P543 | BENCH

Patient characteristics associated with the initiation of novel oral anticoagulants versus warfarin in patients with atrial fibrillation

X. Pan1, H. Kawabata1, M. Hamilton1, X. Lu2, 1Bristol-Myers Squibb, Princeton, United States of America; 1Pfizer Inc., New York, United States of America

Purpose: Oral anticoagulants including warfarin and novel oral anticoagulants (NOACs) are recommended for stroke prevention in patients with atrial fibrillation (AF). It is important to understand how patients receiving NOACs may differ from those receiving warfarin in the real-world clinical setting. The purpose of this study is to assess clinical and demographic characteristics associated with NOAC initiation versus warfarin in AF patients.

Methods: Newly-initiating oral anticoagulant users with AF were identified from a national database of medical and pharmacy insurance claims in the United States. Patients were included in the study if they newly initiated warfarin or a NOAC ( dabigatran and rivaroxaban) between November 2010 and December 2011. Individuals with valvular heart disease and those treated with oral anticoagulants in the year prior to initiation were excluded. Comorbid conditions (hypertension, diabetes and history of congestive heart failure (CHF), myocardial infarction (MI), stroke, and bleeding) were obtained from claims history in the year prior to initiation. Factors associated with NOAC initiation were examined using multivariate logistic regression.

Results: A total of 10,785 NOAC patients and 19,964 warfarin patients were included in this study. NOAC users were younger than warfarin users (mean age 69 vs. 71 years, p<0.001), fewer were female (36% vs. 40%, p<0.001) and fewer had CHADS2 score ≥ 2 (64% vs. 72%, p<0.001). All comorbid conditions occurred less frequently in NOAC patients compared to warfarin patients. In multivariate analysis, NOAC use was less likely than warfarin use in older patients (OR=0.90 (0.86, 0.95)), and in those with diabetes (OR=0.92 (0.86, 0.98)) or hypertension (OR=0.99 (0.95, 1.04)). NOAC use was also significantly less likely in those with history of GI bleeding (OR=0.79 (0.72, 0.89)), intracranial hemorrhage (OR=0.62 (0.46, 0.83), other bleeding (OR=0.68 (0.62, 0.74)), stroke (OR=0.89 (0.83, 0.95)), CHF (OR=0.71 (0.67, 0.75)), or MI (OR=0.79 (0.72, 0.87)).

Conclusions: In a commercially insured population in the United States, NOAC users were younger and had significantly fewer comorbid conditions including history of MI, stroke and bleeding compared to warfarin patients. Further research is warranted as additional data becomes available to examine changes in anticoagulant treatment patterns over time and factors associated with specific NOAC initiation.

P544 | BEDSIDE

Use of simultaneous multielectrode single-beat electrocardiography for mapping of complex arrhythmias

I. Suman Horduna, L. Mantzaria, S. Ernst. Royal Brompton and Harefield NHS Trust, London, United Kingdom

Introduction: The 12-lead ECG is limited in localizing tachycardias particularly in patients with structural heart disease and/or in those with previous ablations, thus a novel tool for evaluating complex arrhythmias, particularly in patients with structural heart disease and previously failed ablation. It is compatible with advanced technologies such as magnetic navigation and facilitates ablation of multiple targets in single procedure.

Methods: Consecutive patients with previously failed ablation or complex underlying cardiomyopathy were selected. Noninvasive ECVE™ simultaneous mapping was performed pre- and intra-procedurally, to localize the arrhythmia origin(s) to guide ablation.

Results: Sixteen patients (10 male) with a median age of 46 years were studied. Fourteen patients had at least one previous endocardial ablation (1.38 previous procedure/patient), and 14 had various background cardiomyopathy. Non-invasive ECVE™ evaluated 35 arrhythmias across 16 patients (2:18 arrhythmias/patient) and correctly diagnosed the region of interest in 34 of 35 (97%) arrhythmias. Magnetic navigation was used in 5 patients. Median procedure duration and fluroscopy time were 210 min and 12.8 min, respectively. Acute ablation success was achieved in 14 of 16 patients, and in 30 of 35 arrhythmias. Three arrhythmias were considered non clinical, in one patient ablation failed due to the epicardial origin of the ventricular ectopy, and in one case ablation was not attempted due to proximity to the His bundle.

Conclusions: ECM non-invasive panoramic mapping, via ECVE™, is a feasible novel tool for evaluating complex arrhythmias, particularly in patients with structural heart disease and previously failed ablation. It is compatible with advanced technologies such as magnetic navigation and facilitates ablation of multiple targets in single procedure.

