NT-proBNP IN ACUTE DECOMPENSATED HEART FAILURE: FINDINGS FROM THE ASCEND-HF STUDY

Posters Contributions
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Background: NT-proBNP is validated for diagnosis of acute decompensated heart failure (ADHF). We evaluated NT-proBNP as a marker of prognosis and response to acute therapy in a cohort of ASCEND-HF, a randomised clinical trial of Nesiritide therapy in ADHF.

Methods: NT-proBNP (Vitros, Ortho-clinical Diagnostics) was measured in samples obtained from 795 patients (396 Placebo, 399 Nesiritide) at baseline and 48-72hrs after enrolment. The relationship of log transformed NT-proBNP and its change to clinical outcomes was tested using adjusted Cox regression and Kaplan Meier curve analysis.

Results: NT-proBNP was elevated at baseline, median 5,773 [IQR 2,981-11,579] pg/mL and decreased by 72hrs, but to a lesser extent in Nesiritide than placebo groups (-2018 [IQR -6470, -442] vs -2,559 [-6251, -942]; p<0.001). Above median baseline NT-proBNP independently predicted death/hospitalization at 30days (HR=1.98 CI[1.24-3.15]; p=0.004) or death at 180days (HR= 2.0 CI[1.24-3.22]; p=0.004). Above median NT-proBNP at 72hrs (3052 [1197-6739] pg/mL) predicted death/hospitalization at 30days (HR=1.77 CI[1.08-2.91]; p=0.02) or death at 180days (HR= 3.94, CI[2.12-7.30]; <0.001). Subjects with above median baseline NT-proBNP that did not decrease by 72hrs were at highest risk for death at 180d (Figure).

Conclusions: NT-proBNP levels at baseline and 72hrs are powerful predictors of outcomes at 30 and 180 days. Patients without a significant fall in NT-proBNP levels merit closer surveillance post-discharge.