Clinical vignette

Left ventricular pseudoaneurysm

Simon Schalla1*, Frits Bär1, Bas Mochtar2, Gabriel Snoep3, and Sebastiaan C.A.M. Bekkers1

1Department of Cardiology, University Hospital Maastricht, Postbus 5800, 6202 AZ Maastricht, The Netherlands; 2Cardiothoracic Surgery, University Hospital Maastricht, Maastricht, The Netherlands; 3Department of Radiology, University Hospital Maastricht, Maastricht, The Netherlands

*Corresponding author. E-mail address: s.schalla@cardio.azm.nl

A 49-year-old female patient with a history of coronary artery disease was seen in our hospital because of a recurrent pseudoaneurysm of the left ventricle (LV). In 1993, she suffered from an anteroseptal wall myocardial infarction complicated by a ventricular septal rupture requiring surgical closure of the defect with a patch. In 1995, a large pseudoaneurysm of the LV apex originating from the site of the old ventriculotomy was diagnosed by cardiac magnetic resonance imaging (Panel A). The pseudoaneurysm extended superiorly and inferiorly. A ventricular wall defect of 7 × 7 cm was closed by a patch and the pseudoaneurysm resected. During subsequent follow-up, a recurrent pseudoaneurysm was detected (Panel B). It again originated from the apex of the LV, extending inferoposteriorly. The patient was not restricted in daily life and at that time refused to undergo a third operation. Magnetic resonance imaging (Panel C) and echocardiographic studies were performed regularly during follow-up visits. She remained clinically stable with dyspnoea on exertion corresponding to NYHA Class II until 2004. Then she complained of a decreased exercise tolerance. The size of the pseudoaneurysm had increased to approximately 10 × 6 × 8 cm. She agreed to undergo a third operation. A rupture near the suture line of the old patch was found requiring closure with a new patch and resection of the pseudoaneurysm (Panel D).

Magnetic resonance imaging of the LV in long axis view.


Panel B, 1998. Recurrence of an inferoposterior pseudoaneurysm (*).

Panel C, 2003. Increasing size of the pseudoaneurysm (*).

Panel D, 2004. After surgery, a residual defect of the anterior wall was still detectable (*). In addition, a remainder of the former pseudoaneurysm can be seen inferiorly without flow on cine imaging (+). See online supplementary material for a colour version of this figure.

Movie. (See Supplementary Material available at European Heart Journal online): Cine magnetic resonance imaging of the heart in short axis view using a balanced fast field echo (steady-state free precession) sequence. The pseudoaneurysm is seen inferiorly from the left ventricle as a round structure showing flow during the cardiac cycle.