**ELECTROCARDIOGRAPHIC FINDINGS AMONG PATIENTS PRESENTING WITH CARDIAC ARREST AND NEUROLOGICAL EVENTS TREATED WITH HYPOTHERMIA**

**M. Mohammadi**, G. Baquero, J. Logue, S. Ettinger, J. Banchs

Penn State Hershey Medical Center, Hershey, PA, USA

Background: The electrocardiogram (ECG) is an essential instrument for the detection and diagnosis of cardiac and non-cardiac conditions. Clinical predictors of survival in patients receiving therapeutic hypothermia (TH) after presenting with cardiac arrest (CA) have been studied published. To our knowledge, there are no reports of electrocardiographic parameters predicting survival in this patient population. Patient and results: We studied 175 patients (age 60±17; 65 women) that presented with CA, cerebrovascular events (CVE) and received TH. Seventeen (9.7%) patients presented with CVE, 139(79.4%) with CA and 19(10.8%) had other diagnoses. Seventy-eight (44%) patients survived and 97(56%) expired. Within the survivors group, 13 presented with CVE and 52 with CA, which included pulseless electrical activity (PEA) in 14(17.9%), VT/VF in 35 (44.9%) and asystole in 3 (3.8%) patients. Among the patients that expired, 4 presented with CVE and 125 with CA, including 42 (43.8%) patients with PEA, 24 (25%) with VT/VF and 21(22%) with asystole.

We found a statistically significant association between PEA and mortality

(Pearson’s chi-square=13.1; degrees of freedom=1;probability=0.000). Amongst admission and follow up ECGs parameters, QT prolongation was found in 14 and 12 patients respectively within the survivors group and in 10 and 25 correspondingly in patients that expired, indicating that QT prolongation during hospital follow up and mortality were associated with statistical significance (Pearson’s chi-square=7.63;degrees of freedom=1;probability=0.006).

Conclusions: Patients presenting with PEA along with prolongation of QT during serial ECGs in patients presenting with CA and receiving TH are associated with increased mortality. Among patients receiving TH, those presenting with CVE have better survival.