

**Apical Balloon Syndrome (TAKO TSUBO STRESS  
CARDIOMYOPATHY) or Aborted Myocardial  
Infarction**

The Editor,

Sir,

A 44-year old man was admitted to a private hospital in October 2008 with classical cardiac chest pain and a diagnosis of Apical Balloon Syndrome (TAKO TSUBO (STRESS CARDIOMYOPATHY) was made as final diagnosis. His echocardiogram showed apical hypokinesia with estimated ejection fraction 55–60% and cardiac output of 4.1L. He had a past history of cigarette smoking for 15 years, smoking 10 cigarettes per day for five years, then 20 per day for 10 years but stopped five years previous to his admission. He was diabetic and was controlled with metformin 500 mg three times daily. He had a stressful occupation. His chest pain was over three hours waxing and waning with no radiation, sweating or shortness of breath. His electrocardiogram (ECG) showed sinus rhythm with ventricular rate 78 per minute with intraventricular conduction defect and ST segment elevation or early repolarization in I and AVL.

He was diagnosed as atypical chest pain or acute coronary syndrome (ACS) and treated with clexane, aspirin, rosuvastatin, Tagamet, Carvedilol, insulin glyceryl trinitrate (GTN) patch, folic acid and aldactone, but his echocardiogram then showed hypokinesia of the apical septum; CPK and CKMB were grossly elevated *ie* 4280 and 126 respectfully, and ejection fraction was 55–60%. He was still within the 12-hour window and as such was metalysed (tenecteplase – 50 mg intravenously stat).

Within the next few days, his enzymes improved but troponin was negative; catecholamines were done several days later and were found to be within normal limits. Eventually, he had a stress ECG which was negative, a coronary angiogram showed normal coronary arteries with ejection fraction of 65%. He was diagnosed with Apical Balloon Syndrome (TAKO TSUBO (STRESS) CARDIOMYOPATHY). He was deemed cured and the prognosis considered excellent.

However, using enhanced magnetic resonance (MR) recently, Eitel *et al* found acute coronary syndrome with normal coronary arteries in 59 cases and features of apical balloon syndrome with oedema which is not necessarily diagnostic of Apical Balloon syndrome but could be seen in aborted myocardial infarction and myocarditis (1). Also cardiovascular magnetic resonance (CMR) would have been able to differentiate between oedema only and absence of irreversible injury in ABS, but an aborted MI could only be diagnosed with intravascular ultrasound of the Left Anterior Descending (LAD) coronary artery showing occult atherosclerotic plaques. Further to confuse the clinical

scenario, new patterns of ABS (TTC) are being seen which involve the mid and basal septum of the heart rather than the original description of the apex of the left ventricle. Also the condition is being seen in younger age groups and males rather than the classical description of the middle aged to older women.

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**REFERENCES:**

1. European Heart Journal Vol 30; 5: 2009.