The aim of the study is to compare the efficacy and safety of iv administration of vernakalant, a relatively new atrial selective antiarrhythmic agent, versus ibutilide, in cardioversion of recent onset atrial fibrillation.
Methods: A total of 78 patients (56 men - 22 women, mean age 63.72±6.67 years) presenting with new-onset atrial fibrillation was studied. In 36 patients (Group A, Men 24 - 12 Women, mean age 62.44±7.24 years) iv vernakalant was administered (3 mgr/Kgr over 10 min and if needed after 15 min, a second dose 2 mgr/Kgr in 10 min). In 42 patients (Group B, 32 Men 10 Women, mean age 64.81+6 years) iv ibutilide was administered (1 mgr over 10 min and if needed after 10 min, a second dose 1 mgr at 10 min).
Results: 52.78% of patients (n = 19) of Group A were converted vs 52.38% of patients (n = 22) of Group B (p = 0.58), with an average time of converting 11.8±4.3 min in patients of Group A vs 33.9±20.25 min in patients of Group B (p <0.0001). The average length of hospital stay of patients in Group A was 17.64±15.96 hours versus 41.09±17.6 hours of Group B (p <0.0001). In one patient in Group A the administration of vernakalant was discontinued due to hypotension while 2 other patients reported dysgeusia during hospitalization. In 3 patients of group B the administration of ibutilide was discontinued due to appearance of nonsustained ventricular tachycardia, which resolved with discontinuation of the drug. The cost of drugs was estimated at 488.22±170.34 € for patients of group A versus 142.43±54.45 € for patients of group B (p <0.0001), however hospitalization costs were significantly lower in patients of Group A (258.58±124.73 € over 414.43±100.32 - p = 0.002).
Conclusion: There was no significant difference in the efficiency of converting recent onset AF between vernakalant and ibutilide. The vernakalant, although an expensive drug, had fewer side effects and more rapid restoration, which reduced the overall cost of hospitalization of patients.

P298

Intravenous antazoline for cardioversion of recent onset atrial fibrillation in patients with stable coronary artery disease

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Introduction: Antazoline is a first generation antihistaminic drug with antiarrhythmic properties. According to a randomized controlled trial and numerous uncontrolled studies antazoline is very effective in pharmacological cardioversion (CV) of recent onset atrial fibrillation (AF) in a wide variety of patients. While recently published guideline indicate amiodarone or vernakalant for CV of patients with coronary artery disease (CAD) the drawbacks of both treatments are well known.
Purpose: To assess effectiveness and safety of intravenous (iv) antazoline in pharmacological CV of recent onset AF in patients with stable CAD.
Methods: This was a retrospective case-control study. We conducted an analysis of the medical records of consecutive patients with recent onset (<48 hours) AF undergoing pharmacological CV in the emergency department using iv antazoline in 2008-2012. Patients with established diagnosis of CAD comprised the study group and the rest being control group. The primary endpoint was the successful cardioversion of AF. The primary safety endpoint was hospitalization due to the adverse effects (AEs) of the treatment.
Results: The study group comprised of 334 cardioversions: patients' mean age was 68.9 ± 9.8, 67% male, 91% had history of AF; 138 CVs were performed in patients with CAD among which 65 (47%) had a history of myocardial infarction (MI). The mean antazoline dose was 152±72 mg and 164±79 mg (p=0.163) in the CAD and control groups, respectively. Concomitant iv betablocker (metoprolole 2.5-5 mg) was administered in 80% and 70.4% (p=0.099) in CAD and control groups, respectively.
Successful CV was achieved in 82.6% patients in CAD and 63.8% control groups: RR 1.3 (95% CI 1.14-1.48) p=0.0002. Hospitalizations due to AEs were rare: 2 (1.4%) patients in the CAD and 8 (4.1%) in the control group, (RR 0.36 (95% CI: 0.08-1.65) p=0.2054.
Among patients with CAD, history of MI did not influence effectiveness (78.5% vs. 86.3%; RR 0.91, 95% CI: 0.78-1.06; p=0.2252) nor AEs requiring hospitalization (1.6% vs. 1.4%; RR 1.14, 95% CI: 0.16-1.57; p=1.000).
Conclusions: Intravenous antazoline may be an effective and probably safe option for pharmacological cardioversion of recent-onset atrial fibrillation in patients with stable coronary artery disease.

