



PREVALENCE AND PROGNOSTIC SIGNIFICANCE OF CARDIAC TROPONIN-T ELEVATION IN PATIENTS ADMITTED WITH HYPERTENSIVE CRISES

Poster Contributions

Poster Hall, Hall C

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Background: Hypertension is one of the most common chronic conditions in the world. Hypertensive crises (HC) are frequently associated with the release of cardiac troponin T (cTnT). However, limited data is available on the clinical significance of cTnT in patients with HC. We sought to study the prognostic value of elevated cTnT in patients admitted with HC.

Methods: This is a retrospective study of patients with HC admitted to a tertiary care medical center between 1/1/2005 – 1/1/2012. We included patients admitted with HC defined as systolic blood pressure >180mmHg or diastolic >120mmHg. cTnT positive status was dichotomized on a level of ≥ 0.1 ng/mL. Patients were excluded if they had end stage renal disease, acute coronary syndrome, or cardiac arrest. Data on demographics and clinical variables were collected through chart review. Continuous and categorical data were presented using means and frequencies, respectively. Chi square and student t-test were used when appropriate. Uni- and multivariable logistic regression models adjusted for age, gender, race, and admission to an intensive care unit were used to determine the predictors of survival in patients admitted with HC with elevated troponin.

Results: There were 457 patients in this study. Mean age was 61 ± 16 years. 56% of patients were female, 51% African American, and 31% Hispanic. During a median follow-up of 180 ± 30 days, there were 34 patients (7%) with an elevated cTnT. Mortality at 6 months and 1 year were 27% and 32% in the elevated troponin group vs 5% and 8% in the normal troponin group. When compared to patients with normal cTnT levels, patients presenting with HC and elevated cTnT have higher odds of mortality at 6 months (Odds Ratio (OR); 6.4, Confidence Interval (CI): 2.1 – 19.2) and at 1 year (OR; 3.7, CI: 1.4 – 9.8). Age (OR; 1.08, CI: 1.05 - 1.11), African American race (OR 3.34, CI: 1.1 - 9.9) and admission to intensive care unit (OR; 11.2, CI: 4.4 - 28.3) were other significant predictors of mortality.

Conclusions: The prevalence of elevated cTnT in patients with HC is low. However, when troponin is elevated in patients with HC, it is an independent predictor of mortality. Further studies are warranted to establish this association.