

A Rare Bioprosthetic Valve Complication: Flail Leaflet Related to Late Cusp Tear

Nadir Görülen Bir Geç Biyoprotez Kapak Komplikasyonu: Kapak Yırtılması Kaynaklı Flail Leaflet

Bioprosthetic valves are at risk of gradual degeneration and dysfunction over time. In this case image, we describe a 72-year-old man who developed severe transvalvular mitral valve regurgitation due to an isolated rupture of his bioprosthetic mitral valve. Notably, there was no significant degeneration, calcification, or thickness. The patient presented with sudden-onset dyspnea upon exertion and had experienced paroxysmal atrial fibrillation episodes over the past two months. He had undergone mitral valve replacement with a prosthetic valve in 2012. Physical examination did not reveal any remarkable abnormalities. Two-dimensional transthoracic echocardiography (TTE) identified severe eccentric mitral regurgitation, and elevated systolic pulmonary hypertension, registering at 65 mmHg. The TTE further showed a dysfunctional bioprosthetic mitral valve, characterized by a high gradient and severe transvalvular mitral regurgitation. Transesophageal echocardiography (TEE) displayed a bioprosthetic mitral valve with a flail leaflet (Figure 1, Video 1) and confirmed the severe transvalvular mitral regurgitation (Video 2). Three-dimensional echocardiography in zoom mode demonstrated that the anterolateral leaflet of the valve was flail (Video 3). A redo mitral valve replacement (Redo-MVR) and tricuspid valve (TV) annuloplasty were carried out via a median re-sternotomy, utilizing cardiopulmonary bypass. The extracted bioprosthetic valve material revealed a leaflet tear, but notably, there was no severe degeneration (Figure 2).

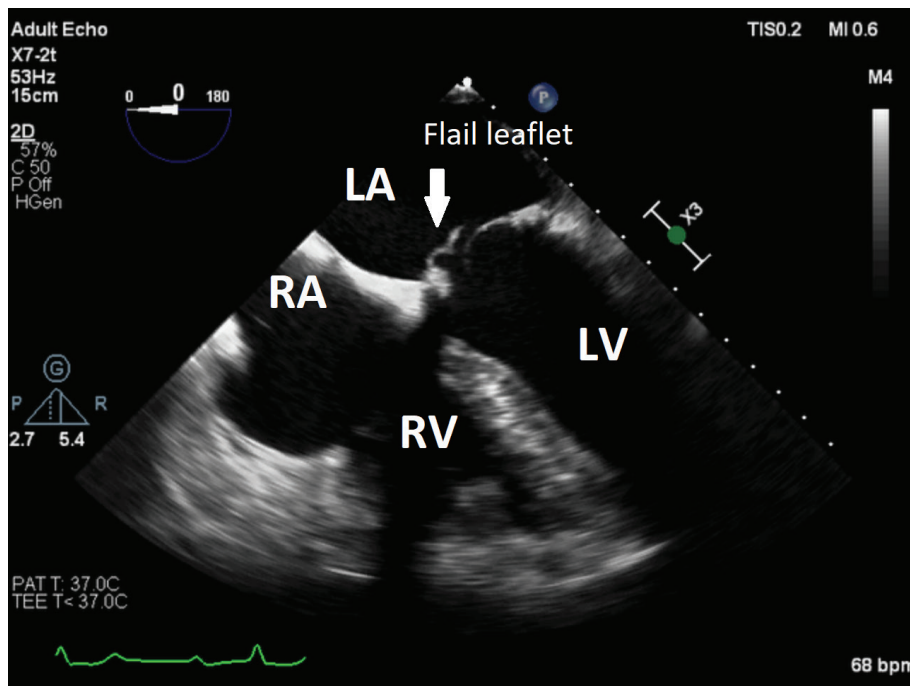


Figure 1. Four chamber view of two-dimensional transthoracic echocardiography showing flail leaflet. (RA: Right atrium, LA: left atrium, RV: right ventricle, LV: left ventricle)

CASE IMAGE OLGU GÖRÜNTÜSÜ

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Figure 2. The bioprosthetic valve surgery material showing leaflet tear without severe degeneration.

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Video 1. Transesophageal echocardiogram examination showing pure rupture of bioprosthetic mitral valve. (RA: right atrium, LA: left atrium, LV: left ventricle)

Video 2. Transesophageal echocardiogram examination showing severe transvalvular mitral regurgitation. (RA: right atrium, LA: left atrium, LV: left ventricle)

Video 3. The three-dimensional transesophageal echocardiogram showing bioprosthetic mitral valve.