ICD therapy used again as end point in SCD-Heft Substudy?

Epstein AE, Principal Author of ACC/AHA/HRS2008 Guidelines for Device-Based Therapy of Cardiac Rhythm Abnormalities*:* "**The fact that ICD therapy is not a surrogate for resuscitation from cardiac arrest is not new information**. A 1993 policy conference from the North American Society of Pacing and Electrophysiology concluded that **'total mortality' was, in fact, the 'appropriate' end point for reporting ICD outcomes** (20)." (JACC October Vol. 52, No. 14, 2008)

From Tung et al (JACC October Vol. 52, No. 14, 2008):

"An examination of randomized trials for primary and secondary prevention has shown that the number of appropriate shocks consistently exceeds the sudden death and overall mortality rate in the control group (28) (Fig. 3). Kadish et al. (27) reported twice as many events in the ICD arm of the DEFINITE trial when compared with the control arm (32 shocks/1 death, ICD vs. 15 arrhythmic deaths, control arm) (30). Two plausible explanations have been proposed to explain this phenomenon. First, ICD therapies may not be a surrogate for sudden cardiac death, as many episodes may have been nonsustained nonfatal events. This suggests that a distinction needs to be made between shocks that are appropriate and shocks that are necessary. Alternatively, insertion of the device may be directly or indirectly proarrhythmic. There are numerous speculated mechanisms by which an ICD may promote arrhythmogenesis including device malfunction, induction of arrhythmias from inappropriate shocks, pacemaker facilitated triggers, and reversal of activation wavefronts from epicardial resynchronization increasing dispersion of refractoriness (31–35)."

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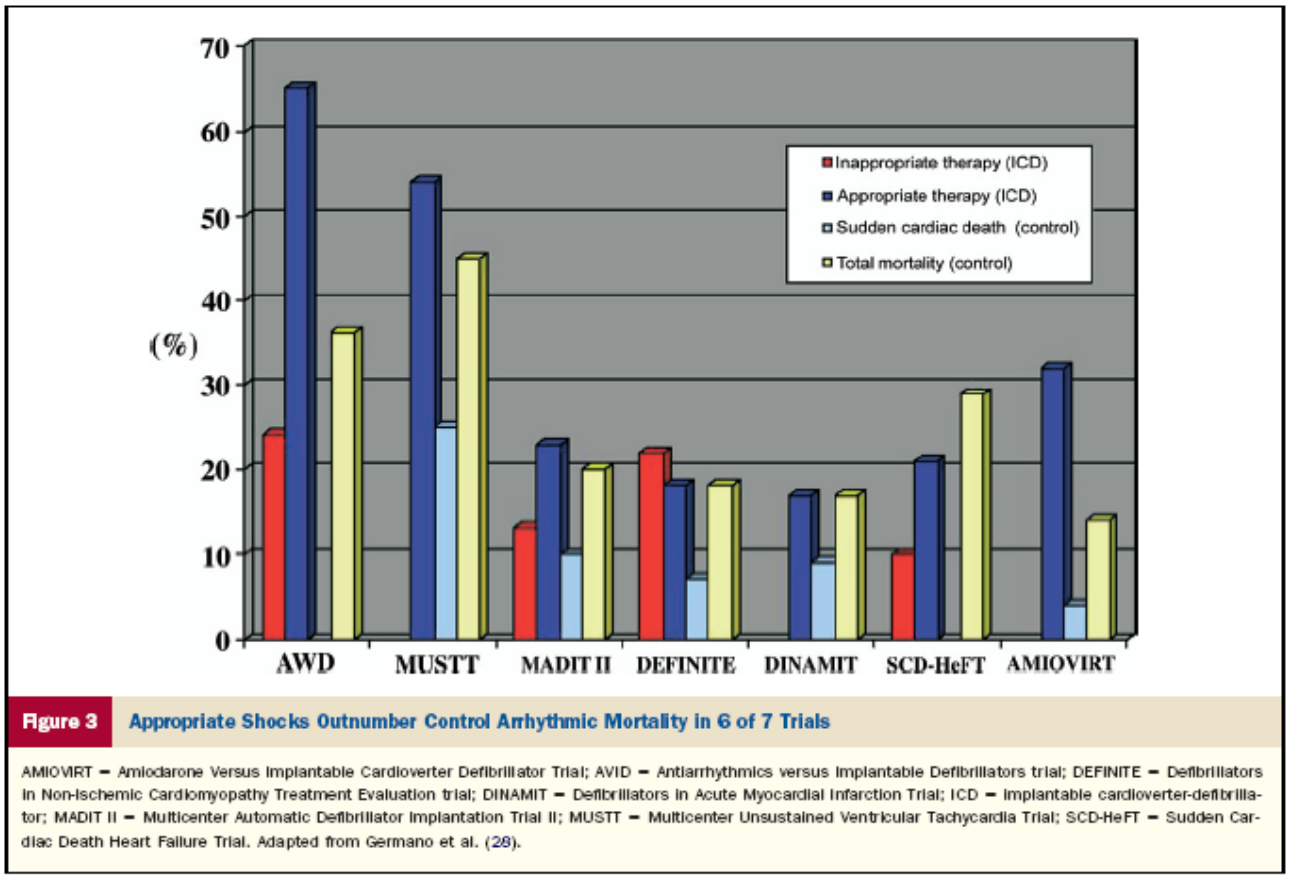

Figure 3 **Appropriate Shocks Outnumber Control Arrhythmic Mortality in 6 of 7 Trials**

AMIOVIRT = Amiodarone Versus Implantable Cardioverter Defibrillator Trial; AVID = Antiarrhythmics versus Implantable Defibrillators trial; DEFINITE = Defibrillators in Non-Ischemic Cardiomyopathy Treatment Evaluation trial; DINAMIT = Defibrillators in Acute Myocardial Infarction Trial; ICD = Implantable cardioverter-defibrillator; MADIT II = Multicenter Automatic Defibrillator Implantation Trial II; MUSTT = Multicenter Unsustained Ventricular Tachycardia Trial; SCD-HeFT = Sudden Cardiac Death Heart Failure Trial. Adapted from Germano et al. (28).

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