Giant left atrium in a patient with prosthetic mitral valve

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A 76-year-old female patient presented complaining of chronic cough and dyspnoea. She underwent mitral valve replacement and tricuspid annuloplasty for rheumatic mixed mitral valve disease with severe tricuspid regurgitation 13 years ago. Clinically, the patient had features of congestive cardiac failure. Chest X-ray revealed asymmetrical cardiomegaly with the right heart border extending to the right lateral chest wall. Echocardiography demonstrated a functioning prosthetic mitral valve with preserved left and right ventricular function. Massive biatrial enlargement became only apparent only on non-standard echocardiographic views from the right side. Cardiac magnetic resonance imaging confirmed biatrial enlargement, with the left and right atria measuring 9.5 × 14 cm and 3.5 × 8.9 cm (WxL), respectively. The right lung was compressed by the left atrium, likely explaining the patient’s chronic cough. [Panel A: four-chamber view cardiovascular magnetic resonance (CMR) imaging].

Common presenting complaints associated with a giant left atrium include dyspnoea and dysphagia due to oesophageal compression. A giant left atrium is commonly defined as measuring >8 cm. It has classically been described in the setting of severe mitral regurgitation in rheumatic heart disease. It has been hypothesized that the pan-carditis of rheumatic heart disease combined with chronic atrial volume overload results in gross atrial enlargement. Atrial fibrillation is always present. Operative treatment entails the partial resection of the inferior and superior left atrial wall. A giant left atrium has become a very rare entity with the decreasing incidence of rheumatic heart disease. (Supplementary material online, Videos S1 and S2).

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Panel A. CMR. Massively enlarged left and right atrium. Prosthetic mitral valve.

Supplementary material is available at European Heart Journal online.