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The list of references is available in the online version of this paper.

CARDIOVASCULAR FLASHLIGHT

Serial images of porcelain atrium

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A 65-year-old male patient was admitted to our hospital for further cardiac evaluation for faintness. His history revealed mitral valve replacement with a St Jude Medical prosthesis (29 mm) 28 years earlier, using a left atrial (LA) approach for severe rheumatic mitral stenosis. There was no evidence of LA calcification at that time. Currently, lateral chest radiography showed diffuse calcified outline of the LA wall (Panel A, arrows), and transthoracic echocardiogram showed enlargement of the LA (65 mm) and increased echo contrast in the LA chamber (Panel B, white arrows; red arrows show the mechanical valves). Axial imaging by chest computed tomography (CT) revealed massive LA calcification (Panel C, white arrows) except in the interatrial septum (red arrow), which has been described as a ‘porcelain atrium’. Fortunately, serial chest CT images of this patient (Panel D) showed sequential calcified changes of the LA. Coronary angiography revealed normal left and right coronary arteries. Right heart catheterization showed no dip-plateau phenomenon in the pressure curve, thus excluding constrictive pericarditis. Because ECG monitor revealed ventricular tachycardia during fainting, an implantable cardioverter defibrillator was implanted. This is the first report of serial images of a ‘porcelain atrium’. Our findings suggest that long lasting rheumatic inflammation may result in LA calcification after mitral valve replacement. Notably, almost all patients with ‘porcelain atrium’ have a history of rheumatic heart disease.