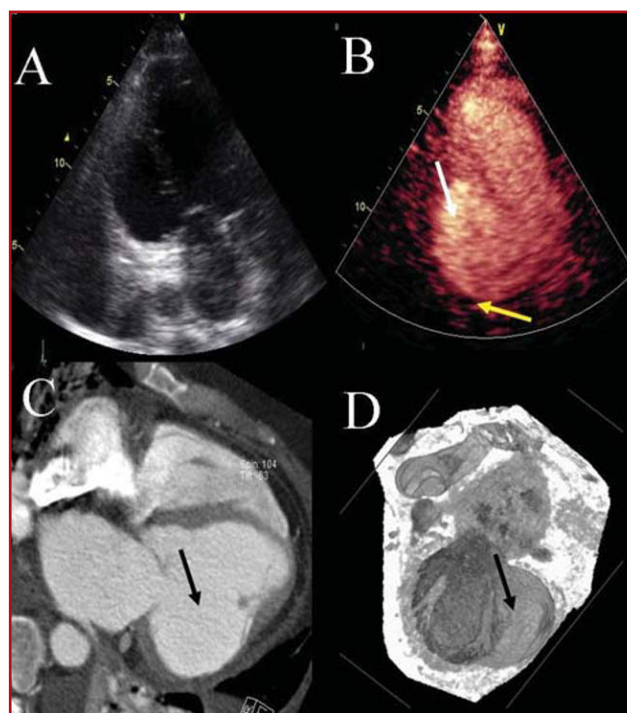


Figure 1.

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