

THE FIRST ICD SHOCK: ABLATION SHOULD BE FIRST-LINE THERAPY FOR VT

Ashkan Ehdai MD

Clinical Cardiac Electrophysiology

Cedars Sinai Heart Institute



Controversies & Advances 2016



ICD SHOCKS HURT...

THE IMPACT OF ICD SHOCKS FOR VT/ VF

- Clinical depression and anxiety is more prevalent in patients with ICD shocks as compared to those without ICD shocks
- Those with numerous ICD shocks score the lowest on quality-of-life and anxiety/depression questionnaires
- 5% of patients would rather “take their chances” without an ICD
- ICD shocks are associated with increased mortality

Irvine et al. American Heart Journal. August 2002
Kamohai et al. Europace. 2002
Pocock et al. NEM 2008
Ahl et al. PACE 2000



ANTI-ARRHYTHMIC DRUG THERAPY

A VERY SHORT BUT NOT SO SWEET LIST...

Amiodarone

Adverse reactions:

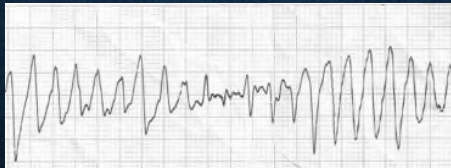
Hypo/Hyperthyroidism
Hepatotoxicity
Pulmonary toxicity
Skin toxicity/hypersensitivity
Bradycardia
Peripheral neuropathy
Optic neuritis
Corneal deposits
Ataxia/Tremor
Slowing of VT rate*



Sotalol

Adverse reactions:

Torsades de Pointe
Bradycardia
Bronchospasm
Lupus Erythematosus
Fatigue
Dizziness
Slowing of VT rate*



Mexiletine/Lidocaine

Adverse reactions:

Tremor
Ataxia
Psychosis
Diarrhea
Depression
Anorexia
Seizures



AMIODARONE AND THE THYROID

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- [Subclinical hypothyroidism is an independent predictor of adverse cardiovascular outcomes in patients with acute decompensated heart failure.](#)

Hayashi T, Hasegawa T, Kanzaki H, Funada A, Amaki M, Takahama H, Ohara T, Sugano Y, Yasuda S, Ogawa H, Anzai T.

ESC Heart Fail. 2016 Sep;3(3):168-176.

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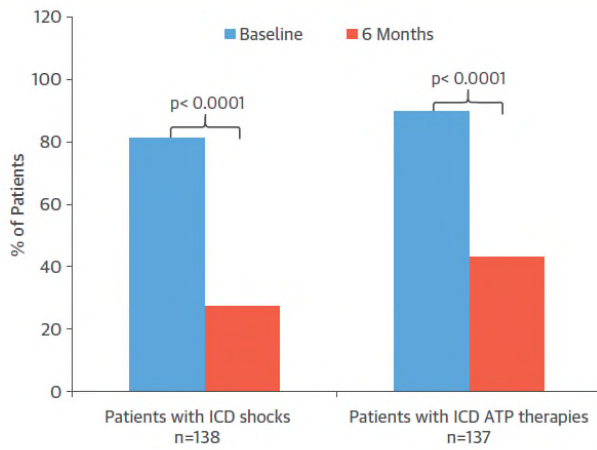
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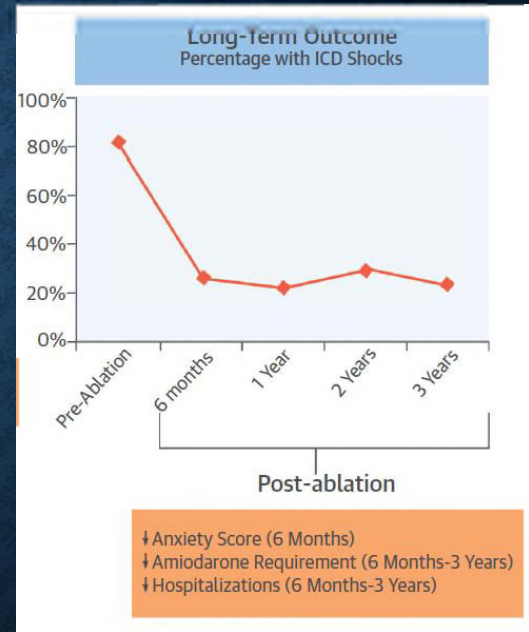
ABLATION FOR VENTRICULAR TACHYCARDIA DUE TO MYOCARDIAL INFARCTION

