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60ᵗʰ Annual Scientific Session & Expo

QUALITY OF CARE AND OUTCOMES ASSESSMENT

DEFIBRILLATORS DO NOT CONFER A SURVIVAL BENEFIT TO OCTOGENARIANS WITH LEFT VENTRICULAR DYSFUNCTION

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
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Session Title: Outcomes in Heart Failure
Abstract Category: 46. Outcomes Assessment
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Background: Given their advanced age and frequent comorbidities, it is unclear whether octogenarians with reduced left ventricular function (LVEF) extract a survival benefit from implantable cardioverter-defibrillators (ICD) in the primary prevention setting.

Methods: Patients 80 years or older who received an ICD for LVEF≤35% at our institution between 2001 and 2008 (n=99) were compared to a cohort of octogenarians with low LVEF who did not receive an ICD (n=53). Comorbid conditions in both groups were assessed using the Charlson Comorbidity Index (CCI), which incorporates 22 medical conditions that affect longevity, including heart disease, cancer, stroke, and other organ dysfunctions.

Results: The overall cohort (n=152, age=84±4 yrs, 72% men, 87% ischemic cardiomyopathy, LVEF 25±7%, CCI=5.9±3.2) was followed for 2.3±2.0 yrs. ICD patients were younger (82±3 yrs vs. 86±4 yrs, p<0.001) and had fewer comorbidities reflected in a lower CCI (5.3±3.1 vs. 6.7±3.1, P=0.021). Patients with ICD also had a trend towards lower LVEF (24±6% vs. 27±7%, P=0.06). The ICD and no-ICD groups were otherwise similar with respect to percentage use of medications such as ACE inhibitors, β-blocker, and anti-arrhythmic drugs. During follow-up, 93 patients died, 58 in the ICD group and 35 in the no-ICD group. Using the Kaplan Meier method, ICD recipients had a better 1-year survival compared to patients with no ICD (72% vs. 52%, P=0.014). However, after adjusting for age, LVEF, and CCI using a multivariate Cox model, the ICD did not confer any survival benefit (HR=0.71, 95% CI 0.42-1.20, P=0.20) while age was the only predictor of survival (HR=1.08 for each year increase in age, 95% CI 1.02-1.15, P=0.014).

Conclusion: Age is the main determinant of survival in octogenarians with left ventricular dysfunction. After correcting for age and other comorbid conditions, the ICD does not seem to confer a survival benefit in this age group. This finding deserves to be further investigated prospectively before a final judgment can be rendered regarding the value of the ICD in the primary prevention of sudden cardiac death in octogenarians.