the study population were discharged on beta blockers. During a mean follow-up of 67 months (range,1-237 months) 602 deaths occurred in the study population. On multivariate analyses, patients discharged on antiarrhythmic medication had significantly higher mortality (hazard ratio 1.47, 95% CI 1.11-1.97, p=0.003) compared to those discharged on no drug therapy. Sub group analysis identified that the excess mortality was due to class III agents, Mortality in class I agents was no different than no drug therapy. Patients receiving beta-blockers had significantly less mortality (hazard ratio 0.44, 95% CI 0.22-0.66, p<0.001) compared to those discharged on no beta blockade. In conclusion use of antiarrhythmic drugs may worsen long-term survival in the defibrillator population compared to no drug therapy. Use of beta-blockers was associated with significant survival advantage in this study.

1064-7 Eligibility for Biventricular Pacing in Patients With an Implantable Cardioverter Defibrillator

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Background: Treatment of congestive heart failure (CHF) aims for symptomatic relief and reduction of mortality. An implantable cardioverter defibrillator (ICD) prevents sudden death in patients at high risk, whereas recent data suggest that biventricular (BV) pacing in patients with CHF may improve functional status. The combination of these 2 treatments may be synergistic. It is unknown, however, which percentage of patients with an ICD indication are potential candidates for BV pacing.
Methods: All patients who received an ICD were analyzed for eligibility of BV pacing. Based on the available literature, established criteria for BV pacing included NYHA class III or IV (> 6 months) and a QRS duration >120 ms. Patients in NYHA class II with a left ventricular ejection fraction (LVEF) <30% and QRS >120 ms were also considered eligible. The incidence of potential exclusion criteria, including atrial fibrillation (AF), RBBB and PR interval <150 ms, was also assessed.
Results: 390 consecutive patients received an ICD from June 1996 till March 2001 at our hospital. There were 315 men and 75 women (mean age of 58 ± 17 years). Underlying cardiac disease was ischemic heart disease (n=281, 72%), idiopathic dilated cardiomyopathy (CM) (n=51, 13%), primary CM (n=31, 8%), and miscellaneous in 7% (n=27) of the patients. Indications for ICD implantation were out hospital cardiac arrest (n=199, 51%), ventricular tachyarrhythmia (n=172, 44%) and preventive (n=19, 5%). In the 390 patients the mean LVEF was 34 ± 25%. The incidence of severe CHF (NYHA class III/IV) was 19% (74 patients); 62 (16%) patients were in NYHA class II with an LVEF <30%. Of these 136 patients, 70 had a QRS duration >120 ms (42 LBBB, 14 RBBB, 14 intraventricular conduction delay). Thus, a total of 70 (18%) patients were eligible for BV pacing in addition to an ICD. When patients either in chronic AF or with RBBB were excluded, this number was reduced to 48 (12%). None of the patients had a PR interval <150 ms (mean 196 ± 31ms, range 155 - 265).
Conclusion: 12-18% of patients with an ICD indication are potential candidates for BV pacing. Screening for eligibility of BV pacing should be routinely considered in patients with CHF scheduled for ICD implantation.

1064-8 Feasibility of Ventricular Resynchronization Coupled to an Atrial Arrhythmia Management Device

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Background: Recent studies have demonstrated the value of biventricular pacing (biVP) in patients with CHF, diminished ejection fraction (EF), and left bundle branch block. These patients commonly have antiarrhythmic drug-resistant atrial fibrillation (DRAF). Optimal management may include atrial rhythm control. Previous studies in DRAF patients with preserved EF have demonstrated excellent long-term atrial rhythm control utilizing an atrial arrhythmia management device (AAMD). We hypothesized that an AAMD adapted to provide biVP would be feasible and safe in carefully selected patients.
Methods: In 20 patients with class II-IV CHF, EF<35%, left bundle branch block and DRAF with controlled ventricular response (16 men, ages 42-80 years, CAD in 13), an AAMD (Medtronic model 7250 [n=2] or 7276 [n=18]) was implanted, coupled to right atrial appendage, right ventricular apical, and left venticular (epicardial [n=2]; transvenous [n=18]) leads. For pacing and sensing, the ventricular leads were married by an adaptor (Medtronic model 2872). Bradycardia programming was DDD or DDDR, with AV delays optimized using echocardiography. Ventricular tachyarrhythmia (VT) programming was single zone (median VT detection interval 280 msec). AF programming included "prevention pacing," antitachycardia pacing, and patient-commanded shock. Previously inefficacious antiarrhythmic drug therapy was utilized as needed as an adjuvant in patients to reduce AF burden. **Results** There were no implant complications. During a followup interval ranging from 41 to 580 days, 7 patients have had AF events treated by the device; 5 patients have elicited shock, all without complication. Three patients are taking an antiarrhythmic drug. Two patients have undergone AV node ablation for uncontrollable AF burden. Single automatic shocks for device-perceived VT have been delivered in 2 patients (one due to double- counted slow VT, the other due to electromagnetic interference). Improvement of one or more HF class has been observed in 13 patients; the remainder are unchanged. **Conclusion:** In selected patients, the coupling of an AAMD and biVP is feasible. In future systems, "single chamber" ventricular sensing is mandatory.

