



IMAGE IN CARDIOLOGY

Cardiovascular imaging of a giant left ventricular aneurysm[☆]



Imagiologia cardiovascular de um aneurisma ventricular esquerdo gigante

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A 73-year-old man with a history of coronary artery disease and inferoposterior myocardial infarction was referred for cardiology consultation with symptoms of chronic heart failure in NYHA class III.

Transthoracic echocardiography revealed a thrombus partially filling a giant pseudoaneurysm/aneurysm of the inferoposterior wall, causing significant deformation of the ventricular geometry (Figure 1; Videos 1–4). Despite the size of the aneurysm, the subvalvular mitral apparatus was intact, with no regurgitation. Given the uncertainty surrounding the differential diagnosis, cardiac magnetic resonance imaging was performed, which confirmed a giant ventricular aneurysm (long axis 6.7 cm) containing a thrombus (Figure 2; Videos 5 and 6), and anticoagulant therapy was

begun. Myocardial perfusion scintigraphy excluded ischemia and confirmed necrosis of the inferoposterior territory. Pre-operative cardiac catheterization showed chronic occlusion of the proximal right coronary artery but no significant left coronary disease, while ventriculography documented a large ventricular aneurysm (Figure 3; Video 7). The patient underwent surgical repair of the aneurysm of the left ventricular inferior wall (Figure 4) by partial aneurysmectomy under extracorporeal circulation, with removal of a large wall thrombus and closure of the aneurysm neck with a 2 cm × 3 cm Dacron® patch (Figure 4). The left ventricle was closed using continuous sutures. The postoperative period was uneventful and the patient was discharged home on the fifth postoperative day.

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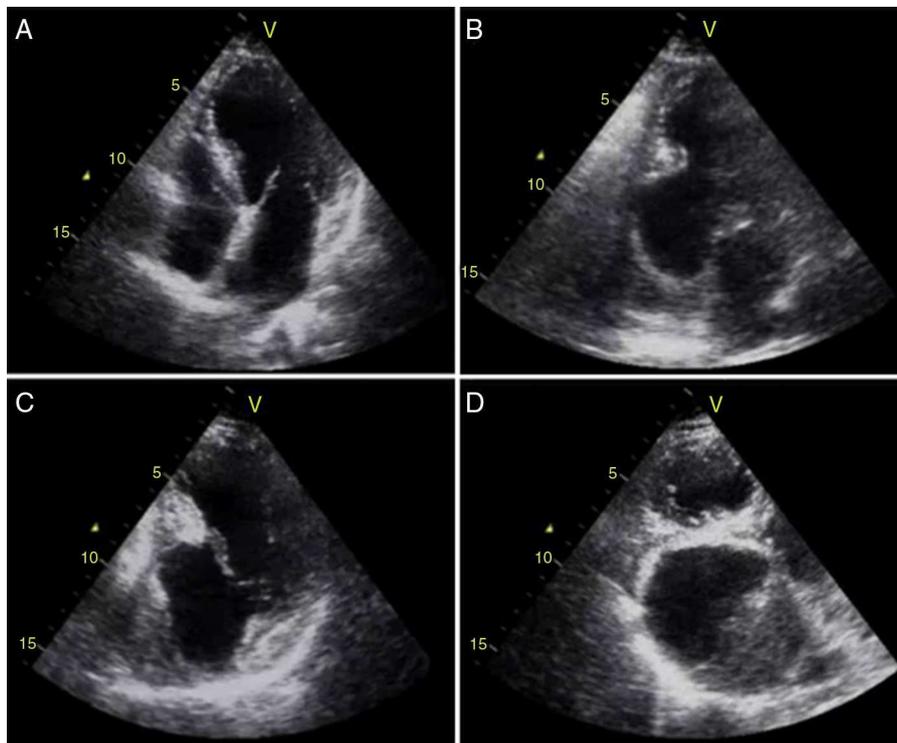


Figure 1 Two-dimensional transthoracic echocardiography: (A) apical 4-chamber view showing no alterations; (B) apical 2-chamber view revealing a giant ventricular inferior wall aneurysm containing a thrombus; (C) modified apical 2-chamber view showing intact subvalvular mitral apparatus; (D) modified apical 3-chamber view showing a large ventricular posterior wall aneurysm containing a thrombus.

