



ACC.14

TCT@ACC-12 | innovation in intervention

A342

JACC April 1, 2014

Volume 63, Issue 12

Arrhythmias and Clinical EP

INCIDENCE AND PREDICTORS OF SUDDEN CARDIAC DEATH FOLLOWING HEART TRANSPLANTATION

Poster Contributions

Hall C

Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Arrhythmias and Clinical EP: Other I

Abstract Category: 6. Arrhythmias and Clinical EP: Other

Presentation Number: 1141-97

Authors: Kairav Vakil, Ziad Taimeh, Alok Sharma, Monica Colvin-Adams, Russell Luepker, Selcuk Adabag, University of Minnesota, Minneapolis, MN, USA, Veterans Affairs Medical Center, Minneapolis, MN, USA

Background: The incidence, timing, and predictors of sudden cardiac death (SCD) in patients (pts) who underwent heart transplantation (HT) are unknown.

Methods: Adult pts (≥ 18 years) who underwent first time HT in the US between 1987 and 2013 were retrospectively identified from the UNOS registry. Pts with "cardiac arrest" as the primary cause of death constituted the SCD group.

Results: Data on 37,492 pts (mean age 48.4 ± 13.0 years; 77% males; 78% Caucasian) were analyzed. During a mean follow-up of 6.5 ± 5.7 years, 17,324 (46.2%) pts died of which 1,659 (9.6%) were SCD (Figure). In multivariate logistic regression analysis (OR; 95% CI), ischemic cardiomyopathy as HT indication (1.42; 1.18-1.71), higher donor age per year (1.01; 1.00-1.02), allograft coronary artery disease (CAD) (1.72; 1.45-2.03), graft rejection (1.67; 1.41-1.99), and left ventricular ejection fraction (LVEF) $<40\%$ (2.98; 2.46-3.61) were associated with a higher incidence of SCD (all $p < 0.02$). Conversely, Caucasian race (0.66; 0.55-0.91), higher recipient age per year (0.97; 0.96-0.98), and use of ventricular assist device prior to HT (0.73; 0.56-0.91) were associated with a lower SCD incidence (all $p < 0.02$). Permanent pacemaker implantation after HT, which was associated with longer survival in prior reports, did not reduce SCD ($p = 0.5$)

Conclusion: The incidence of SCD after HT is significantly lower than non-SCD. Rejection, allograft CAD, and LVEF $<40\%$ are strong predictors of SCD in HT pts.

