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Arrhythmic outcome after CRT-D device replacement
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Background: Cardiac resynchronization therapy (CRT) and implantable cardioverter-defibrillators (ICD) are effective therapies for heart failure (HF) patients with cardiac dyssynchrony. Patients receiving primary prevention CRT-D that positively remodel may no longer qualify for ICD indication due to CRT induced left ventricular ejection fraction (LVEF) improvement.

Objective: We aimed to evaluate the outcome of CRT-D patients at the time of device replacement (DR). Methods: Patients undergoing primary prevention CRT-D DR were prospectively included from November 2007 to March 2011 in two centers. CRT response was as a 2±1 NYHA class improvement and an increase in LVEF≥10%. Six months before DR, all patients underwent echocardiography and device interrogation. Patients without theoretical ongoing ICD indication (TOII) at DR were defined as those with LVEF≥40% without appropriate ICD therapy (AT) during the first ICD service-life.

Results: A total of 107 consecutive patients were enrolled. Sixty-one patients (57%) were considered CRT responders after the index procedure. At the time of DR (56±14.4 months from initial implant), 87% of CRT responders were free of AT, compared with 70% of non CRT-responders (p=0.02). Thirty-nine patients (36%) did not meet the criteria for TOII. During follow-up (mean 26.4±14.4 months after DR) 37 patients (95%) without TOII were free of AT versus 49 of 68 patients (72%) with ongoing TOII (p=0.007).

Conclusion: Absence of theoretical ICD indication occurs in more than one third of CRT-D patients undergoing DR. In addition AT rate is relatively low (2.2%/year) in this subgroup of patients.

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Reduction of inappropriate therapies: follow-up of 843 ICD/CRT-D in real life
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Purpose: Remote monitoring (RM) is now accepted as a safe alternative to standard follow-up (sFU) for ICD.

Methods: We analyzed the long term arrhythmic events and device-related outcomes of 843 ICD/CRT-D.

Patients (pts) were equipped with Boston (44%), Medtronic (40%), St Jude Medical (11%), Biotronik (3%) and Sorin (2%) RM systems. FU started after hospital discharge. Automatic FU with RM was performed every 3 months, with at least one sFU/year. In emergency cases, pts were invited for in-hospital control visits.

ICDs were programmed with 2 zones (VT zone >180 bpm / VF zone >220bpm). All RM alerts and related EGMs as well as the reasons of therapies were reviewed by two physicians.

Results: 843 pts (82% male, 64±10 y.o.) were enrolled. 52% had ischemic cardiomyopathy, 44% previous history of AF. 63% were primary prevention ICDs, 46% and dual chamber (44%) were mainly represented, single chamber 10%.

During a FU period of 28±14 months, we noted 16±1.1 automatic RM FU and 2±1 sFU visits/pt. 87 pts died during FU. 92 pts had major alerts (37 for ICD lead dysfunction, 33 for ERI reached, 18 for electrical storm, 4 therapies off). Within 216 pts with minor alerts, 112 refer to AF, with for 54 pts early detection of unknown AF resulting in therapy modifications.

238 inappropriate (app) shocks occurred in 73 pts (9%). 57 inappropriate shocks occurred in 23 pts (3%) and were mainly due to AF (61%, other: sinus tachycardia 9%, lead dysfunction 13%, T oversensing 9%, electromagnetic interference 4%).

141 pts had app ATP (17% of the population). 14 pts with high LV lead impedance detected by RM had LV lead dislodgement and underwent early intervention.

Conclusion: In a large single center observational study, RM has demonstrated to be an effective method of FU for ICD recipients. Early diagnoses of AF or lead failure allow rapid management of patients and are associated with a very low rate of inappropriate shocks.

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Safety and effectiveness of transvenous lead extraction in octogenarians
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Safety and effectiveness of transvenous lead extraction in octogenarians.

Introduction: As the median population ages, the number of elderly patients with implantable cardiac devices referred for transvenous lead extraction will dramatically increase. The safety and effectiveness of lead extraction in elderly patients has not been well evaluated. We report the safety and effectiveness of transvenous lead extraction in octogenarians.

Methods and results: From January 2002 to December 2013, we reviewed data from consecutive patients more than 80 years referred to our institution for transvenous lead extraction for infection or lead dysfunction.

Clinical characteristics, procedural features, and peri-procedural major and minor complications were compared between octogenarians and younger patients. Out of 391 patients undergoing lead extraction during the study period, 100 (25.6%) patients were octogenarians (mean age 84±22 years; range 80-98; 75 % males).

A significantly higher percentage of octogenarians presented with chronic renal failure (P<0.003), history of malignancy (P=0.04).

Infection was the most common reason for lead extraction in elderly (82% of cases). Laser assistance for extraction was required in 69 elderly patients (69%).

Complete lead extraction efficacy were similar between both groups (99% in octogenarians vs 98.6% in patients <80 years; P=0.6).

No deaths occurred in the octogenarian group. No differences in terms of other peri-procedural major and minor complications were found between the 2 groups.

0432

Impact of early complications on outcomes among patients with implantable cardioverter defibrillator in primary prevention
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Background: The life-saving benefit of implantable cardioverter defibrillators (ICD) has been well demonstrated, and therefore their utilization has considerably grown in the last 10 years. At the same time, complications have become an increasingly important concern.

Objectives: This study aimed to assess the prevalence and impact on outcomes (late complications and overall mortality) of early complications after ICD implantation for primary prevention in a large French population.

Conclusion: Despite a significantly higher rate of comorbidities, transvenous lead extraction can be performed safely and successfully in octogenarians with a low rate of complications.