Late left ventricular outflow tract obstruction following mitral valve replacement

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A 66-year old male presented with presyncope 14 years following mechanical mitral valve replacement. Echocardiography demonstrated the remainder of an elongated anterior mitral valve leaflet (AMVL) with systolic anterior motion obstructing the left ventricular outflow tract (Fig. 1 and Supplementary Video 1). Owing to previous intracranial bleeding, the completion of AMVL resection was performed via the bioprosthetic mitral valve. Owing to previous intracranial bleeding, the completion of AMVL resection was performed via the bioprosthetic mitral valve.

Supplementary material (Video 1) is available at EJCTS online.

Video 1: Transthoracic echocardiography (long axis view) demonstrating the systolic anterior motion obstructing the left ventricle outflow tract in systole. In the initial operation the native valve was found degenerative with no interventricular septum hypertrophy. In the first-time replacement the AMVL was partially resected, and it was found thrombosed and elongated in the second operation.

Figure 1: (A) Transthoracic echocardiography (long-axis view) demonstrating the systolic anterior motion obstructing the left ventricular outflow tract in systole (arrow), possibly due to an anatomical discrepancy in the location of the papillary muscle and the anterior mitral valve leaflet. (B) Transthoracic echocardiography, the apical view demonstrating the jet velocity across the left ventricular outflow tract. Ao: aorta; LA: left atrium; LV: left ventricle.