Images in cardio-thoracic surgery

Abnormal chordae causing aortic and mitral regurgitation

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A young adult presented with relative short history of dyspnea and was diagnosed with severe aortic and mitral regurgitation. Intra-operatively, abnormal chordae were found to impair the function of the aortic valve (Fig. 1) and of the mitral valve (Fig. 2). Aberrant chordae were removed, and valves were replaced with mechanical prostheses.

Fig. 1. (a) Intra-operative view of the aortic root after removal of the non-coronary cusp and retraction of the right coronary cusp: thick chorda that connects the base of the ventricular aspect of the anterior mitral leaflet (black arrow) and the left coronary Valsalva sinus (just below the left coronary ostium) passes onto the free margin of the left coronary cusp (white arrow); (b) The mitral-aortic chorda was 25 mm long and 4 mm in diameter; (c) The deep groove on the left coronary aortic cusp, a mark produced by the chorda.

Fig. 2. Left atrium is exposed: abnormal chorda tendina connecting the atrial surface of the anterior mitral leaflet (black arrow) with the atrial wall.