



## Prevention

### THE INTEGRATED AND SUPERIMPOSED PROGNOSTIC VALUES OF N-TERMINAL PRO B-TYPE NATRIURETIC PEPTIDE FOR ALL CAUSE DEATH IN CHINESE ELDERLY PATIENTS WITH CORONARY ARTERY DISEASE

ACC Moderated Poster Contributions  
McCormick Place South, Hall A  
Sunday, March 25, 2012, 9:30 a.m.-10:30 a.m.

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Session Title: Prevention: Clinical Current Research on Prediction and Costs  
Abstract Category: 9. Prevention: Clinical  
Presentation Number: 1188-467

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**Background:** Acute coronary syndrome (ACS) and stable coronary artery disease (CAD) constitute a high risk population. N-terminal pro B-type natriuretic peptide (NT-proBNP) has been shown to be associated with mortality of CAD. However, not much information about NT-proBNP in the risk assessment of elderly CAD patients is available. The present study was to estimate the prognostic value of NT-proBNP in the elderly with ACS or stable CAD

**Methods:** The study was consisted of 999 the elderly (over 60 year) with CAD including stable CAD and ACS, a mean follow-up period was 417 days (15 months). All-cause mortality was as the end point

**Results:** In 707 stable CAD patients, 138 died (19.5%), 292 ACS patients, 77 died (26.4%). NT-proBNP (ln) was significantly related to all-cause death in patients with ACS ( $P<0.001$ , OR: 1.760, 95% CI: 1.543-2.007), stable CAD ( $P<0.001$ , OR: 1.739, 95% CI: 1.577-1.917). The independent risk factors of mortality were age, AMI, chronic heart failure (CHF), blood glucose, serum triglyceride and NT-proBNP for ACS, were age, hemoglobin, plasma albumin, neutrophil/ lymphocytes ratio, fibrinogen, ejection fraction, left ventricular mass index, left atrial diameter and NT-proBNP for stable CAD. The addition of NT-proBNP (ln) to GRACE RS (0.835 vs 0.775,  $P=0.001$ ) or EHAS (0.784 vs 0.605,  $P<0.0001$ ) increased significantly the c-statistic, even c-statistic of NT-proBNP (ln) was statistically higher than EHAS (0.783 vs 0.605,  $P<0.0001$ ). The c-statistics of two models in this study were obviously higher than that of GRACE RS (0.862 vs 0.775,  $P=0.0006$ ) or EHAS (0.881 vs 0.605,  $P<0.0001$ ). NT-proBNP was bound up with the GRACE RS ( $r=0.611$ ,  $P<0.001$ ) or EHAS ( $r=0.357$ ,  $P<0.001$ ). NT-proBNP could be identified by CHF, cardiac systolic dysfunction (LVEF<40%), left ventricular hypertrophy, ACS, atrial fibrillation and chronic kidney disease with the c-statistic of 0.758, 0.850, 0.745, 0.577, 0.683, 0.668 and 0.681

**Conclusions:** NT-proBNP, as a integrated and superimposed predictor, had incremental prognostic value beyond GRACE RS and EHAS in Chinese elderly patients with CAD. New models based on NT-proBNP might be helpful in defining risk and guiding therapy to reduce mortality