








Transcatheter edge-to-edge mitral valve repair in a patient with acute severe primary mitral regurgitation: a case report

 Ivona Mustapić^{1,*},
 Andrija Matetić¹,
 Paula Radić¹,
 Anja Mandrapa¹,
 Tea Domjanović Škopinić¹,
 Vedran Carević¹,
 Darija Baković Kramarić^{1,2}

¹University Hospital of Split, Split, Croatia

²University of Split School of Medicine, Split, Croatia

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***ADDRESS FOR CORRESPONDENCE:** Ivona Mustapić, University Hospital of Split, Šoltanska 1, HR-21000 Split, Croatia. / Phone: +385-95-227-6970 / E-mail: mateljanka@gmail.com

ORCID: Ivona Mustapić, <https://orcid.org/0000-0002-1534-3642> • Andrija Matetić, <https://orcid.org/0000-0001-9272-6906> • Paula Radić, <https://orcid.org/0000-0002-7273-6696> • Anja Mandrapa, <https://orcid.org/0009-0002-3416-5906> • Tea Domjanović Škopinić, <https://orcid.org/0000-0002-4989-6974> • Vedran Carević, <https://orcid.org/0000-0002-0009-5009> • Darija Baković Kramarić, <https://orcid.org/0000-0001-6751-5242>

Introduction: Transcatheter edge-to-edge mitral valve repair (TEER MV) is recommended for symptomatic patients with secondary mitral regurgitation (MR) (class IIa) and with primary MR (class IIb) without concomitant coronary artery or other heart disease when they are not eligible for surgery¹. Nevertheless, there are limited data on the percutaneous approach for acute primary mitral regurgitation.

Case report: We report the case of an 82-year-old woman who was hospitalized for orthopnea and pulmonary congestion. She had previously had a left hip arthroplasty and suffered from tuberculosis in her youth. On admission, transthoracic echocardiography (TTE) was performed, showing a normal-sized left heart with preserved systolic function (LVEF 60%) and restrictive mitral inflow. The mitral valve was myxomatous degenerated with prolapse and flail of the posterior leaflet and therefore eccentric regurgitation jet. Transesophageal echocardiography revealed systolic prolapse and flail of the posterior MV leaflet due to rupture of the primary chordae tendineae (**Figure 1**). Percutaneous coronary angiography showed normal epicardial coronary arteries. Considering the rapid onset of symptoms and acute primary MR, the patient was referred to the Heart Team. Due to advanced age and functional status NYHA III, the patient was considered high surgical risk and TEER was recommended. TEER MitraClip™ was successfully performed with two clips in the region of the regurgitant jet under control of TOE: A2-P2 segment; XTW x1 and XT x1. Intraprocedural success was measured by echocardiographic reduction of MR from severe to trivial with concomitant reduction in left atrial pressure. Postprocedural TTE showed a significant reduction of MR (**Figure 2**) with a marked improvement in functional status to NYHA I.

CONCLUSION: Acute mitral regurgitation requires rapid and adequate assessment of surgical risk with good visualization of mitral valve anatomy. If necessary, TEER is a life-saving treatment with immediate relief of symptoms.

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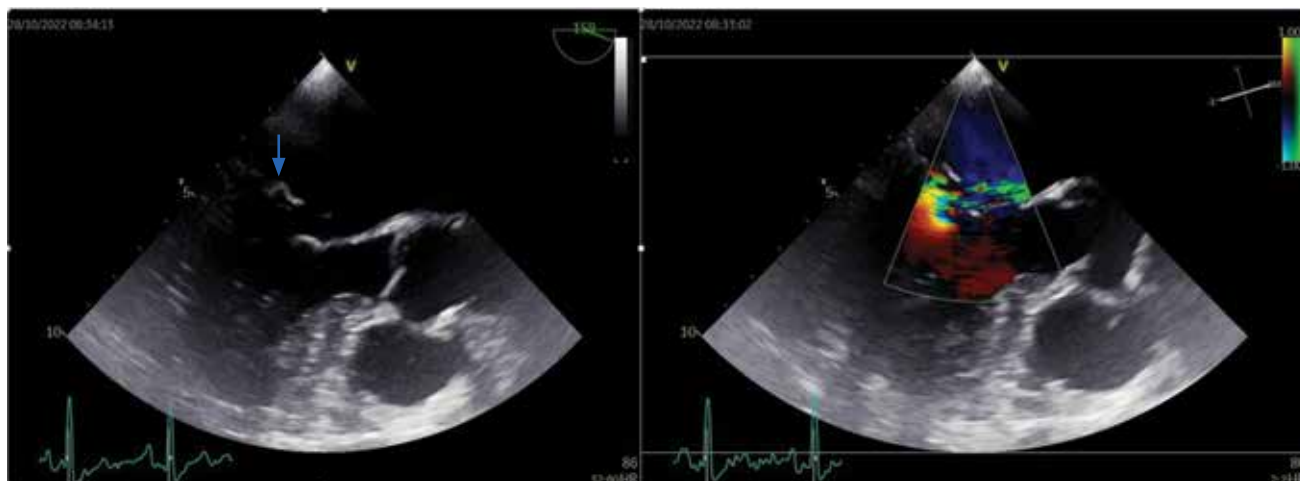


FIGURE 1. Transesophageal echocardiography. Left image: a blue arrow pointing at prolapse and flail posterior mitral valve leaflet. Right image: color Doppler flow over mitral valve with eccentric regurgitant jet toward the septum.



FIGURE 2. Transthoracic echocardiography. Left image 3D-echocardiography, a blue arrow pointing at good position of implanted clips. Right image: three-chamber view, color Doppler flow over mitral valve showing absence of mitral regurgitation.

LITERATURE

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