ECHOCARDIOGRAPHIC RESPONSE TO CARDIAC RESYNCHRONIZATION THERAPY IS LESS
PRONOUNCED IN NON LEFT BUNDLE BRANCH BLOCK MORPHOLOGIES EVEN WHEN QRS WIDTH IS
MORE THAN 150 MILLISECONDS

ACC Moderated Poster Contributions
McCormick Place South, Hall A
Monday, March 26, 2012, 11:00 a.m.-Noon

Session Title: Biventricular Pacing: Mechanisms and Insights
Abstract Category: 13. Heart Failure: Therapy
Presentation Number: 1213-70

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Background: Recent trial data suggest that responses to cardiac resynchronization therapy (CRT) differ amongst subgroups. Less wide QRS duration and non-left bundle branch block (non-LBBB) morphologies have been associated with less robust response. However, the prevalence, baseline characteristics, echocardiographic responses, and outcomes of patients (pts) stratified by both QRS morphology and QRS duration in real-world practice are unknown.

Methods: We analyzed data of consecutive pts that received CRT in a single center between 12/2003 and 07/2007. Pts were divided in 4 subgroups after excluding paced subjects: A) LBBB and QRS ≥ 150 msec; B) LBBB and QRS 120-150 msec; C) Non-LBBB (right bundle or non-specific conduction delay) and QRS ≥ 150 msec; D) Non-LBBB and QRS 120-150 msec.

Results: Out of 812 pts, 31% were in group A, 12% in group B, 13% in group C and 15% in group D. Echocardiographic response (LVEF) to CRT was best in group A (+12 ±12%), then group B (+8 ±10%), group C (+5 ±9%) and group D (+3 ±11%) (p < 0.0001). Survival free from death or transplant was significantly better in group A (p=0.01) (Figure). However, the difference disappeared after adjusting for age, sex and cardiomyopathy type (p=0.14).

Conclusion: In our large, single center series of pts undergoing CRT, pts with LBBB and QRS 120-150msec experienced less echocardiographic response to CRT than LBBB with QRS >150msec, but better than those with non-LBBB even with QRS >150msec. Overall survival is better in pts with LBBB and QRS ≥ 150 msec subgroup.