

Assessment of isolated cleft mitral valve by live/real-time three-dimensional transesophageal echocardiography

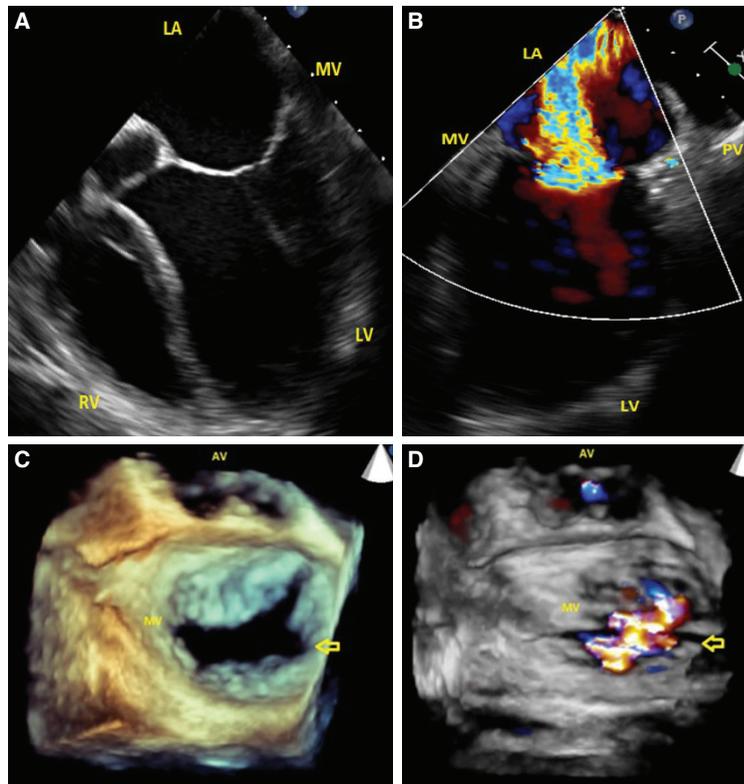
İzole kleft mitral kapağın üç-boyutlu transözofajiyal ekokardiyografi ile değerlendirilmesi

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A 75-year-old female patient with a known history of congestive heart failure and functional mitral regurgitation (MR) was admitted to the hospital with New York Heart Association class 3 symptoms. She was taking heart failure medication. The physical examination revealed a 5/6 systolic murmur and an electrocardiogram demonstrated a normal sinus rhythm with a heart rate of 89 bpm. Two-dimensional (2D) transthoracic echocardiography showed a dilated left ventricular cavity with

an ejection fraction of 35% and moderate MR. The patient was referred to the transesophageal echocardiography (TEE) laboratory to examine the MR. Two-dimensional TEE indicated moderate to severe MR with normal mitral valve structure (Figure A, B, Video 1, 2*). However, three-dimensional TEE revealed an isolated cleft of the posterior mitral leaflet (Figure C, D, Video 3, 4*). The organic reason for MR was diagnosed and the treatment was changed to surgical repair rather than medical follow-up. An isolated cleft mitral valve without any other feature of atrioventricular septal defect is not a common congenital cause of MR. Three-dimensional TEE has an incremental value over 2D TEE in the assessment of isolated cleft mitral valve anatomy.



Figures– Two-dimensional transesophageal echocardiography. **(A)** Five-chamber view. Normal mitral valve (MV) structure is seen. **(B)** Commissural view with color Doppler. Moderate to severe mitral regurgitation is seen. Left atrium (LA), left ventricle (LV), and pulmonary vein (PV) are also seen. Live/real-time three-dimensional transesophageal echocardiography. **(C)** Aortic valve (AV) and mitral valve (MV) are seen. Arrow shows cleft of posterior mitral leaflet. **(D)** Color Doppler. *Supplementary video files associated with this presentation can be found in the online version of the journal.