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USE AND COMPARATIVE EFFECTIVENESS OF CARDIAC RESYNCHRONIZATION THERAPY AMONG PATIENTS WITH HEART FAILURE AND ATRIAL FIBRILLATION: DATA FROM THE NCDR® REGISTRY

Poster Contributions

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Saturday, March 29, 2014, 10:00 a.m.-10:45 a.m.

Session Title: Device Therapies in Heart Failure and Cardiomyopathies

Abstract Category: 8. Arrhythmias and Clinical EP: Devices

Presentation Number: 1108-105

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Background: Atrial fibrillation (AF) is common in patients with heart failure, but the effectiveness of CRT-D compared with ICD in patients with heart failure and AF is unclear.

Methods: We identified patients with AF, left ventricular ejection fraction $\leq 35\%$, and QRS duration ≥ 120 -ms who underwent first-time device implantation for primary prevention between April 2006 and December 2009 and who could be linked with Medicare claims data. We used Cox proportional hazards models and inverse probability weighted estimates to compare differences in the risks of 3-yr mortality, all-cause and heart failure readmission and 90d device-related complications.

Results: In this 8951 patient analysis, 6470 (72%) received CRT-D and 2481 (28%) received ICD. Cumulative incidence rates among CRT-D and ICD were 32.2% vs 33.0% ($P=.68$) for mortality; 75.9% vs 75.6% ($P=.84$) for all-cause readmission; 33.4% vs 36.2% ($P=.02$) for heart failure readmission within 3-yrs; and 3.0% vs 2.7% ($P=.41$) for complications within 90d. After inverse weighting for the probability of CRT-D, risks of mortality, all-cause and heart failure readmission were lower among patients receiving CRT-D compared to ICD, but there were no significant differences in 90d complications (Figure).

Conclusions: CRT-D implantation was associated with lower mortality, all-cause and heart failure readmissions compared to ICD implantation with no difference in complications. Among CRT-eligible patients with heart failure and AF, CRT-D was underutilized.

