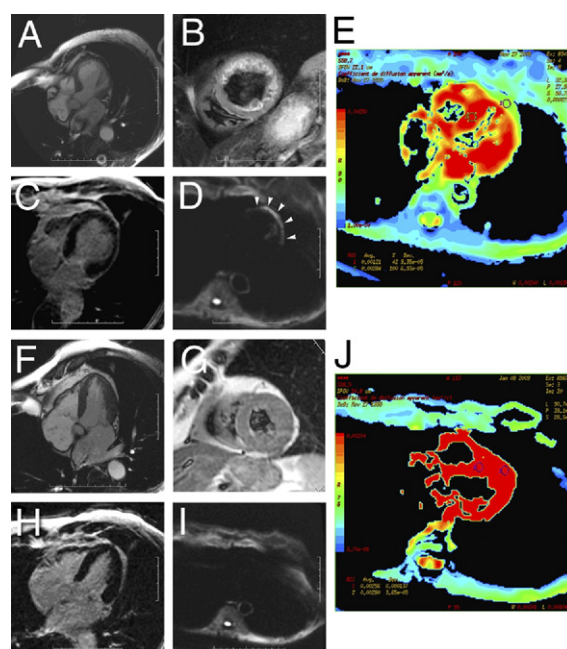


## IMAGES IN CARDIOLOGY

# Reversible Magnetic Resonance Diffusion-Weighted Abnormalities in Takotsubo Cardiomyopathy

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**A** 73-year-old woman presented to the cardiology department with new-onset chest pain after a suffocating cough. Cardiovascular examination, electrocardiogram, and chest X-ray were normal. Troponin was increased to  $2.55 \mu\text{g/l}$ . Echocardiography revealed isolated medioventricular akinesia with impaired left ventricular ejection fraction (LVEF) (40%). Coronary angiography revealed no significant lesion. Cardiac magnetic resonance imaging showed akinesia in the mid and apical segments of the left ventricle (LVEF 35%) (**A**, [Online Video 1](#)) with T2-weighted hypersignal (**B**). First-pass perfusion and delayed-enhancement sequences were normal (**C**). Electrocardiography-gated, breath-hold single-shot echo-planar diffusion-weighted magnetic resonance images obtained with a b-value of  $300 \text{ s/mm}^2$  in the axial plane revealed a hyperintense area in the akinetic segments with a decreased apparent diffusion coefficient (**D**, **E**). Because this sequence is dedicated to the assessment of water motion within tissues, these findings were considered to be edema without necrosis or fibrosis. Six weeks later, repeat magnetic resonance imaging showed a complete normalization of left ventricular contractility (LVEF 69%) (**F**, [Online Video 2](#)), the disappearance of initial T2-weighted hypersignal (**G**), persistent absence of late enhancement (**H**), and no residual lesions on diffusion-weighted imaging with apparent diffusion coefficient normalization (**I**, **J**). The diagnosis of Takotsubo cardiomyopathy was retained, according to the Mayo Clinic diagnostic criteria.