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Heart Failure and Cardiomyopathies

AN ANALYSIS OF CARDIOGENIC SHOCK & CARDIAC ARREST IN APICAL BALLOONING SYNDROME (TAKOTSUBO/ STRESS CARDIOMYOPATHY): EVALUATING CLINICAL CHARACTERISTICS AND OUTCOMES

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Heart Failure and Cardiomyopathies: Diagnostic, Prognostic and Therapeutic Strategies in Cardiomyopathies
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Background: Apical Ballooning Syndrome (ABS) is a transient cardiomyopathy that has usually has a benign clinical course. However, a proportion of cases go on to develop fulminant cardiogenic shock or arrest. We sought to compare ABS patients with and without cardiogenic shock or arrest in order to determine differences in clinical characteristics and outcomes.

Methods: We retrospectively evaluated the electronic records of 219 patients who met diagnostic criteria for ABS. Twenty-four were clinically diagnosed with cardiogenic shock and two experienced cardiac arrest.

Results: Approximately 12% of patients developed cardiogenic shock or arrest. The proportion of males (16.7%) and females (11.3%) was not significantly different (p=0.44). Baseline characteristics (age, hypertension, hyperlipidemia, diabetes, and history of smoking) were similar between those who developed shock and those who did not. Higher peak troponin levels (12.87±27.4 vs. 5.32±8.06; P=0.0062) were associated with those who went into shock. Baseline ST-elevation was not statistically significant in those who were clinically diagnosed with shock as compared to those who did not (p=0.19). Those with shock had initially lower ejection fraction (~30%) as compared to those who did not go into shock (~40%) (p=0.007) and required intra-aortic balloon counter-pulsation (p<0.001) and mechanical ventilation (p<0.001). Kaplan-Maier survival analysis demonstrated that patients who were clinically diagnosed with shock were more likely to exhibit a higher all-cause mortality in spite of recovery of ejection fraction (p=0.011).

Conclusions: Cardiogenic shock complicates a significant proportion of Takotsubo's cardiomyopathy. Patients with shock exhibit higher peak troponins, lower ejection fractions, and require mechanical cardiac and respiratory support. Importantly, although recovery of cardiac function does occur in these patients, they continue to exhibit greater all-cause mortality as compared to those who do not. Takotsubo's patients who are diagnosed with cardiogenic shock should have close follow-up in order to monitor for clinically relevant events related to the patient's overall mortality.