1064-19 Is Dofetilide Safe to Use in Patients With Implantable Cardioverter Defibrillators?

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Background: Dofetilide (DOF) is a relatively new antiarrhythmic agent utilized for the treatment of atrial fibrillation. Although it has been studied in patients (pts) with underlying heart disease and left ventricular dysfunction, little data is available regarding its use in pts with implantable cardioverter defibrillators (ICDs) and known ventricular tachycardia (VT).
Methods: We examined follow-up on 17 ICD pts treated with DOF for atrial fibrillation.
Results: Mean age was 71 +/- 8 yrs, with 14 men, and mean LVEF 30 +/- 11%. Coronary disease was present in 12 pts and a nonischemic dilated cardiomyopathy in 5 pts. Indications for ICD implantation include sustained VT or cardiac arrest in 10 pts, syncope in 6 pts, and asymptomatic nonsustained VT with inducible VT in 1 pt. A history of congestive heart failure was noted in 12/17 (71%) pts. Dosing was based on creatinine clearance and adjustments were made based on the QT interval, as recommended by the manufacturer. The defibrillation threshold (DFT) was 14.6 +/- 4.9 joules at baseline and 11.1 +/- 3.8 joules at follow-up on dofetilide (p=0.07). The mean dofetilide dose was 662 +/- 305 mcg/day. Mean follow-up was 209 +/- 202 days (median 82 days), and 9/17 (53%) remain in sinus rhythm on DOF. DOF was discontinued in 6 pts due to inefficacy, in 1 pt due to noncompliance, and in 1 pt due to nausea and a creatinine of 2.6. No proarrhythmia was noted, and there were no drug-related deaths.
Conclusions: DOF is well-tolerated and appears to be effective for the treatment of atrial fibrillation in ICD pts with underlying heart disease in short-term follow-up. Despite the pre-existing history of ventricular arrhythmias, no adverse ventricular arrhythmias were noted in this small group of pts. In addition, no detrimental effects on the DFT were noted. DOF may serve as an effective alternative to amiodarone in this pt population with less risk of end organ toxicity.

1064-20 Reliability and Clinical Benefits of a New Subthreshold Noninvasive Shock Lead Integrity Test

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Background: The integrity of the defibrillation lead is crucial for the proper function of implanted cardioverter / defibrillators. Serial measurements of the shock lead impedance are the most reliable non-invasive method to verify the integrity. The current approach is to deliver an at least 1-J shock. As this is painful for the patient, deep sedation is mandatory. The aim of the prospective study was to compare a new subthreshold measurement for shock lead impedance with the standard measurement.
Methods: The study included 123 patients who received in 25 European centers either a Prizm DR (n=73) or VR (n=50, Guidant, St. Paul, MN, USA) defibrillator. The defibrillator was connected to the single coil (models 0127/0128; n = 39) or dual coil (models 0147/0148; n = 84) Endotak Reliance defibrillation lead. The defibrillator delivers for the shock lead integrity test a <1 mJ subthreshold pulse through the single coil or dual coil lead and the defibrillator housing (can). The current density of the test pulse is 1/100th of a pacing pulse. Non-invasive shock lead impedance was measured for the defibrillation vectors from the distal coil to the proximal coil and can as well as from the distal coil to the can. The standard measurement for shock lead impedance was with a 17J shock.
Results: The shock lead impedance for the vector from the distal coil to the proximal coil and the can was 42 ± 5 ohms (95% confidence interval (CI): 41 - 44 ohms) with the lead integrity test and and 41 ± 4 ohms (±95% CI: 39 - 43 ohms) with a high-energy shock (p = 0.13).The shock lead impedance for the vector from the distal coil to the can was 63 ± 7 ohms (±95% CI: 60 - 66) with the lead integrity test and 60 ± 8 ohms (±95% CI: 56 - 64 ohms) with a high-energy shock (p = 0.44). The vector from the distal coil to the can had a significant higher shock lead impedance than from the distal coil to the proximal coil and the can (p=0.001).
Conclusion: The new subthreshold shock lead integrity test measured shock lead impedance similar to the standard measurement with the delivery of the high-energy shock. This non-invasive test is a useful diagnostic method as it allows serial measurements of the shock lead impedance during follow-up without the need for sedation.