DURABLE LONG-TERM REDUCTION IN ICD THERAPY

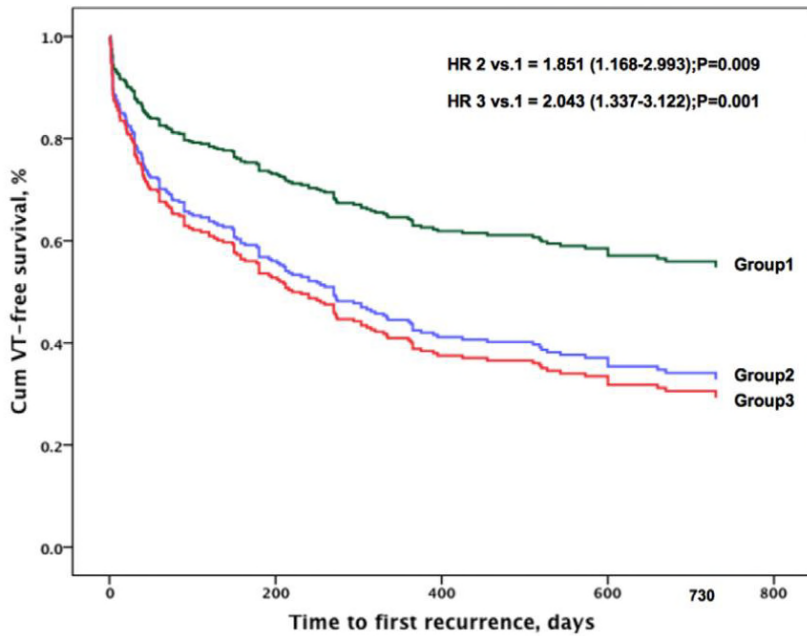
FIGURE 4 Comparison Between Percentage of Patients at Baseline and 6 Months Post-Ablation for ICD Shocks and ICD ATP Therapies



Data are representative of evaluable patients with available data only (efficacy analysis cohort with ICD, n = 214). ATP = antitachycardia pacing; ICD = implantable cardioverter-defibrillator.



EARLY REFERRAL FOR VT ABLATION AVOIDING THE “TOO LITTLE, TOO LATE PHENOMENON”



Group 1 = Ablation \leq 30 days after clinical VT

Group 2 = Ablation $>$ 30 days but $<$ 1 year after clinical VT

Group 3 = Ablation $>$ 1 year after clinical VT



CATHETER ABLATION VS ANTI-ARRHYTHMICS WE HAVE A WINNER....

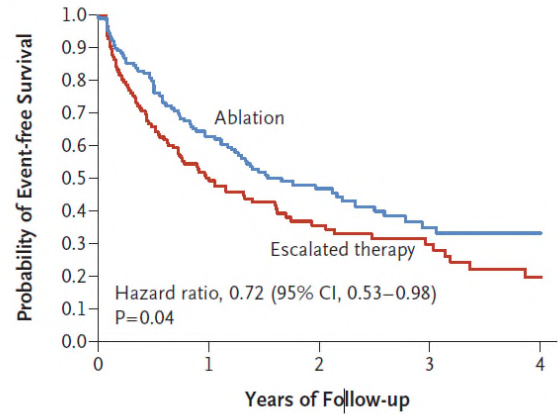
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Ventricular Tachycardia Ablation versus Escalation of Antiarrhythmic Drugs

John L. Sapp, M.D., George A. Wells, Ph.D., Ratika Parkash, M.D., William G. Stevenson, M.D., Louis Blier, M.D., Jean-Francois Sarrazin, M.D., Bernard Thibault, M.D., Lena Rivard, M.D., Lorne Gula, M.D., Peter Leong-Sit, M.D., Vidal Essebag, M.D., Ph.D., Pablo B. Nery, M.D., Stanley K. Tung, M.D., Jean-Marc Raymond, M.D., Laurence D. Sterns, M.D., George D. Veenhuizen, M.D., Jeff S. Healey, M.D., Damian Redfearn, M.D., Jean-Francois Roux, M.D., and Anthony S.L. Tang, M.D.

A Primary Outcome Death/ VT storm/ICD shocks



No. at Risk

Ablation	132	80	40	20	8
Escalated therapy	127	61	25	17	6

SAFETY OF CATHETER ABLATION

~10,000 PATIENTS AFTER VT ABLATION

- Total adverse in-hospital events: 8.5%
 - Death, ischemic stroke, intra-cerebral hemorrhage, pericardial complications, hematoma or hemorrhage, blood transfusion, cardiogenic shock/CHF
- Major adverse events (stroke, tamponade, death): 3.0%
- Death 1.1%

SUMMARY

Catheter ablation of VT is safe, effective, and can provide a superior risk/benefit profile compared to long term anti-arrhythmic therapy



**AVOID THE TOXICITIES
DRUG THERAPY!**