

Descriptions for Video 1-4

Video 1. Preoperative transthoracic and transesophageal echocardiography demonstrated severe mitral regurgitation due to Barlow's disease.

Video 2. This video demonstrates the intraoperative findings. The main incision measures 30 mm, and a one-window, two-port approach is used, consisting of a camera port and an accessory port. By using pre-prepared artificial chordae loops of different lengths, complex mitral valve repair for Barlow disease can be performed with a shortened aortic cross-clamp time.

Video 3. This video shows the creation of five artificial chordae loops of different lengths using calipers. The appropriate leaflet attachment site can be selected according to the length of each loop. Based on preoperative transesophageal echocardiography and cardiac computed tomography, the required number and length of artificial chordae can be anticipated, allowing the loops to be prepared before surgery.

Video 4. Postoperative transesophageal echocardiography demonstrates satisfactory leaflet coaptation without residual mitral regurgitation or systolic anterior motion.