A Rare Case of Injury to Aorto-Mitral Curtain During Mitral Valve Replacement Surgery

The Editor,

A 32-year-old woman with severe rheumatic mitral stenosis underwent mitral valve replacement surgery with St. Jude’s bileaflet mechanical mitral valve prosthesis. After weaning off from cardiopulmonary bypass (CPB), transesophageal echocardiography (TEE) examination showed an abnormal high-velocity, holosystolic regurgitant jet from the left ventricle (LV) into the left atrium (LA), located just outside the sewing ring of the prosthetic valve, suggestive of a paravalvular leak [Figure 1a and Video Clip 1]. The jet was localized at the anterior portion of the mitral valve annulus near the aortic valve. There was, however, no abnormal, rocking movement of the prosthesis. Both the leaflets of the prosthesis were also moving normally. Considering the moderate severity, based on intermediate jet size and dense, parabolic continuous wave doppler waveform [Figure 1b], and the location of the jet, CPB was re-instituted to address the problem. On opening the LA, it was found that there was neither any problem with the seating of the prosthetic valve nor there was any disruption of the sutures securing the sewing ring to the annulus. There was no calcification also at the region of the aorto-mitral curtain. There was, however, a rent in the aorto-mitral curtain adjacent to the anterior mitral valve annulus, just beside the sewing ring of the prosthetic valve [Figure 1c]. The rent was causing a fistulous communication between the LV and the LA. The rent was repaired using pericardial patch. After repair, the patient was weaned off from CPB. Repeat TEE examination showed complete obliteration of the abnormal jet [Figure 1d and Video Clip 2]. The patient was subsequently discharged uneventfully from the hospital and was asymptomatic at follow-up visits at 1 and 6 months later, respectively. Echocardiography during the follow-up visits did not show any abnormal finding.

Injury to neighboring cardiac structures can happen during cardiac surgical procedures. Injury to aorto-mitral curtain as well as to mitral valve leaflet during aortic valve repair/replacement and injury to aortic valve cusps during mitral valve replacement have been previously
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Conflicts of interest
There are no conflicts of interest.

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