

 **CARDIAC ARRHYTHMIAS**

THE VENTRICULAR RATE AT ONSET OF ATRIAL FIBRILLATION PREDICTS HEART FAILURE HOSPITALIZATION AND MORTALITY IN CARDIAC RESYNCHRONIZATION PATIENTS

ACC Poster Contributions
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Background: Atrial fibrillation (AF) is a major source of morbidity and mortality in patients with heart failure (HF) and cardiac resynchronization therapy (CRT). The extent to which the ventricular rate during AF contributes to worsened outcomes in CHF patients (pts) with CRT is unclear.

Methods: CRT subjects in 2 trials, CRT RENEWAL and REFLEx (n = 1698), were analyzed in a post hoc fashion. 1126 pts experienced at least one Atrial Tachycardia Response (ATR) episode (med. follow up: 11.2 mo., med. ATR trigger rate 170 bpm). The ventricular rate at ATR episode onset was averaged for each pt and used as a predictor of a combined HF hospitalization + all-cause mortality endpoint in a Cox model adjusting for covariates and Kaplan Meier analysis.

Results: Pts with ATR episodes with mean ventricular onset rates (VOR) > 110bpm were younger (67.9 vs 69.8yrs, p=0.01) and less likely to have CAD (63% vs 70% p=0.01) than those with VOR ≤ 110 bpm. The two groups did not differ for other variables including NYHA class, time spent in ATR mode switch and % CRT pacing. Pts with mean VOR >110 bpm at ATR mode switch onset were at greater risk of the combined endpoint than pts with rates of ≤110 bpm (HR = 1.35, p=0.03).

Conclusions: An increase in CHF hospitalization and mortality in CRT pts with PAF is predicted by even a modest increased mean ventricular onset rate during PAF. Further investigation is warranted regarding early detection of high VOR via remote monitoring and treatment with rate control to improve outcomes in CRT patients.

