

Image in Medicine

A CASE OF TAKOTSUBO SYNDROME

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Takotsubo syndrome, first reported by Satoh et al in 1990, is a reversible cardiomyopathy frequently precipitated by a stressful event with a clinical presentation that mimics an acute coronary syndrome (1). The syndrome was initially reported in the Japanese literature but in recent years it has also been reported in North American and European populations (2).

The clinical presentation is similar to that of acute myocardial infarction in the absence of any obstructive epicardial coronary artery lesion. This type of left ventricular dysfunction is characterized by preserved basal function, moderate-to-severe dysfunction in the mid-ventricle, and apical akinesis (3).

We report a case of that syndrome presented to our emergency department in July 2007 with a history of central chest pain after a stressful event.

The patient was a 66-year-old-woman with a family history of cardiovascular disease. Remote pathological anamnesis highlighted a history of depression-anxiety syndrome, gastro-oesophageal reflux disease and dyspeptic disorders.

She was referred to our emergency department on July 2007, 2 hours and 30 minutes after the onset of chest pain. The patient underwent two stressful events (2 family members of the patient had passed away recently).

At admission blood pressure was 110/60 mmHg, ECG revealed sinus rhythm, ST elevation of approximately 2 mm from V4 to V6 and the second ECG showed T wave inversion and QTc at the upper limits of reference, myocardial necrosis markers were elevated (peak serum mass CK-MB was 4,35 ng/mL, and the peak level of troponin T was 4,35 ng/mL).

Transthoracic echocardiography revealed akinesis of the apex and distal segment of the left anterior wall, preserved systolic function with ejection fraction of 65%, normal diameters and parietal thickness.

Emergency cardiac catheterization was performed and showed normal coronary arteries; left ventriculography revealed apical dyskinesia (Figure 1).

4 days later a cardio-MRI was performed. It revealed apex dyskinesia and hypokinesia of the distal segments of the anterior, inferior and lateral wall and ipokinesia of the inter-ventricular septum in the distal segment. After gadolinium-DTPA injection, no late hyperenhancement was observed (Figure 2). On discharge she remained asymptomatic. She was dismissed on medical therapy with ramipril, ASA, spironolactone, omeprazol.

Serial ECGs and echocardiograms performed after discharge showed that the ECG and left ventricular contraction gradually returned to normal over a 12-week period.

Follow-up MRI was performed after 3 months. It revealed no ventricular wall motion abnormalities, no myocardial perfusion defects or late hyperenhancement.

Takotsubo cardiomyopathy is an increasingly recognized diagnosis. Its clinical presentation mimics the presentation of acute ST elevation myocardial infarction without concomitant epicardial coronary artery disease. Despite the initial dramatic presentation of this disease the prognosis is quite favourable.

Takotsubo cardiomyopathy could be more common than previously thought and although under-reported it is an important diagnosis to make, with an excellent prognosis.

REFERENCES

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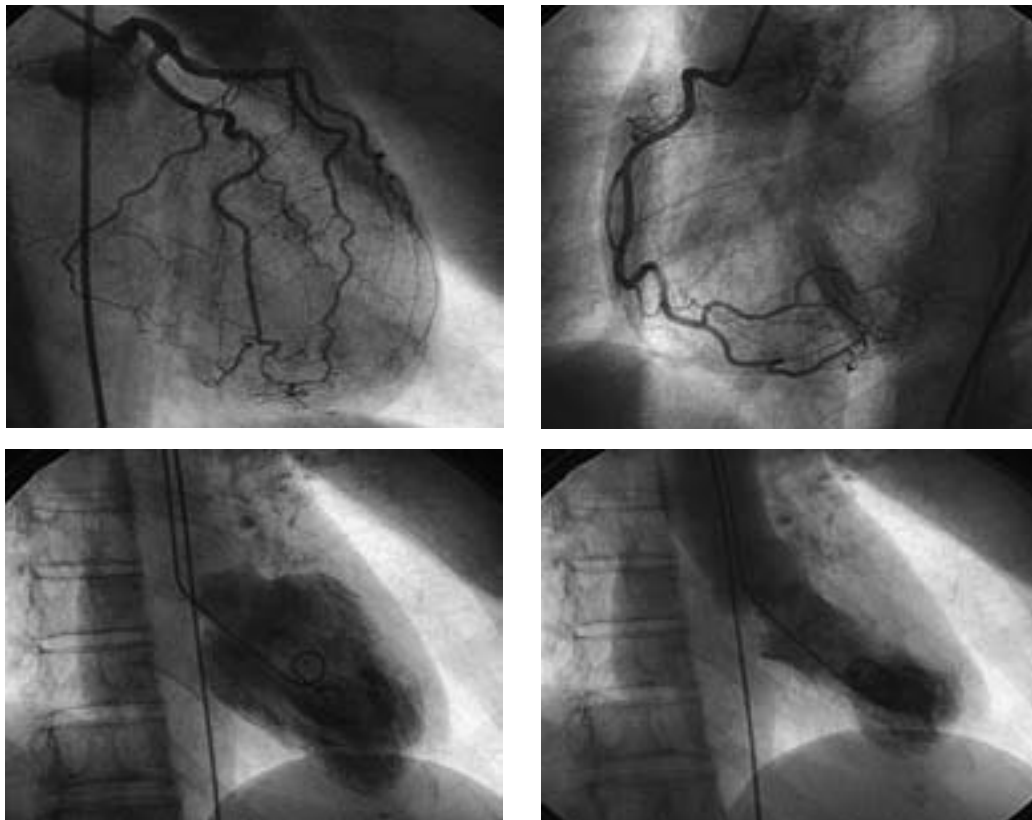


