

A case with prolapse of all four cardiac valves: a rare condition in myxomatous degeneration

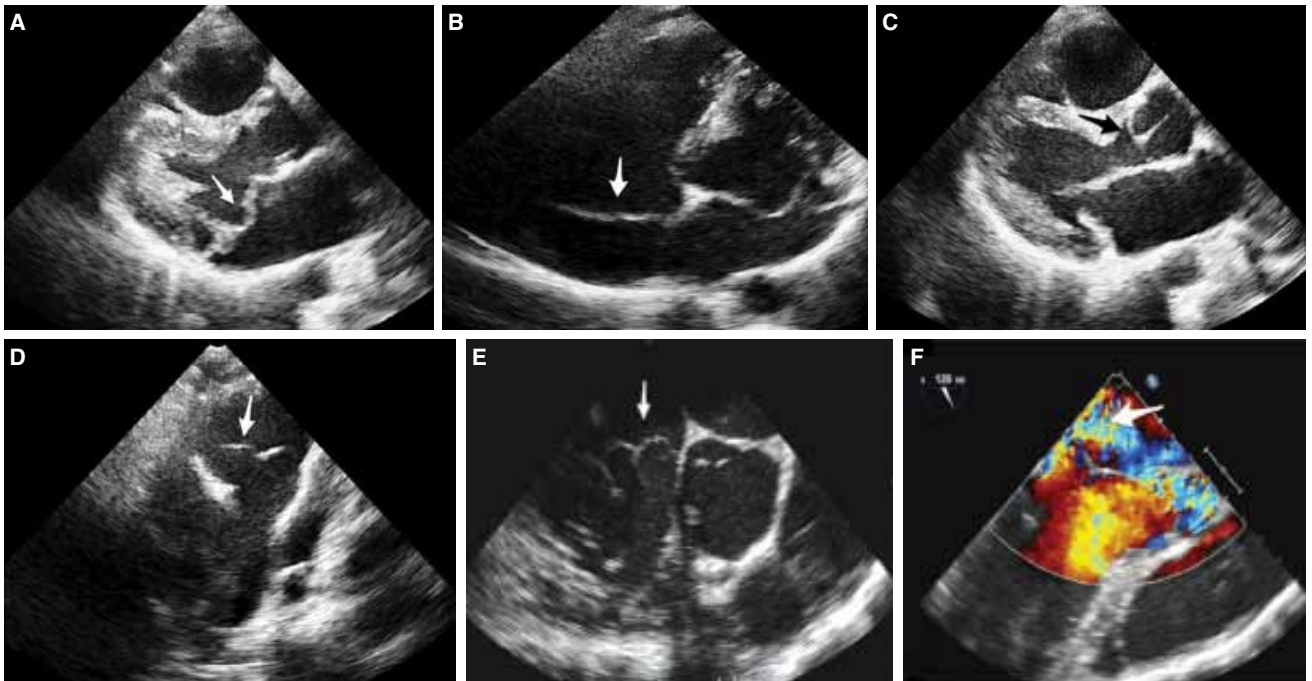
*Miksamatöz dejenerasyonda nadir bir durum:
Kalbin dört kapağının tümünde olan prolapsuslu bir olgu*

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A 32-year-old man admitted to our out-patient clinic with palpitations and atypical chest pain. He had no significant medical history. On the physical examination, his blood pressure was 113/74 mmHg and pulse rate 76 beats/min. Cardiac auscultation revealed a grade 3/6 systolic murmur at the apex and the left lower sternal border. A 12-lead electrocardiogram showed a normal sinus rhythm. Telecardiography was normal. Routine laboratory findings were unremarkable. Transthoracic echocardiography revealed prolapse of all four valves, indicating the

presence of floppy valves, despite the absence of other anomalies (Figure A-D, Videos 1-2*). Transesophageal echocardiography showed a marked prolapse of the floppy tricuspid valve (Figure E, Video 3*) with a moderate regurgitation of mitral (Figure F) and tricuspid valves. The patient has been followed regularly and remains in good condition. Mitral valve prolapse is a common valvular abnormality. In terms of multiple valve prolapse syndrome, two pediatric cases who had combined valvular prolapse with mitral valve prolapse were reported by Suzuki et al. However, an adult case with prolapse in all four valves without any stigmata of Marfan or Ehlers-Danlos syndrome was first reported by Mitsunori et al. The present case is only the second adult case with multiple floppy valves involving all cardiac valves to be reported in the current literature.



Figures– Transthoracic echocardiographic views. **(A)** The parasternal long-axis view shows prolapse of the anterior mitral valve leaflet (white arrow) into the left atrium in systole. **(B)** The apical four-chamber view demonstrates that septal and anterior leaflets of the tricuspid valve (arrow) were redundant and prolapsed beyond the level of the tricuspid ring during systole. **(C)** The parasternal long-axis view shows the thickened mitral valve leaflets and displacement of the noncoronary cusp of the aorta (black arrow) towards the left ventricular outflow tract in diastole. **(D)** Modified parasternal short-axis view reveals the pulmonary valve (arrow) extruding into the right ventricular outflow tract. **(E)** Basal short-axis view shows that leaflets of the tricuspid valve (thin arrow) were floppy and redundant. **(F)** Color Doppler examination shows a moderate mitral valve regurgitation (thick arrow). *Supplementary video files associated with this presentation can be found in the online version of the journal.