Gender And Age Related Differences In Implantable Defibrillator Recipients: Results From The Pacemaker And Implantable Defibrillator Leads Survival Study (“PAIDLESS”)


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Abstract

Introduction: This study investigated the influences of gender and age on defibrillator lead failure and mortality.

Methods: Gender and age were analyzed with respect to lead failure and mortality in a retrospective single center study. Subjects included all Winthrop University Hospital patients that underwent defibrillator lead implantation between 1996 and 2011. Statistical analyses included Fisher’s Exact Test, Kaplan-Meier analysis, and multivariable Cox regression models.

Results: The study included 3802 patients (2812 men/990 women). Leads implanted in women failed more quickly than in men ages 45 to 54 (p=0.0341). Multivariable Cox regression models confirmed male gender as an independent protective factor of lead failures between the ages of 45 and 54 [HR=0.37(0.14, 0.96), p=0.042]. Lead survival time for these women was 13.4(SE=0.6) years versus 14.7(SE=0.3) years in men. No differences in mortality were found.

Conclusions: This study is the first to compare lead failure and mortality in relation to gender and age at a large implanting center. This study emphasizes the complex interplay between gender and age with respect to lead failure and mortality and the need for future research.
The Impact Of Receiving Two Recalled Defibrillator Leads On Lead Failure And Survival: Results From The Pacemaker And Implantable Defibrillator Leads Survival Study (“PAIDLESS”)


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Abstract

Introduction: This study analyzed lead failure and mortality in patients with respect to the number of recalled leads implanted.

Methods: Subjects included all Winthrop University Hospital patients that underwent defibrillator lead implantation between 1996 and 2011. Patients with no recalled leads, one recalled lead, and two recalled leads were compared using Kruskal-Wallis and Chi-Square tests.

Results: This study included 3802 patients (2326 with no recalled leads, 1447 with one recalled lead, 29 with two recalled leads). The two recalled lead group had one failure (3%) and eight deaths (28%). The one recalled lead group had 75 failures (5%) and 671 deaths (46%). The no recalled leads group had 75 failures (3%) and 871 deaths (37%). Mortality was lower in the two recalled lead group when compared to the one recalled lead group (p=0.0006) as well as the no recalled lead group (p=0.0063).

Conclusions: The highest mortality was observed in those with one recalled ICD lead. The unfortunate circumstance in which patients received two recalled ICD leads, did not translate into any adverse impact on lead failure and survival.