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DOI: https://doi.org/10.1093/eurheartj/ehr078

Posted at the Zurich Open Repository and Archive, University of Zurich
ZORA URL: https://doi.org/10.5167/uzh-50837
Accepted Version

Originally published at:
DOI: https://doi.org/10.1093/eurheartj/ehr078
Impressive left ventricular pseudoaneurysm mimicking a pericardial tamponade 5 years after mitral valve replacement for endocarditis

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A 66-year-old female patient with a history of mechanical mitral valve replacement (MVR) due to endocarditis 5 years ago was referred with shortness of breath, tachycardia, and beginning hypotension. In addition, the patient appeared to have prominent jugular veins suggesting a pericardial tamponade. Transthoracic echocardiography (TTE) displayed a partly calcified pericardial effusion (13 × 8 cm) compressing the right ventricle (RV) and the right atrium (RA) (Panel A), and computed tomography revealed a giant left ventricular pseudoaneurysm (LVPA) (10 × 10 cm) originating from the posterior mitral valve annulus (Panel B, white arrow). The impressive LVPA compressing the RV, the RA, and the inferior vena cava (Panels C and D; see Supplementary Video 1) was perfused through a tunnel-like structure (Panel E, black arrow; see Supplementary Video 2) that communicated with the left ventricular posterolateral wall below the prosthetic mitral valve. The LVPA was partially resected and a 4 × 4 cm atrioventricular dehiscence became
apparent (Panel F, black arrow) which was repaired from the inside of the left atrium using a 4 × 4 cm patch, before re-replacement of the mechanical valve (MVR) was performed. The procedure was uneventful and the patient made a swift recovery. Here, we present a very impressive image and motion series of a giant LVPA originating from below the mitral annulus 5 years after mechanical MVR. Left ventricular pseudoaneurysm is a rare condition that is difficult to diagnose (Miura et al., Ann Thorac Surg 2008;85:643–645). Although myocardial infarction is the most common reason for LVPA (Amasyali et al., Int J Cardiol 2007;119:e51–e5), one-third result from surgical procedures, most often after MVR (Frances et al., J Am Coll Cardiol 1998;32:557–561). Therefore, regular follow-up including TTE is mandatory after MVR.
Figure. RV, right ventricle; RA, right atrium; AA, ascending aorta; LVPA, left ventricular pseudoaneurysm.