- 43 **DeGroff CG**, Shandas R, Valdes-Cruz L. Analysis of the effect of flow rate on the Doppler continuity equation for stenotic orifice area calculations: a numerical study. *Circulation* 1998;**97**:1597–605.
- 44 **Segal J**, Lerner DJ, Miller C, *et al*. When should Doppler determined valve area be better than the Gorlin formula? Variation in hydraulic constants in low flow states. *J Am Coll Cardiol* 1987;**9**:1294–305.
- 45 **Voelker W**, Reul H, Nienhaus G, *et al*. Comparison of valvular resistance, stroke work loss, and Gorlin valve area for quantitation of aortic stenosis. An in vitro study in a pulsatile aortic flow model. *Circulation* 1995;**91**:1196–204.
- 46 **Kaplan NM**. Systemic hypertension: mechanism and diagnosis. In: Zipes DP, Libby P, Bonow RO, Braunwald E, eds. *Braunwald's heart disease: a textbook of cardiovascular medicine*. 7th edn. Philadelphia, PA: Elsevier Saunders, 2005:959–87.

IMAGES IN CARDIOLOGY

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Endocarditis of left ventricular apical patch with cavity formation

An 82-year-old man was admitted for septic fever and chills in May 2005. He had undergone coronary artery bypass grafting and aneurysmectomy of the left ventricular apical aneurysm in September 2004. Since January 2005, he had complained about episodes of night sweating, fever with chills and fatigue. Antibiotics prescribed by the general physician had no effect.

Several separate sets of blood cultures done after admission were positive for *Staphylococcus epidermidis*, resistant to methicillin. Echocardiography showed poor two-dimensional image quality. Cardiac magnetic resonance revealed apical pseudoaneurysm (32×17×36 mm) overlying the implanted patch, with a small intermittent shunt between left ventricular and pseudoaneurysmal cavity (panel A). Nevertheless, another oval-shaped cavity (32×18×40 mm) was observed distally to the pseudoaneurysm (panel B). Both cavities were filled with blood clots. Yet, a small bidirectional blood flow was noted between both spaces (data supplement movie clip is available online at <http://heart.bmj.com/supplemental>). After intensive

antibiotic treatment, inflammatory markers and white blood cell count were normalised and blood cultures were repeatedly negative. After discharge, the patient did not show any signs of relapse at regular follow-ups.

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Supplemental video is available on the *Heart* website at <http://heart.bmj.com/supplemental>

Panel A shows an irregular space between the apical patch and pericardium, which represents apical pseudoaneurysm (arrow). Apical pseudoaneurysm may develop after left ventricular aneurysmectomy and, usually, does not require any specific treatment. Panel B shows an oval-shaped cavity connected with pseudoaneurysm (arrow). This finding is clear pathology and may be related to *Staphylococcus* infection.