P299

Efficacy of short- and long-term anti-arrhythmic use in maintaining sinus rhythm in patients with first developed paroxysmal atrial fibrillation; prospective-randomized stud, interim analysis

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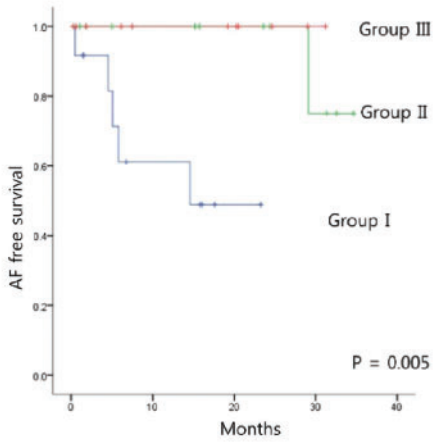
Background: There is no detailed guideline recommendation of AAD treatment for the firstly developed paroxysmal atrial fibrillation (AF). Anti-arrhythmic drugs (AAD) prevent recurrence of AF and short-term AAD treatment would increase drug safety by reducing treatment duration. We designed the prospective, randomized trial to evaluate the efficacy of short- and long-term AAD (flecainide) compared with no treatment in maintaining sinus rhythm in patients with firstly developed paroxysmal AF.
Methods: This study included 35 patients (53.5 ± 12.8 years old, 23 males). Definition of the firstly developed paroxysmal AF was the patients with firstly developed symptomatic paroxysmal AF without history of palpitation. Patients were randomly assigned into no AAD treatment (Group I; N = 12), short-term AAD treatment (flecainide 100mg bid for 4 weeks, Group II; N = 12) or long-term AAD treatment (flecainide 100mg bid for 6 months, Group III; N = 11). All patients were in sinus rhythm at randomization. Patients received clinical follow up with serial evaluation of rhythm status.
Results: There were no significant differences in age, gender, cardiovascular comorbidities and echocardiographic parameters. Among the total population, AF recurred in 6 patients (17.1%) during the mean follow up period of 16.4 ± 12.4 months. Recurrence of AF occurred more frequently in patients with Group I than in those with Group II or Group III [41.7% (5/12) vs. 8.3% (1/12) vs. 0% (0/11), p = 0.018] (Figure 1).
Conclusions: Short-term AAD can be considered to reduce the incidence of AF recurrence as well as to minimize complications of AAD in patients with firstly developed paroxysmal AF.

Figure 1.



Abstract P299 Figure.

P300

Impact of gender: rivaroxaban for patients with atrial fibrillation in the XANTUS real-world prospective study

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On behalf of: the XANTUS Investigators

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Background: Gender differences in outcomes have been seen in patients with atrial fibrillation (AF). Overall in the phase III ROCKET AF randomized controlled trial of rivaroxaban versus warfarin in stroke or systemic embolism prevention in patients with nonvalvular AF, women had a higher risk of stroke but a lower risk of vascular death and bleeding events than men. Recent registry data have also shown that women had a higher risk of stroke than men.
Purpose: This study aimed to analyse demographics and clinical characteristics, and assess the impact of gender on rates of thromboembolism, bleeding and death, in patients with nonvalvular AF specifically receiving rivaroxaban in routine clinical practice.
Methods: XANTUS is an international, prospective, observational study of consecutive consenting patients with nonvalvular AF newly started on rivaroxaban who were followed up at 3-month intervals for 1 year, or at least 30 days after permanent discontinuation; mean treatment duration was 329 days. The XANTUS database was examined for demographics, clinical characteristics and outcomes by patient gender. All major outcomes (including major bleeding, symptomatic thromboembolic events [stroke, systemic embolism (SE), transient ischaemic attack, myocardial infarction (MI)], and death) were centrally adjudicated.
Results: Among the 6,784 patients in the safety population, the analysis was conducted in 4,016 male (59.2%) and 2,765 female (40.8%) patients (missing values for 3 patients). Women were older than men (mean age 73.7 vs 70.0 years; p<0.0001) and were more likely to have age-related comorbidities (e.g. prior stroke/SE/transient ischaemic attack: 20.7% vs 17.9%; p=0.005); men were more likely to have had prior MI (12.8% vs 6.2%; p<0.0001). After adjustment for baseline characteristics, analysis of outcomes by gender showed a similar risk of stroke/SE in both men and women (hazard ratio [HR] 1.04; 95% confidence interval [CI] 0.59–1.84), and nonsignificant trends for men to be at lower risk of ischaemic stroke (HR=0.79; 95% CI 0.39–1.61).

