

Giant Left Atrium: A Cause of Atrial Fibrillation and Rare Entity in Chronic Rheumatic Valvular Heart Disease: A Case Report

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Abstract: A 35 year old male with known rheumatic heart disease presented to the emergency department with progressively increasing breathlessness. Two dimensional echocardiography followed by CECT chest revealed giant left atrium (17.7cmx16.1cm). The largest left atrium described so far in literature is 18.7cm, reported by Mehmet et al and from India is 18.4cmx11cmx10.2cm. So this is third largest in world and second largest in India.

Keywords: Giant left atrium, mitral stenosis, atrial fibrillation, mitral regurgitation, rheumatic heart disease

1. Introduction

Left atrial enlargement is a common feature of rheumatic valvular disease. Other causes are left ventricular failure, chronic atrial fibrillation, significant left to right shunts, patent ductus arteriosus, ventricular septal defect. Giant left atrium is uncommonly seen in mitral stenosis. We here report a case of rheumatic mitral stenosis with mild mitral regurgitation present with one of the largest left atrium described so far.

2. Case Report

A 35 year old male presented with symptoms of breathlessness, fatigue and intermittent palpitation for the last 2 yrs. that worsened in the last 1 month. The patient was under treatment with combination of frusemide and spironolactone. On examination, heart rate was 106/minute, irregularly irregular and blood pressure was 94/60 mm of Hg. On cardiac examination, apex beat was localised to 6th intercostal space lateral to mid-clavicular line. On auscultation, the first heart sound was variable, the second heart sound was narrowly split with loud P2. There was a rough rumbling mid-diastolic murmur and a



Figure 1



Figure 2



Figure 3

pansystolic murmur best heard at the apex radiating to the left axilla. His routine examination was normal. A chest x-ray (fig. 2) revealed gross enlargement of cardiac silhouette. Trans-thoracic echocardiography (fig. 3) showed a massively dilated left atrium, which was further confirmed by CECT chest (fig. 1) that revealed the size of left atrium - 17.7cm x 16.1cm, mitral valve area - 0.7 cm² and there was colour doppler evidence of mild mitral regurgitation, mild tricuspid regurgitation with moderate pulmonary arterial hypertension.

In view of clinical examination and 2D echo the patient was diagnosed as a case of rheumatic heart disease with severe mitral stenosis with mild mitral regurgitation and mild tricuspid regurgitation with atrial fibrillation and giant left atrium. Despite having giant left atrium, the patient did not have compressive symptoms like dysphagia or hoarseness of voice.

3. Discussion

According to Ismura and co-workers, giant left atrium means left atrium greater than 6cm. Hurst states that in case of giant left atrium, mitral regurgitation is more common than mitral stenosis and atrial fibrillation is almost always present. Till date, the largest left atrium is 18.7 cm, reported by Mehmet et al. In our case x ray shows enlarged cardiac silhouette. On two dimensional echocardiography, it was confirmed as giant left atrium and then CECT revealed the size 17.7cmx16.1 cm. Giant left atrium rarely presents with severe mitral stenosis, but in our case it was associated with severe mitral stenosis with mild mitral regurgitation and mild tricuspid regurgitation with atrial fibrillation. The patient of giant left atrium presents usually with complain of shortness of breath and dysphagia. Our patient had mild chest pain, shortness of breath on exertion without compressive symptoms and had no evidence of acute rheumatic carditis or bacterial endocarditis during the course of illness. Such giant left atrium with severe mitral stenosis with mild mitral regurgitation is a rare entity. So we report it.

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