Why Patients with Implantable Defibrillator are Frequently Hospitalized? A Long Term Follow-up Study

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Introduction: Rehospitalization of patients (pts) following implantable cardioverter defibrillator (ICD) implantation is an important factor affecting quality of life and cost effectiveness associated with this therapy.

Aim: To evaluate hospital readmission characteristics in pts with ICD.

Methods: we retrospectively studied hospital admission records of all the pts who underwent ICD implantation in our hospital from December 1996 to January 2000. Current vital status was assessed by 1/11/2008.

Results: Forty-eight consecutive pts were included in the study. Thirty-seven male, mean age at implantation 63±11 years, mean LVEF 30.8±9.4%, Coronary artery disease in 39 (81%) pts, NYHA class I, II, III in 2, 35, 11 pts, respectively. ICD implantation was for secondary prevention of symptomatic ventricular arrhythmia in all but one patient. No patient was lost to follow-up. There were 380 hospitalizations after initial ICD implantation. Five pts (11%) had no rehospitalizion, 7 pts had only one (15%), 20 pts (42%) had 2-10 and 16 pts (33%) had had more than 10 rehospitalization. The primary diagnosis for hospitalization was ventricular arrhythmia in 61 (16%), atrial arrhythmia in 8 (2%) inappropriate shock in 12 (3%), ICD replacement in 26 (7%), device complication in 14 (3.6%), cardiac non arrhythmic in 117 (31%) and non cardiac in 142 (37%). 28 pts (58%) had died 3-12 years after initial ICD implantation. In these pts, 5 had no rehospitalization, 7 pts had only one and 16 had more than one rehospitalization.

Conclusion: In our secondary prevention ICD pts, rehospitalization rate was high. However, most of the hospitalizations were unrelated to arrhythmia or ICD issues.