Nonsignificant trends were also seen for higher risk of major bleeding (HR=1.32; 95% CI 0.90–1.95) and MI (HR=1.17; 95% CI 0.51–2.68) in men.
Conclusion: Unlike other AF populations reported in the literature, outcomes in patients with nonvalvular AF treated with rivaroxaban were generally similar between men and women in this real-world study.

P301

Comparison of local activation time annotation algorithms in high density mapping of regular atrial tachycardias

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Introduction: High-density automated mapping of regular atrial tachycardias requires an accurate assessment of the local activation time (LAT).
Aims: To compare the performance of 3 automated LAT annotation algorithms available within the CONFIDENSETM mapping module (Carto, Biosense Inc): maximum unipolar electrogram slope (SL), bipolar electrogram peak (PK) and the novel "hybrid electrogram" wavefront annotation (WF).
Methods: We analyzed 21 regular ATs in whom procedural activation mapping was unequivocal and ablation success confirmed the diagnosis. Each AT was presented randomly three times to 5 experts independently with different LAT annotation: SL, PK and WF annotation. Experts were asked to define 1) the tachycardia mechanism 2) the ablation target set forward by the corresponding activation map, and 3) the level of difficulty in interpreting the maps (graded from 1 to 4 as easy, moderate, difficult or uninterpretable).
Results: Mean AT cycle length was 300±46ms, number of activation points was 955±421. WF annotation showed the highest accuracy in defining the tachycardia mechanism (WF: 55% vs. PK: 27% vs. SL: 28%, $p<0.001$) and ablation target (WF: 65% vs. PK: 39% vs. SL: 31%, $p<0.001$). Overall, WF annotated maps, were graded as "easier to interpret" by the experts (difficulty score 2.3 ± 0.9) versus PK (2.8 ± 1) and SL (3.2 ± 0.8) ($p<0.001$). Of interest, only 12% of the WF maps were annotated as uninterpretable compared to 31% of SL and 45% of the PK maps ($p<0.001$).
Conclusion: Continuous acquisition of LAT by wavefront annotation, allows better and easier recognition of the tachycardia mechanism and the ablation target compared to the conventional unipolar slope and bipolar peak methods.

P303

Higher persistence but lower compliance with direct oral anticoagulants treatment for atrial fibrillation following a personalized therapeutic information: paradoxical results of the MONACO study