P545 | BEDSIDE

Diabetes as a comorbidity of atrial fibrillation in brady-tachy syndrome: what impact on antithrombotic therapy?

G. Boriani1, M. Santini2, L. Pedeleit3, A. CapuccI3, A. G. Botto5, M. Gulizia5, M. Biffi4, R. Ricci4, M. Vimercati1, A. Grammatico1. 1Institute of Cardiology, Univ. Bologna, Bologna, Italy; 2San Filippo Neri Hospital, Rome, Italy; 3Cardiology, Firenze, Italy; 4University Hospital Ruiunit, G.M.Lancisi Hospital, Department of Cardiology, Ancona, Italy; 5San’Anna Hospital, Como, Italy; 6Garbaldi-Nesima Hospital, Department of Cardiology, Catania, Italy; 7Medtronic Italia, Milano, Italy

Background: Diabetes mellitus is a common comorbidity both in patients with atrial fibrillation (AF) or in patients with brady-tachy syndrome. Aim of the study: Aim of our analysis was to evaluate prevalence and outcome associated to diabetes mellitus in patients suffering from brady-tachy syndrome and wearing a pacemaker with extensive diagnostic capabilities.

Methods and patient population: We studied 908 consecutive patients (50% male, 70 to 11 years) who received a dual chamber pacemaker (Medtronic AT500, Medtronic Inc., Minneapolis, Minnesota) with extensive diagnostic capabilities (30). We analyzed information on atrial fibrillation and associated characteristics. Hypertension was present in 431 (48%) patients, ischaemic disease in 175 (19%) patients, previous myocardium infarction in 75 (8%) patients, heart failure in 130 (14%) patients, diabetes in 83 (9%) patients.

Results: Over a median 22-month follow-up (25th to 75th interquartile range 16 to 30 months), arterial embolism occurred in 14 patients: 7 patients suffered a nonfatal ischemic stroke, 4 patients had a transient ischemic attack and 3 patients had embolic complications. Diabetes mellitus, present in 4 (28.6%) patients with arterial embolism, was an independent predictor of embolic events by multivariate logistic analysis (OR=1.0 95% CI 1.2 to 15.7, p=0.032).

Overall, AF lasting at least 5 min (as assessed by device diagnostics) occurred in 513 (56%) patients and lasted more than 24 hours in 291 patients (32%). In 91 patients (10%) an external atrial cardioversion was performed. Two hundred and nine (22%) patients were hospitalized for cardiovascular causes. Diabetes mellitus was not associated to a higher incidence of AF (AF lasting more than 5 min occurred in 43 diabetic patients, i.e 52%), need for external cardioversion of AF (8 diabetic patients, 10%) or cardiovascular hospitalizations (19 diabetic patients, 23%).

Conclusions: In a cohort of patients with bradycardia and AF implanted with a dual-chamber pacemaker with extensive diagnostic capabilities, diabetes mellitus results to be a strong predictor of embolic events. However, the occurrence of AF detected through device diagnostics and the need for external cardioversion did not appear to be increased in diabetic patients.

P546 | BEDSIDE

What is the optimal antithrombotic therapy of atrial fibrillation

H. Kawai, E. Watanebe, M. Yamamoto, T. Ichikawa, H. Harigaya, K. Okuda, Y. Sodue, S. Motoyama, M. Saini, Y. Ozeki. Department of Cardiology, Fujita Health University Hospital, Toyosako, Japan

Purpose: Although the antithrombotic regimen in the Atrial Fibrillation (AF) patients after coronary artery stenting is controversy, the relationship between actual antithrombotic therapy in the late phase of stenting and their clinical course has never been studied. The purpose of this study was to clarify the progression and complications of the AF patients after coronary artery stenting, and determine the most suitable antithrombotic regimen for Japanese patients, whose stroke risks are higher than European.

Methods and results: We studied 131 patients (mean age 70.7±7.5, 73.3% male, 51.9% using drug eluting stents) who underwent coronary artery stent deployment from October 2004 to September 2011. During a median follow-up of 47 months, all cause death, major adverse cardiac events (MACE, i.e. death, non-fatal myocardial infarction, target revascularization), Cerebral Infarction (CI), and major bleeding requiring hospitalization were observed in 29 (22.1%), 53 (40.5%), 12 (9.2%), and 17 (13.0%) patients, respectively. The incidence of major bleeding...