C-REACTIVE PROTEIN IN ACUTE DECOMPENSATED HEART FAILURE: INSIGHTS FROM ASCEND-HF

Poster Contributions
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Background: Inflammation is associated with progression of heart failure (HF). However, limited data exist on the pattern of high-sensitivity C-reactive protein (hsCRP) levels and its association with outcomes in patients admitted for acute HF.

Methods: In the ASCEND-HF Biomarker substudy, we characterized hsCRP levels and used multivariable models to examine the association of hsCRP levels at baseline, subsequent measurements at 48-72h, and 30 days, with inpatient and 180-day outcomes in acute HF patients.

Results: Median age was 67 years; 70.2% were men; 67.9% were white. Levels of hsCRP remained elevated at 48-72h but declined at 30 days in both treatment arms (Figure A). In multivariable models, baseline hsCRP was not associated with dyspnea relief; in-hospital death or worsening HF (4.7%); 30-day death or HF readmission (12.0%); and 180-day mortality (12.1%), but was associated with prolonged (≥5 days) length of stay (adjusted OR per log 1.19; 95% CI: 1.06-1.33; P<0.01). Patients with increasing hsCRP (delta >0) at 48-72h or 30 days had higher 180-day mortality (Figure B). Higher hsCRP levels at 30 days (4.7 mg/L [1.83, 13.1]) but not 48-72h (11.0 mg/L [4.87, 29.9]) were associated with higher 180-day mortality after adjusting for baseline hsCRP and clinical predictors (adjusted HR per log 1.35, 95% CI: 1.06-1.72; P=0.02 and 1.16, 95% CI: 0.88-1.53; P=0.30, respectively).

Conclusions: Higher hsCRP at 30 days, but not inpatient hsCRP, predicts higher 180-day mortality in patients admitted for acute HF.