Mitral valve perforation and chordae rupture in bacterial endocarditis

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51-year-old woman with a history of previously diagnosed streptococcal endocarditis presented with acute respiratory distress. She had been sub-optimally treated due to complications with the antibiotic regimen but had been doing well until the day of presentation. She developed acute shortness of breath which required intubation and mechanical ventilation. A transesophageal echocardiogram (TEE) was requested to evaluate the urgency for surgical intervention.

The transesophageal echocardiogram demonstrated a perforation (arrow) of the posterior mitral valve leaflet, a large mitral valve vegetation (V), a ruptured chorda (C) which oscillated between the left ventricle (LV) and atrium (LA). Severe mitral regurgitation was noted with the regurgitant jets from poor closure of the leaflet tips (Pj) directed into the atrium and the perforation (Lj) arcing along the posterior aspect of the atrium. A review of other cardiac structures did not reveal extension of endocarditis.

The left atrium and ventricle both showed evidence of chronic mitral regurgitation likely due to the leaflet perforation. The acute decompensation was likely due to rupture of the chorda causing acute exacerbation of mitral regurgitation.

She had an uncomplicated replacement of the valve the following day.