

Clinical Images

Mitral Regurgitation and Pulmonary Edema

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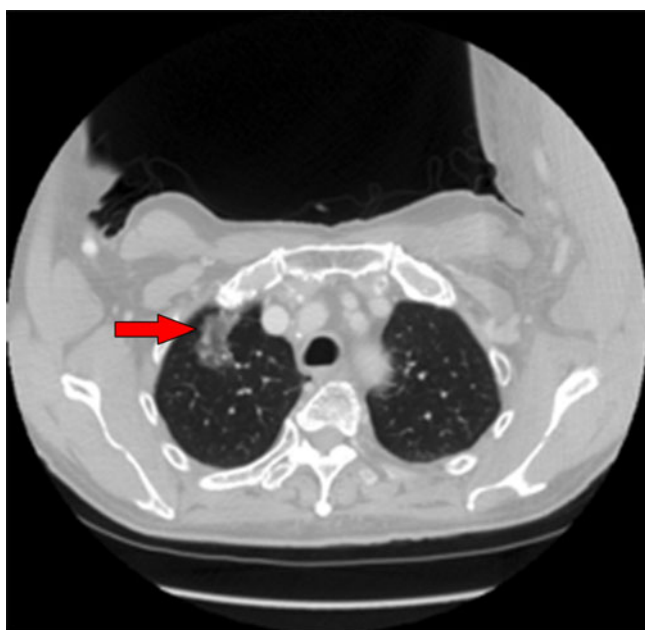


Figure 1. Chest CT image.

REPORT OF CASE

An asymptomatic 88-year-old Asian male with hypertension presented with a right upper lobe infiltrate on chest x-ray. A chest CT (Fig. 1) demonstrated a geographic 3.5 × 2.2-cm ground-glass opacity in the right apex. A 3/6 holosystolic murmur was heard at the apex radiating to the axilla. Transthoracic echocardiography showed a flail posterior mitral valve leaflet secondary to a ruptured chordae tendinae.

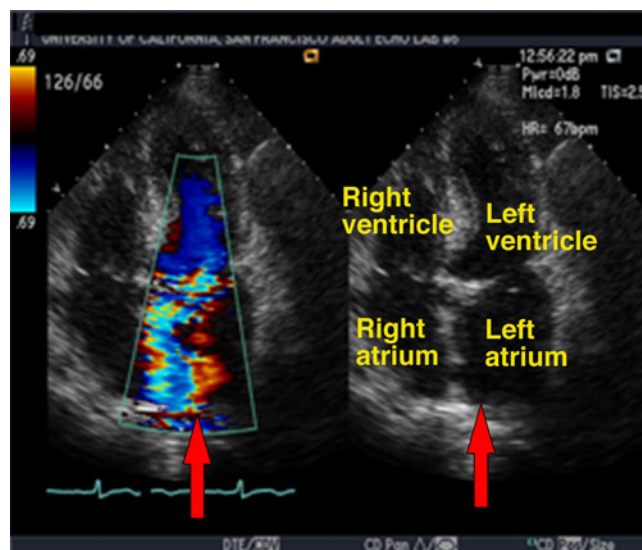


Figure 2. The mitral regurgitant jet is directed towards the right superior pulmonary vein.

In patients with a flail posterior mitral valve leaflet, the regurgitant jet is directed towards the right superior pulmonary vein¹ (Fig. 2), causing higher hydrostatic pressures in that location. This may lead to focal edema in the right upper lobe². Prior studies have shown that up to 38% of patients with a ruptured chordae tendinae remain asymptomatic in the subacute to chronic setting despite severe mitral insufficiency^{3,4}. In most cases, surgical repair is highly successful⁵. However, given this patient's age and his excellent response to medical therapy with an angiotensin receptor blocker, surgery was not performed. In the setting of upper lobe infiltrates where infection and cancer seem unlikely or have been excluded, mitral regurgitation with segmental pulmonary edema should be considered.

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