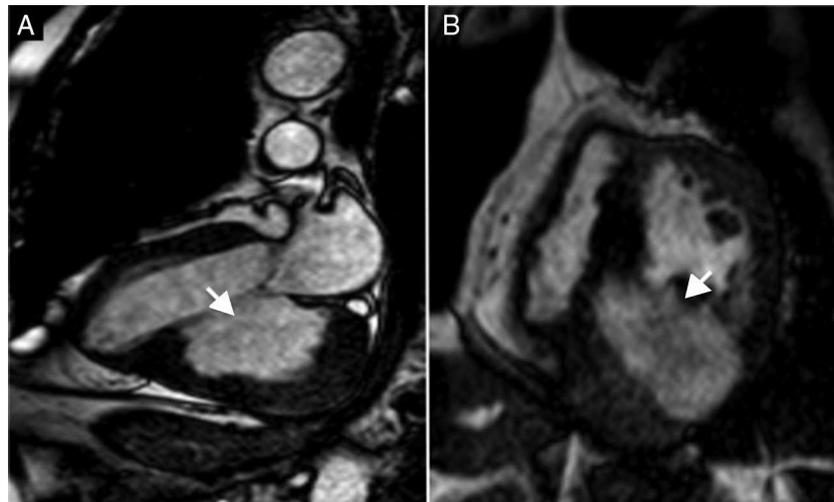


Figure 2 Cardiac cine steady-state free precession magnetic resonance imaging: (A) long-axis view showing a giant ventricular aneurysm (long axis 6.7 cm) of the posterior wall (arrow) containing a thrombus; (B) short-axis view above the level of the papillary muscles showing a large ventricular aneurysm of the inferoposterior wall (arrow), containing a thrombus.

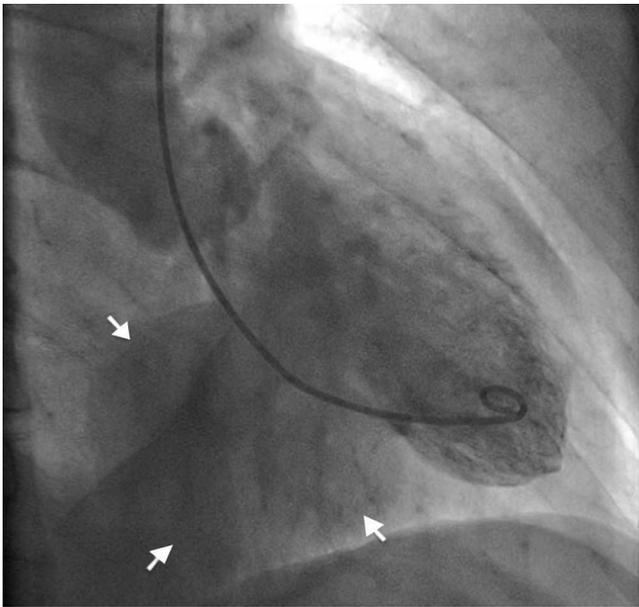


Figure 3 Ventriculography showing a giant ventricular aneurysm, the arrows indicating its anatomical borders.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors declare that no patient data appear in this article.

Conflicts of interest

The authors have no conflicts of interest to declare.

Appendix A. Supplementary material

Supplementary material associated with this article can be found in the online version at [doi:10.1016/j.repc.2015.01.004](https://doi.org/10.1016/j.repc.2015.01.004)

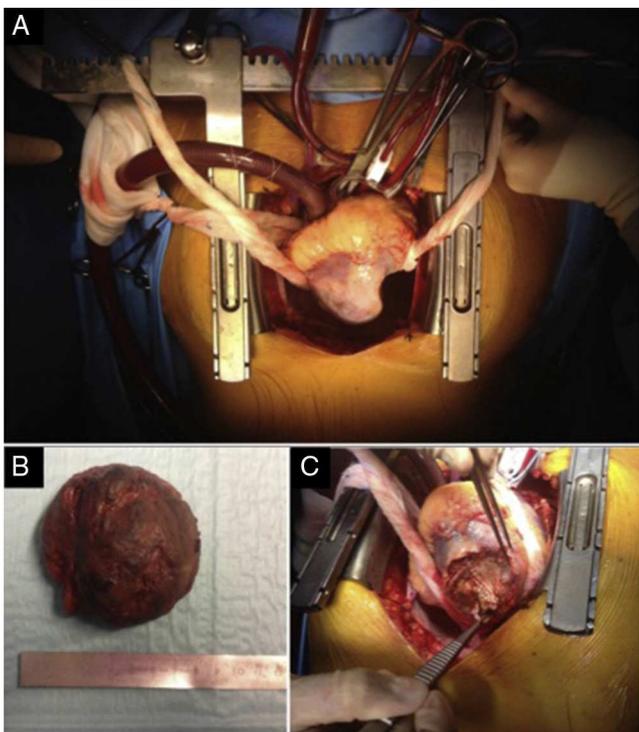


Figure 4 Intraoperative photographs following median sternotomy: (A) large aneurysm of the left ventricular inferior wall; (B) wall thrombus removed from ventricular aneurysm; (C) aneurysm neck closed with a Dacron® patch.