

TAKO-TSUBO CARDIOMYOPATHY IN PATIENTS ADMITTED FOR PRIMARY PERCUTANEOUS CORONARY INTERVENTION IN A HIGH VOLUME UK CENTRE

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Introduction Tako-tsubo cardiomyopathy (TCM) is increasingly being recognised in patients admitted with suspected acute coronary syndrome, as access to angiography and echocardiography are much quicker than before. Typically, patients with TCM present to the primary PCI service (PPCI) with chest pain and ST elevation on their electrocardiogram mimicking ST elevation myocardial infarction (STEMI). However, there is no 'real-world' data about the prevalence of this condition in PPCI admissions for suspected STEMI. Therefore we aimed to analyse the prevalence of TCM in a high volume regional PPCI service in UK.

Methods All patients admitted with suspected STEMI between Sept 2009 and Nov 2011 to our centre were included. After excluding those who underwent PPCI, We analysed the echocardiogram and/or left ventriculogram of those patients who did not undergo PPCI to identify patients with typical TCM features of apical akinesia with basal hyperkinesia. Their coronary angiograms were reviewed and the inclusion criteria to identify TCM was the absence of significant coronary disease with no artery having >50% stenosis.

Results Of the 1875 patients admitted, 17 (0.9%) patients (0 m, 17 f) with the mean age of 70 ± 10.7 years (range 56–94 years) were identified to have typical TCM features. The prevalence of TCM in female PPCI admission was 3.1% (17/560) (figure 1). The admission ECG showed ST elevation in 14 patients (82%) and three had LBBB (18%). In those who had positive hsTroponin (n=16, 94.1%), the mean level was 921 ± 668 (median 778, range 110–2550). Two

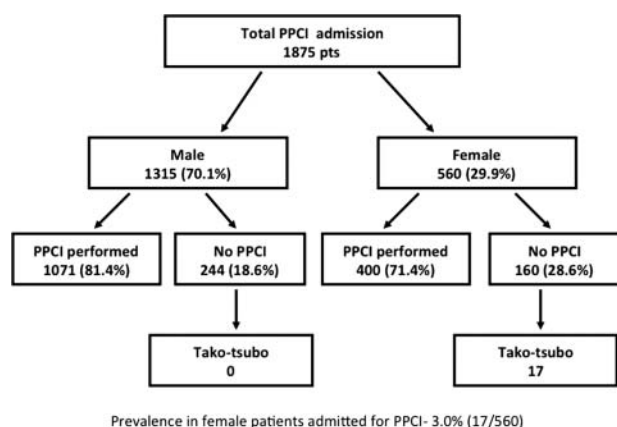


Figure 1 Flow chart to identify Tako-tsubo Cardiomyopathy patients in our study.

Table 1 Echocardiographic features of TCM patients in our study (n=17)

Severely impaired LV function	2 (11.8%)
Moderately impaired LV	15 (88.2%)
RV impairment	2 (11.8%)
Mitral regurgitation (MR)- None	13 (76.5%)
MR (mild)	3 (17.6%)
MR (moderate)	1 (5.9%)
LVOT peak velocity: <1 m/s	6 (35.3%)
LVOT peak velocity: >1 m/s	9 (52.9%)
LVOT peak velocity: >2 m/s	2 (11.8%)
Apical Thrombus	1 (5.9%)

patients had cardiac arrest prior to hospital admission with successful resuscitation. Left ventricular function was severely impaired ($EF \leq 30\%$) in 2 patients whilst all others had moderately impaired LV function ($EF 31-50\%$) (table 1). Aspirin, β -blocker, Angiotensin converter enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) was given to 13 (76.5%), 13 (76.5%) and 15 (88.2%) patients respectively on their discharge. All the 15 patients who had repeat echocardiogram within 3 months of their index admission showed complete recovery of their LV function. During a mean follow up period of 22 ± 7 months (median 21, range 8–36 months), there was no mortality.

Conclusions This first ‘real-world’ observational study of TCM in STEMI patients admitted for PPCI to a single centre showed an overall prevalence of 0.9% with 3% prevalence in female population. Although TCM is not benign during the acute episode, there is an excellent survival outcome if managed appropriately during the acute phase.