

ECG FEATURES OF TAKOTSUBO CARDIOMYOPATHY IN PAKISTANI PATIENTS

Syed Waqar Ahmed¹, Fateh Ali Tipoo²

<https://doi.org/10.47144/phj.v53i1.1920>

1. Resident, Section of Cardiology, Department of Medicine, Aga Khan University Hospital, Karachi

2. Associate Professor, Section of Cardiology, Department of Medicine, Aga Khan University Hospital, Karachi

Address for Correspondence:

Syed Waqar Ahmed
Resident, Section of Cardiology, Department of Medicine, Aga Khan University Hospital, Karachi
Emails: syed.waqar@aku.edu

All authors declare no conflict of interest.

This article may be cited as:
Tipoo FA, Ahmed SW. ECG features of Takotsubo Cardiomyopathy in Pakistani Patients. Pak Heart J 2020;53(01):101-101.

ABSTRACT

Objectives: Takotsubo cardiomyopathy (TC) is a distinct clinical disease that mimics the clinical and ECG features of ST elevation Myocardial Infarction (STEMI). Differentiating between TC and STEMI is essential since they have different treatment strategies and prognosis, especially in the acute phase. Since ECG is the first investigation for a patient with clinical features of STEMI, recognizing ECG features of TC early on is invaluable. There is a dearth of literature from the South Asian population describing ECG features of TC. Hence we investigated the different ECG features of TC in comparison to ECG features of anterior STEMI in a cohort of Pakistani population.

Methodology: A retrospective analysis of first presentation ECG's of 32 TC patients admitted in AKUH from January 2010 to December 2019 was done. TC was diagnosed using the Mayo clinic diagnostic criteria. Major exclusion criteria were patients with ECG features of left or right bundle branch block and left ventricular hypertrophy were excluded. Similar number of acute anterior STEMI patients (coronary angiogram proven) was identified and first presentation ECG features evaluated. 6 different ECG criteria to differentiate between TC and acute anterior STEMI were examined for diagnostic accuracy.

Results: Patients with TC were younger and 81% of the patients were females. 50% of the TC patients had precordial ST elevation >1.5mm. Reciprocal ECG changes were significantly lesser in the TC patients. The QTc interval was prolonged (>440msec) in 62.5% of the TC patients (20 patients) with a mean QTc of 456 +/- 48 msec. Q waves were seen lesser in TC patients (15.6 % vs 43.4%). All the ECG criteria examined for diagnostic accuracy for differentiating between TC and anterior STEMI had low sensitivity and high specificity. The highest sensitivity was 66 % for the criteria STe V2<1.75 mm and STe V3<2.5 mm in our population.

Conclusion: This study demonstrates that published ECG criteria to distinguish TC from acute, anterior STEMI in Pakistani patients have a low diagnostic accuracy. Our study also shows that ECG of TC patients have lesser reciprocal ECG changes & Q waves, and longer QTc intervals. Novel ECG criteria amalgamating these findings can be developed to improve the accuracy of ECG diagnosis of TC.

Keywords: Takotsubo Cardiomyopathy, Stress Cardiomyopathy, Electrocardiography, Cardiology