

# Takotsubo syndrome after pericardial tamponade following cryoballoon ablation of pulmonary veins for paroxysmal atrial fibrillation and complicated by right coronary artery thrombosis

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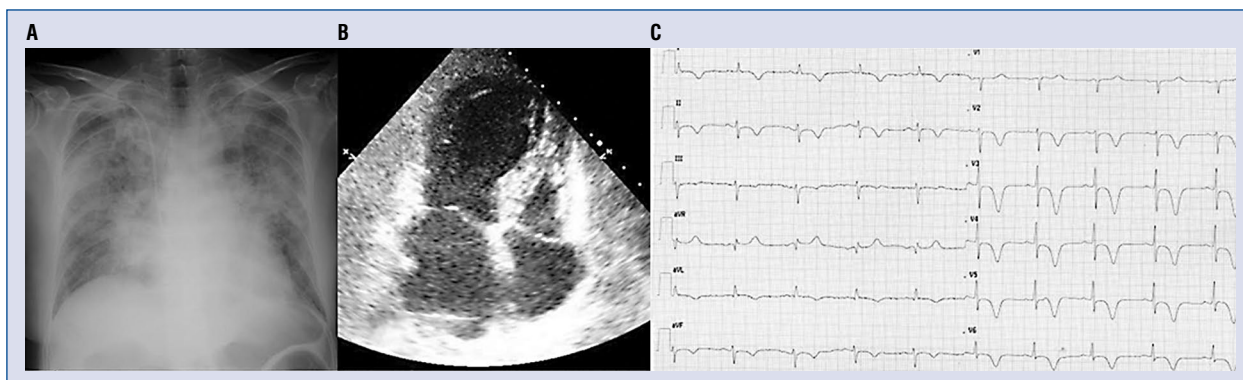
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A 62-year-old female was referred to cryoballoon ablation of pulmonary veins due to paroxysmal atrial fibrillation. After the isolation of the left veins, control echocardiography revealed signs of tamponade. After pericardiocentesis, the subsequent echocardiography showed the apical ballooning of left ventricle (LV) with ejection fraction reduced by 17%. Due to the clinical symptoms, increased plasma levels of troponin and B-type natriuretic peptide, pulmonary edema in X-ray (Fig. 1A), abnormal echocardiography (Fig. 2B), and electrocardiogram (Fig. 1C), the subsequent treatment for acute heart failure was immediately implemented. The next day after the procedure the patient underwent coronary angiography that revealed eccentric thrombus of dominant right coronary artery (RCA), sealed by same-session-stent implantation. Control-echocardiography showed a total recovery of LV function, with no persistent wall-motion abnormalities, making the final diagnosis of takotsubo syndrome (TTS).

Takotsubo (stress-) syndrome (TTS) is a clinical syndrome characterized by transient ventricular LV-wall-motion abnormalities, which extend beyond a single coronary vascular bed. The syndrome occurs following the emotional or physical stress events and its etiology is still poorly understood. TTS after ablation of pulmonary veins is a very rare condition. Hereby, we present the first case of TTS after pericardial tamponade following the cryoballoon ablation of pulmonary veins. Severe emotional stress related to the procedure and its complications, catecholamine infusion, were the main factors responsible for the syndrome in this particular case. RCA thrombus may occur as a result of hypotension, the hypercoagulative effect of the drugs, or increased pressure in the pericardium. The diagnosis of TTS may be difficult upon presentation. In this particular case, the area of LV dysfunction was clearly beyond the RCA supply area that led to the final diagnosis of TTS.

**Conflict of interest:** None declared



**Figure 1.** A. Chest X ray — pulmonary edema; B. Echocardiography examination; C. Electrocardiogram abnormalities: negative T waves in leads I, II, aVL, aVF, V2–V6, and QTc prolongation.

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