0435

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 ≥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 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±14 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.

0303

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 automatic RM FU and 2±1 sFU visits/patient. 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 appropriate (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 detection 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.

0374

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, 104 (26%) were octogenarians (80-98; 75 % males).

A significantly higher percentage of octogenarians presented with chronic renal failure (P=0.03), 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.

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.

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.
METHODS: From a multicentric French registry (DAL-PP Registry, 2002-2012), 5547 consecutive patients, with coronary artery disease or dilated cardiomyopathy, were implanted with an ICD in the setting of primary prevention. From 5338 (96%) patients with full information, we determined prevalence, independent associated factors and prognosis of the occurrence of early (within 30 days post implantation) complications.

RESULTS: Early complications occurred in 709 patients (13.5%), mainly related to lead dysfunction or hematoma (56%). Independent associated factors to early complications were renal impairment (clearance <30ml/min, OR=1.69, 95% CI 1.19-2.41, P<0.001), cardiac resynchronization therapy (OR=1.61, 95% CI 1.17-2.21, P=0.004), anti-coagulant therapy (OR=1.30, 95% CI 1.04-1.63, P=0.02) and older age (OR=1.02, 95% CI 1.01-1.02, P=0.03). During a mean follow-up of 3.1±2.5 years, 834 patients experienced ≥1 complication (16%), mainly inappropriate therapies and/or lead dysfunction (75%). After consideration of potential confounding factors, early complications were significantly associated with the occurrence of late complications (OR=2.13, 95% CI 1.73-2.66, P<0.0001) and a higher risk of overall mortality (OR=1.48, 95% CI 1.17-1.88, P=0.02).

Conclusions: Early complication is a frequent event after ICD implantation occurring in one out of six patients. These events are associated with a significant increase of late complications and overall mortality.

0456
Therapeutic management in ambulatory elderly patients with atrial fibrillation: the S.AGES cohort
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Few data on therapeutic management of patients over 80 years with non-valvular atrial fibrillation (AF) are available in general population.

OBJECTIVES: The objectives of the AF-S.AGES cohort (Sujets AGÉS) were to describe real-life therapeutic management of non-institutionalized elderly subjects with AF according to age groups, i.e., 65-79 and ≥80 years and to determine factors associated with anticoagulant treatment.

METHODS: General practitioners recruited 1072 patients aged ≥65 years old between 2009 and 2011. General characteristics were first evaluated in the overall sample and according to age groups and use of anticoagulant treatment at inclusion.

RESULTS: Mean age was 78.0 (SD 6.5) years and 42% were older than 80 years. In the overall sample, 19% of patients had paroxysmal AF, 15% persistent, 56% permanent and for 10% AF type was unknown. Vitamin K antagonist (VKA) were used in 77% of patients, antiplatelet therapy in 17% and 12% of patients did not receive any antithrombotic treatment. There were no differences between age-groups (< 80 or ≥80 years) for VKA (78 vs. 76%, p=0.58). Rate control drugs were more frequently used (55%) than rhythm control drugs (37%). Class I and Class II anti-arrhythmic drugs were less often used in octogenarians than in younger patients (5.6% vs. 12.3%, p=0.001 and 36 vs. 41%, p=0.05). Among patients ≥80 years old, VKA use was associated with permanent AF younger age and cancer. Among patients < 80 years old, the use of VKA was associated with permanent AF and preserved functional autonomy. HAS-BLED and HEMORR2HAGES scores were associated with non-use of VKA in subjects ≥80 and < 80 years, CHADS2 and CHA2DS2-VASc scores were not associated with VKA use in both groups.

Conclusions: We observed a higher use of anticoagulant therapy in elderly AF outpatients even after 80 years when compared with previous studies. These results suggest that recent international guidelines are better implemented in the elderly population.

0037
Is the risk of atrial fibrillation dependent on the mechanism of tachycardia in patients with history of paroxysmal supraventricular tachycardia?
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Purpose of the study: to evaluate the role of the mechanism of paroxysmal supraventricular tachycardia (SVT) on the incidence of spontaneous atrial fibrillation (AF). The relation between SVT and AF is well-known but its frequency could depend on the mechanism of SVT.

Methods: 1559 patients, mean age 49±19 years, with SVT and without anterograde conduction over an accessory pathway (AP) were referred for electrophysiological study (EPS), performed in control state and after isoproterenol.

Results: SVT was related to atrioventricular nodal re-entrant tachycardia (AVNRT) in 1262 patients (group I), either typical (n=1180) or atypical (n=183)(group IB). In 297 patients SVT was related to atrioventricular re-entrant tachycardia (AVRT) due to a concealed AP (group II). At the initial evaluation 47 group I patients (4%) of group IA, 4% of group IB, 5% of group II (2%) had presented at least one episode of sustained AF (NS). During follow-up (mean 3±2 years), 97 patients developed AF, 86 of group I (71% of group IA, 6% of group IB, 8%), 11 of group II (4%). AF risk was higher in group I than in group II (p<0.045); differences remain significant for group IA/IB. When patients with AF at first study were excluded AF risk was similar in all groups; 5% of group IA(4% of group IA; 6.5% of group IB)(0.06) and 3% of group II. Ablation of slow pathway/AP was performed in 1099 patients, 67% of group IA (69% of group IA, 51% of group IB), 64% of group II (NS). AF risk was paradoxically higher in patients in whom ablation was performed in group I (6.7% in group I, 7% in group IA, 13% in group IB), compared to patients without ablation (4% in group I, 4% in group IA, 3% in group IB)(p=0.022) and was unchanged in group II (4% after ablation and 3% in patients without ablation).

Conclusions: AF-related SVT was rare (3%), independent on the mechanism of SVT. The risk of subsequent AF after a follow-up of 3 years increased to 6% and was near 5% in patients without AF at initial evaluation; it was only higher in patients with atypical AVNRT than in patients with AVRT. The risk was not affected by the ablation of the slow pathway or the AP.

0173
Is oral anticoagulation needed in patients with atrial fibrillation, stent implantation and low-moderate risk of stroke?
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Thromboprophylaxis for patients with coronary artery disease and atrial fibrillation (AF) is an issue when patients undergo intracoronary stent placement and several recent guidelines propose slightly different management.

METHODS: All patients with AF and stent implantation seen between 2000 and 2010 in 3 academic hospitals were identified in a database and followed up for mortality, stroke and bleeding events.

RESULTS: Among all patients seen between 2000-2010, 343 had AF, coronary stent placement and CHADS2 score=0 or 1. In these patients, OAC was