ACC.14
TCT@ACC-i2 | innovation in intervention

A736
JACC April 1, 2014
Volume 63, Issue 12

Heart Failure and Cardiomyopathies

PROGNOSTIC VALUE OF CARDIAC TROPONIN T MEASURED BY A HIGHLY SENSITIVE ASSAY IN STABLE PATIENTS WITH HEART FAILURE AND OTHERWISE NORMAL STANDARD CARDIAC TROPONIN I LEVEL

Oral Contributions
Room 204 B
Saturday, March 29, 2014, 8:30 a.m.-8:45 a.m.

Session Title: Prognostic and Diagnostic Role of Biomarkers in Heart Failure
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
Presentation Number: 904-05

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Background: Cardiac Troponin (cTn) levels offer prognostic information for patients with heart failure. The prognostic utility of detectable high sensitivity cTn in patients with heart failure in the setting of a standard cTn assay lower than 99th percentile has not been described.

Methods: High sensitivity cTn T (hs-cTnT) levels were measured in 232 sequential stable patients, with a heart failure history undergoing elective coronary angiography without acute coronary syndrome (cTnI, Abbott <0.3 ng/mL), with 5-year follow-up of all-cause mortality. Aminoterminal pro B-type natriuretic peptide (NT-proBNP, Roche) and hs-cTnT (Roche 5th gen) were measured.

Results: In the cohort (mean age 68±11 years, 63% male, 34% diabetic, median NT-proBNP 1,144 pg/mL, median GFR 77.8 mL/min) the median hs-cTnT level was 20.1 ng/L [IQR 12.1, 20.5] and 76 subjects died by 5-years. Higher hs-cTnT provided independent prediction of a 2.6-fold increase in 5-year mortality (hs-cTnT < 20.1 ng/mL versus ≥ 20.1 ng/L: Hazard ratio [95% confidence interval] 2.59 [1.62-4.28], p<.0001, Figure). After adjusting for NT-proBNP and GFR, higher hs-cTnT still predicted a 2.0-fold increase in mortality (1.99 [1.19-3.40], p=0.008).

Conclusions: Higher levels of hs-cTnT in a subset of stable heart failure patients with normal cTnI provided independent prognostic value for mortality prediction. These findings support the hypothesis that detectable hs-cTnT may identify high-risk patients with heart failure.