

- echocardiography and doppler ultrasound: a report From the American Society of Echocardiography's Guidelines and Standards Committee and the Task Force on Prosthetic Valves, developed in conjunction with the American College of Cardiology Cardiovascular Imaging Committee, Cardiac Imaging Committee of the American Heart Association, the European Association of Echocardiography, a registered branch of the European Society of Cardiology, the Japanese Society of Echocardiography and the Canadian Society of Echocardiography, endorsed by the American College of Cardiology Foundation, American Heart Association, European Association of Echocardiography, a registered branch of the European Society of Cardiology, the Japanese Society of Echocardiography, and Canadian Society of Echocardiography. *J Am Soc Echocardiogr* 2009;**22**:975–1014; quiz 1082–1014.
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CARDIOVASCULAR FLASHLIGHT

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Corevalve prosthesis causes anterior mitral leaflet perforation resulting in severe mitral regurgitation and subsequent endocarditis

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An 84-year-old patient presented at our outpatient clinic with recurrent dyspnoea (NYHA class III) and fever. Medical history included transcatheter aortic valve replacement (TAVR) using a 31 mm Corevalve prosthesis 6 months ago. Trans-thoracic echocardiography revealed moderate aortic regurgitation and also perforation of the anterior mitral leaflet (AML) causing severe mitral regurgitation (MR; Panels A1 and A2). Thus, the patient was scheduled for open heart surgery.

On admission to the hospital 2 weeks later, transoesophageal echocardiography showed evidence of acute new onset endocarditis with small vegetations on the AML and an increase in MR (blue arrow; Panels B1 and B2). Blood smear analyses (six out of six) were positive for *Staphylococcus epidermidis*, and immediate intravenous antibiotic treatment was administered.

Aortic valve (SJM Trifecta 27 mm) and mitral valve (SJM Epic 33 mm) replacement was performed. Trans-aortic *in situ* video-assisted examination confirmed both endocarditis and AML perforation due to the Corevalve prosthesis stent (green arrow; Panels C1 and C2).

Intra- and post-operative course was uneventful. The patient recovered well and was discharged without symptoms and normal valve functions 10 days post-operatively.

This report highlights three issues: (i) the danger of AML injury following catheter-based aortic valve replacement, which has not been described thus far; (ii) the potential risk of subsequent endocarditis following TAVR; and (iii) the need for meticulous patient evaluation for TAVR. Although this patient was considered at a high surgical risk, based on his age in the first place, he recovered well from standard double-valve replacement.

Supplementary material is available at *European Heart Journal* online.