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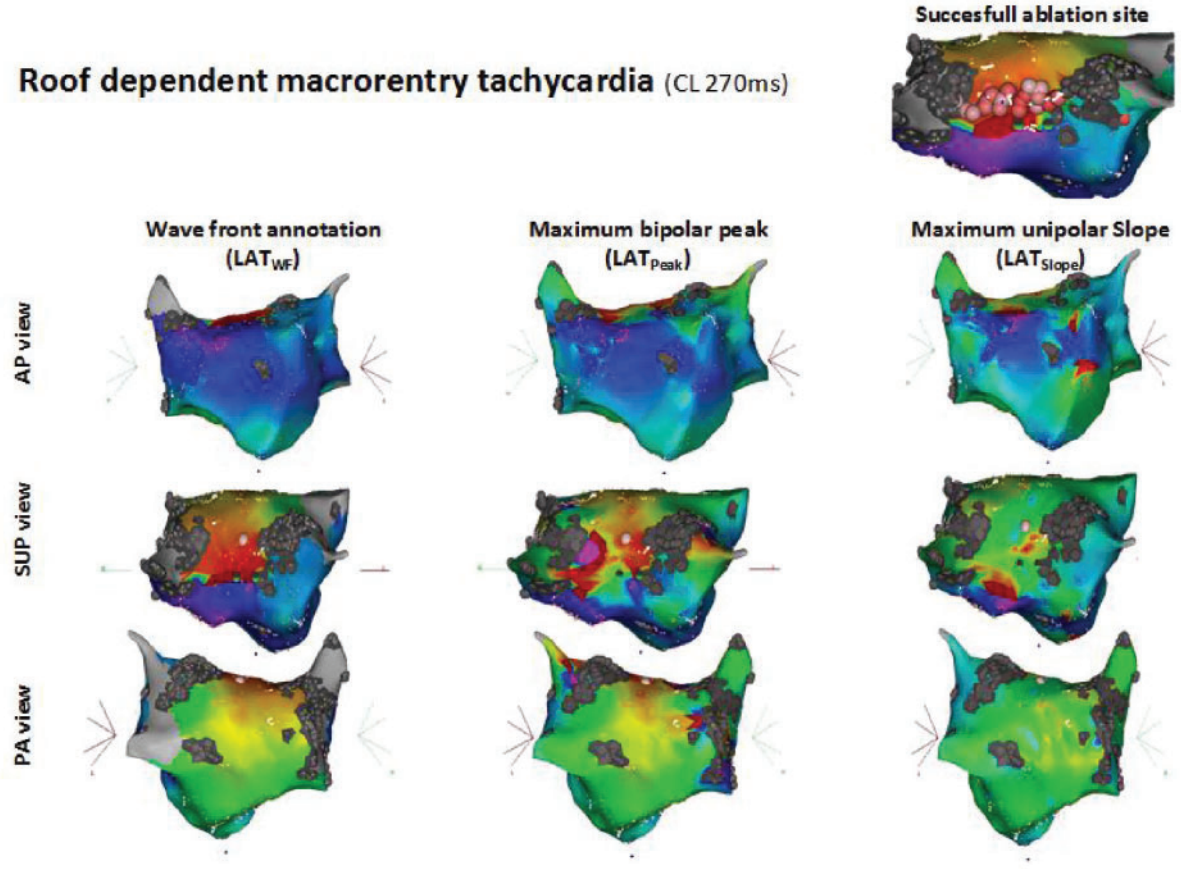
Background: Despite multiple patient education programs for VKAs, studies have shown a poor level of patient knowledge about stroke and bleeding risks, and a non optimal VKAs compliance have been often described.
Direct oral anticoagulants (DOAC) have demonstrated non inferiority compared to VKA's and share a much more convenient administration scheme, without the need of blood tests for dosage adaptation. But this convenience could carry the risk of lower drug compliance, and this could lower the benefits of these new drugs in real life prescription.
The DOACs risk management program required by the regulatory agencies include patient information, with a specific OAC information card to be carried by the patient. The goal of the study is to assess the additionnal impact of a personalized therapeutic information on compliance on rivaroxaban, prescribed once a day as VKAs.
Methods: the study is a randomized, parallel, single blind, placebo control, usual care non-interventional study with 1y follow-up. Patients recently prescribed rivaroxaban received either usual information centered on the NOAC information card (group C control) or a personalized therapeutic information (group A active) at days 15, 30, and 45 including 3 phone calls, paper booklets offer, and websites suggestion. Knowledge and compliance were evaluated at 6 and 12 months by phone with dedicated questionnaires (8-item Morisky Medication Adherence Scale : MMAS-8).
Results: 196 pts were included (97 in A and 99 in C groups). Age was 70y, 60% were male, CHADSVASc was 3,06 +- 1,5, HAS BLED was 1,36 +- 0,8. At 1y, persistence was higher in A group, 98% (90/92) vs 76% (76/92) ($p<0,001$). Reasons for cessation were in group A side effects (n=2), and in group C side effects (n=6), physician décision (n=13), patient décision (n=3). But compliance (primary outcome, mesured per-protocol by design) was paradoxically slightly lower, at 7,4 +- 0,8 vs 7,6 +- 1,1 ($p=0,02$). Knowledge results were mostly similar in the 2 groups.
Conclusion: A dedicated and personalized therapeutic information could improve drug persistence, perhaps by keeping less compliant patients from DOACs cessation for often futile reasons. These patients should be the target of educationnal programs.



Abstract P301 Figure.