

Rheumatic Mitral Stenosis with Ball Valve thrombus in the Left Atrium

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Citation

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Abstract

A 32 year old woman presented with progressive shortness of breath on exertion. She had a longstanding history of rheumatic mitral stenosis. Physical examination was remarkable for an irregularly irregular rhythm, tapping apical impulse, S₁ of variable intensity, and a grade III/IV mid diastolic rumbling murmur at the apex best heard with the bell of the stethoscope. Transthoracic echocardiography (Video1) demonstrated a freely mobile large, ball-shaped mass in the left atrium along with valvular changes typical of rheumatic mitral stenosis. The mitral leaflets were pliable, with restricted mobility of the leaflet tips because of their fusion. This resulted in doming and a “hockey stick” appearance of the anterior leaflet in diastole, a characteristic feature of rheumatic mitral stenosis (Video1). Further there was notable subvalvular thickening and left atrial enlargement. Continuous-wave Doppler interrogation demonstrated a persistent transvalvular gradient throughout diastole, with a mean transvalvular gradient of 13 mm Hg. The estimated valve area was 0.8cm².

Ball valve thrombus is often associated with rheumatic mitral stenosis with atrial fibrillation, but is an infrequent entity. The stasis associated with atrial fibrillation may be more important in its genesis. The ball valve thrombus has a potential for fatal systemic emboli or occlusion of the mitral valve resulting in sudden death. Therefore aggressive management by emergency surgery is the preferred treatment modality. The patient was offered surgery which she declined for unknown reasons.

Video1 : Trans thoracic Echo shows rheumatic mitral stenosis inferred by typical hockey stick appearance of the anterior mitral leaflet and a large mobile ball valve thrombus.

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References

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