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**CARDIOVASCULAR FLASHLIGHT**

Left atrial dissection after mitral valve replacement

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An 80-year-old gentleman was referred for two vessel coronary artery disease and severe mitral regurgitation due to myxomatous P2 prolapse. The patient underwent coronary artery bypass grafting and mitral valve repair, which despite multiple attempts and due to highly fragile tissue, required mitral valve replacement during the same operation. A bioprosthetic valve (arrows) was implanted using everting pledgeted stitches placed on the atrial aspect of the mitral annulus, to avoid the risk of atrioventricular disruption given tissue fragility. Post-bypass echocardiography showed a trivial paravalvular leak with no significant gradient across the valve. The patient presented transient hypertension after transfer to the ICU, with a maximal systolic pressure of 170 mmHg. He later presented haemodynamic instability, prompting echocardiography to rule out tamponade, which showed a cavity within the left atrial (LA) wall, with high velocity flow (>3.5 m/s) originating from the posterior left ventricular wall, diagnostic for a LA dissection. There was no significant paravalvular leak and a small pericardial effusion (+). There was minimal flow from the dissection cavity to the LA. The absence of flow within the pericardium and stable haematocrit indicated this was a contained rupture into the LA wall. There was no supramitral stenosis. Haemodynamics stabilized with fluid resuscitation and vasoconstriction.

Left atrial dissection is a rare complication after mitral valve replacement, and represents a variant of contained atrioventricular disruption. We preferred medical management given the friable tissue and technical difficulty in repairing this dissection, and critical state of this elderly patient.

Supplementary material is available at European Heart Journal online.

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