Dear Editor,

A 77-year-old woman was referred to perform a first and elective transthoracic echocardiography for occasionally detection of centrum cordis systolic murmur. Two hours before the echocardiography, she had suffered a robbery, and sudden palpitations and dyspnea were emerged.

The echocardiography showed mild dilatation of the left ventricle (end-diastolic volume: 141 ml, end-systolic volume: 66 ml), mild reduction of the left ventricular ejection fraction (53%) with apical ballooning [Figure 1a, yellow arrow], degenerative moderate-to-severe mitral regurgitation [Figure 1b], and moderate aortic regurgitation [Figure 1c]. Sinus rhythm with weak negative T-waves in inferior and V3-V6 leads was observed an ECG, and a moderate troponin elevation was detected (HS-Troponin T 48 ng/l–n. v. <14 ng/L). Coronary angiography did not reveal coronary stenosis/occlusion [Figure 1d and e]. In few days, the wall motion abnormality was resolved in the absence of edema and/or late gadolinium enhancement in the cardiac magnetic resonance imaging [Figure 1f and g] with no change in mitral/aortic regurgitation [Figure 1h and i] [Video 1].

Subsequently, after 2 months, because of recurrent episodes of pulmonary edema, despite the aggressive medical

**Figure 1:** (a) Left ventricular apical hypokinesia (yellow arrow). (b) Moderate-to-severe mitral regurgitation at color Doppler. (c) Moderate aortic regurgitation at color Doppler. (d) Angiography of left coronary artery without coronary stenosis/occlusion. (e) Angiography of right coronary artery without coronary stenosis/occlusion. (f) Mitral and aortic regurgitation at cine magnetic resonance imaging. (g) Recovery in left ventricular contractility. (h) Persistence of mitral regurgitation at color Doppler after recovery of left ventricular contractility. (i) Persistence of aortic regurgitation at color Doppler after recovery of left ventricular contractility. (j) Severe left ventricular systolic dysfunction after valve replacement surgery. (k) Normally functioning mitral valve prosthesis. (l) Intracavitary defibrillator implantation in the presence of aortic and mitral prosthetic valves
treatment with β-blockers, angiotensin-converting enzyme inhibitors, and diuretics, the patient was scheduled for aortic and mitral valve replacement with biological prostheses. In early postoperative period, despite the normally functioning valvular prosthesis [Figure 1k], the patient developed severe global left ventricular systolic dysfunction [Figure 1j] too severe to be explained only by preload and afterload changes after valvular replacement. After 3 months of optimal medical therapy, there was no improvement in left ventricular function (ejection fraction: 20%, end-diastolic volume: 154 ml, end-systolic volume: 123 ml); therefore, an Implantable cardiac defibrillator was implanted for the primary prevention of sudden cardiac death [Figure 11].

Takotsubo cardiomyopathy, which derives its name from the Japanese word Takotsubo (“octopus pot”), is characterized by transient left ventricular dysfunction with a variety of wall-motion abnormalities. It predominantly affects elderly women and is often preceded by an emotional or physical trigger (as robbery).[11] In the acute phase, the clinical presentation, electrocardiographic findings, and biomarker profiles are often similar to those of an acute coronary syndrome. In long-term follow-up, a recurrent Takotsubo syndrome is possible and could impair the patient’s prognosis.[1,2] Data on recurrence of Takotsubo syndrome are limited: 5-year recurrence rates of 5%–22% have been reported, with the second episode occurring 3 months to 10 years after the first episode and also were reported recurrence of Takotsubo syndrome with a different anatomical variant.[2-4] In our case, the patient with Takotsubo cardiomyopathy and heart failure due to degenerative mitral and aortic regurgitation underwent the valve replacement surgery with early recurrence of left ventricular systolic dysfunction. Thus, Takotsubo cardiomyopathy may be considered as a risk factor of the postoperative left ventricular dysfunction triggered by surgical/anesthetic procedure.[5]

Despite that to our best knowledge, this is the first case of heart failure due to Takotsubo cardiomyopathy in a patient with mitral and aortic regurgitation and an early recurrence of left ventricular systolic dysfunction after valve replacement surgery.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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