Figure 1: Diagnostic coronary angiography demonstrating normal epicardial coronary arteries (A), left ventriculography revealed apical dyskinesia (B).

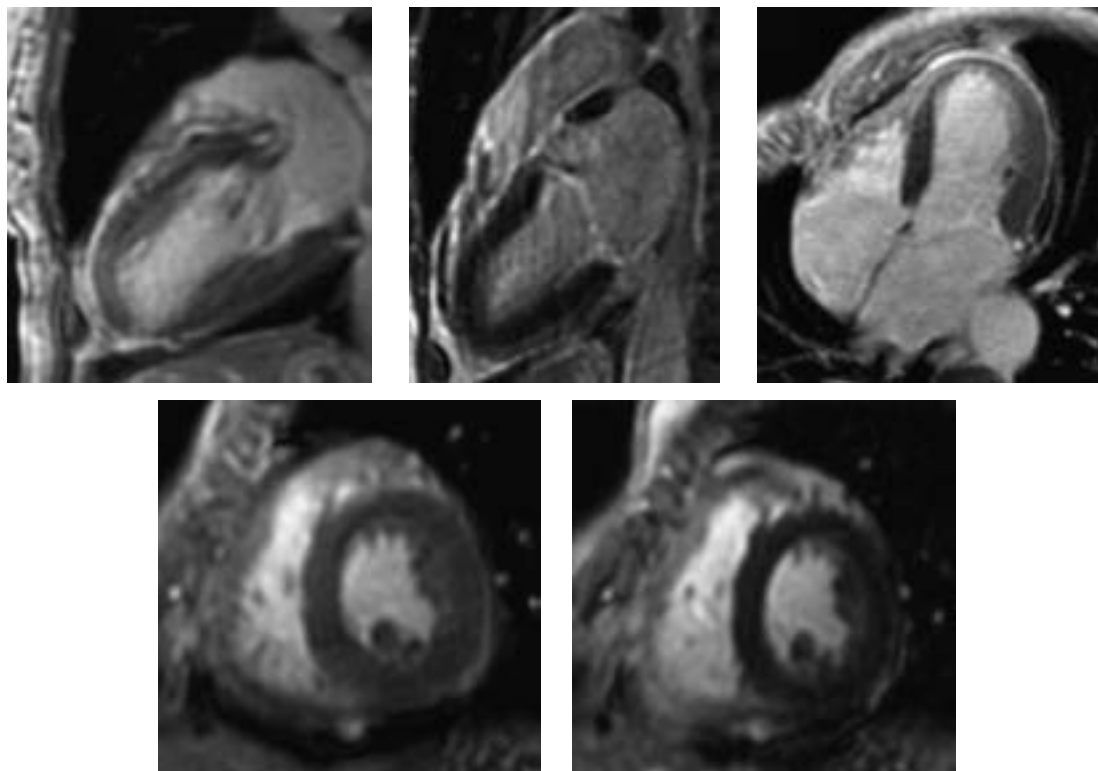


Figure 2: Cardio-MRI revealed apex dyskinesia and hypokinesia of the distal segments of the anterior, inferior and lateral wall and hypokinesia of the interventricular septum in the distal segment. After gadolinium-DTPA injection, no late hyperenhancement was observed.