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Prevalence, management and outcome of life-threatening arrhythmias in Takotsubo Syndrome:

Authors:
I El-Battrawy¹, F Santoro², T Stermaier³, F Guastafierro², G Novo⁴, S Novo⁴, A Santangelo⁴, E Mariano⁴, F Romeo⁵, FA Romeo⁵, A Capucci⁶, I Giannini⁶, ND Brunetti², I Akin¹, I Eitel³, I Akin¹, ¹University Medical Centre of Mannheim - Mannheim - Germany, ²University of Foggia - Foggia - Italy, ³Medical University - Lübeck - Germany, ⁴University of Palermo - Palermo - Italy, ⁵University of Rome Tor Vergata - Rome - Italy, ⁶Marche Polytechnic University of Ancona - Ancona - Italy,

Topic(s):
Arrhythmias, General – Epidemiology, Prognosis, Outcome

Citation:

Background:
Recent studies have highlighted that takotsubo syndrome (TTS) is associated with a poor prognosis. One important complication related to TTS is life-threatening arrhythmia (LTA). Our study was conducted to determine the incidence and management of LTA in TTS and its long-term prognostic impact.

Material and Methods: We analyzed 906 TTS patients from 9 European centers being part of the international, multicenter GErman Italian STress cardiomyopathy (GEIST) registry. Patients were divided into the LTA group (encompassing ventricular tachycardia, ventricular fibrillation, torsade de pointes, asystole as well as complete atrioventricular block) and non-LTA group.

Methods and results: In our study cohort we identified 67 (7.4%) TTS patients with presence of LTA. All patients were followed-up over a period of 2.8 years. In the LTA group 18% of patients presented LTA prior hospital admission. Whereas, asystole and/or AV-Block were significantly more presented pre-hospital (66% versus 23.6%; p<0.01), ventricular tachyarrhythmias were more presented in-hospital (76.3% versus 33.3%; p<0.01). LTA patients suffered more frequently from cardiogenic shock (31% versus 7.6%, p<0.01) and in-hospital death (10.9% versus 3.6%; p<0.01). Furthermore, the long-term survival was significantly impaired in LTA patients as compared to non-LTA patients; (log-rank <0.01). Using multivariate Cox-regression analysis only corrected QT interval on admission (HR 1.00, 95% CI 0.9-1.0; p=0.04) and cardiogenic shock (HR 2.19, 95% CI 1.0-4.6; p<0.04) were identified as independent predictors of LTA.

Conclusion: The short- and long-term mortality rate of TTS patients presenting with LTA was significantly higher than in TTS patients presenting without LTAs. Therefore TTS patients with presence of LTAs should be carefully monitored during hospital stay and the presence of LTA could be used for optimized risk stratification.