This editorial refers to ‘Management of atrial fibrillation in seven European countries after the publication of the 2010 ESC guidelines on atrial fibrillation: primary results of the PREFER in AF Registry’ by P. Kirchhof et al., on page 6.

The PREFER in atrial fibrillation (AF) registry (PREvention of thromboembolic events—European Registry in Atrial Fibrillation) is published in this issue of EP Europace by Kirchhof et al. It concerns baseline data relating to AF management following the publication of the European Society of Cardiology (ESC) Guidelines for management of patients with AF in September 2010, collected from >7000 patients in seven European countries between January 2012 and January 2013. There have been previous surveys designed to address similar issues that were conducted partly in Europe, for example, the Registry on Cardiac Rhythm Disorders Assessing the Control of Atrial Fibrillation (RECORDAF) and Real-Life Global Survey Evaluating Patients With Atrial Fibrillation International Registry (RealiseAF) or were entirely European, notably the EuroHeart Atrial Fibrillation survey.

In 2010, the ESC issued its first independent set of AF management guidelines. The previous guidelines had been published in 2006 by the American College of Cardiology, the American Heart Association, and the ESC, and by 2010, major changes were necessary because of the fast rate of progress in this field of medicine. The new ESC guidelines introduced:

- A scale to quantify disease-related symptoms (the EHRA score).
- A new scoring system to identify those patients at risk of thromboembolism (CHA2DS2-VASc).
- A bleeding risk score for patients with AF (HAS-BLED).
- A new antiarrhythmic drug (dronedarone) for reduction of AF recurrences and for reduction of cardiovascualr hospitalizations.
- A more liberal approach to left atrial ablation for paroxysmal AF.

In addition, footnotes to the guideline dealt briefly with an imminent new drug for pharmacological cardioversion (vernakalant), and with dabigatran, a novel oral anticoagulant.

The present survey (PREFER in AF) identified that oral anticoagulation was used in a greater proportion of patients and that aspirin use had fallen off in patients with a CHA2DS2-VASc score of 2 or more, but that disappointingly >60% of patients with a CHA2DS2-VASc score of 0 were still treated with oral anticoagulation and that >20% were still prescribed aspirin. These figures compare favourably with the EuroHeart Survey (Figure 1). However, antithrombotic therapy is still not correctly prescribed according the evidence base and guidelines. Novel oral anticoagulant therapy was given to about 6% of patients, largely independent of their risk category.

Rate control was given to nearly 80% of the entire population, but an isolated rate control strategy was used in only 40%. Rate control was described as inadequate (<50 or >110 b.p.m.) in only 7% of the whole group, but the symptoms were distributed evenly across rate control groups suggesting that it is AF or underlying heart disease rather than an inappropriate ventricular rate that contributes most to the symptomatic status. This finding reinforces the speculation that with safe and effective treatment patients may be managed with rhythm control in a better manner.

Rhythm control was the selected strategy in almost 60% of patients, although this differed across countries with the UK opting for this therapy in <50% and France for >70%. Surprisingly, ablation was undertaken in 5% of the total, but 12% of those who received rhythm control management, and almost one-quarter of those with recurrent forms of AF not associated with significant underlying heart disease. These data are very consistent with the recently published ESC EURObservational atrial fibrillation pilot study, in which of the 1391 patients who underwent ablation, two-thirds presented with paroxysmal AF and 38% had lone AF.
Dronedarone was used in only a small proportion of patients (between 2.0 and 7.5% of patients), probably reflecting concerns related to the results of the PALLAS study, the hepatotoxicity signal, and very heavy regulatory safeguards that have been put in place in Europe. Amiodarone was heavily used in France (40%), and remarkably sotalol was the second most commonly used antiarrhythmic drug in the UK (7%) whereas it is rarely used in Spain (<2%). All classes of antiarrhythmic drugs were given to patients with little or no heart disease, but shockingly about 5% of patients with heart failure or coronary disease inappropriately received Class I antiarrhythmic drugs (flecainide or propafenone) and sotalol was used in a higher proportion of patients with heart failure than it was in patients without heart disease! Quinidine has almost completely disappeared, but small amounts were used, particularly in France (0.5%).

Well-designed registries such as PREFER in AF provide real-world evidence and information that is complementary to that derived from randomized controlled trials. They are often, like PREFER in AF, industry-funded, and their perspective may be aligned to issues which concern the industry as well as the medical community. However, they provide an essential aspect of data gathering, since guidelines which are based predominantly on clinical trial data must also take account of what is happening in the constituency which they seek to influence. Similarly, the effect of new guidelines must be assessed by appropriately designed surveys to inform the need for new trials and revised guidelines. It is a substantial pity that PREFER in AF was not also conducted prior to the 2010 ESC AF guidelines to provide a good ‘before and after’ comparison. However, the similar, competent, and well-reported EuroHeart survey does provide a baseline reference against which to judge changes after introduction of the guidelines.

Comparison between the situation in 2005 and 2011 suggests that there has been a substantial change especially with regard to oral anticoagulation, but it is difficult to tell what role was played by the new guidelines. The data from PREFER in AF also suggest that changes have not been enough and the more definitive 2012 update to the guidelines was probably needed. The astute reader will realize that the PREFER in AF registry has a longitudinal element that will allow the early influence of this update to be more accurately assessed and we eagerly await the results.

Conflict of interest: I.S. is a Consultant/Advisor/Investigator to Bayer, BMS, Boehringer Ingelheim, Cardiome, Daiichi, Pfizer, and Sanofi. A.J.C. is a Consultant/Advisor/Investigator to Bayer, BMS, Boehringer Ingelheim, Cardiome, Daiichi, Pfizer, and Sanofi.

References
Atrial flutter with 1:1 atrioventricular conduction after administration of vernakalant for atrial fibrillation

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A 44-year-old healthy woman presented with a first episode of recent onset atrial fibrillation (Panel A). Intravenous vernakalant was administered. Organization to atrial flutter with 2:1 atrioventricular conduction occurred (Panel B). After completion of the second infusion, the atrial cycle length prolonged slightly resulting in 1:1 atrioventricular conduction (Panel C). Immediate electrical cardioversion was performed. Diagnostic work-up did not reveal any structural or electrical pathology of the heart.

Vernakalant is a newer, relatively atrial-selective antiarrhythmic drug, designed to overcome the safety issues of the currently available drugs for cardioversion of atrial fibrillation. The conversion rate in recent onset atrial fibrillation is reported to be ~50%. Compared with other antiarrhythmic drugs, vernakalant was not associated with rapid conducted atrial flutter or serious ventricular arrhythmias. The guidelines recommend vernakalant for cardioversion of recent onset atrial fibrillation in patients with no or minimal structural heart disease and with some restrictions in patients with moderate heart disease.

This case describes the occurrence of atrial flutter with 1:1 atrioventricular conduction after administration of vernakalant for atrial fibrillation in a patient with a structural normal heart and no evidence of pre-existing arrhythmias. Therefore, despite the low pro-arrhythmic risk, careful patient monitoring is necessary when using vernakalant.

The full-length version of this report can be viewed at: http://www.escardio.org/communities/EHRA/publications/ep-case-reports/Documents/atrial-flutter-with-atrioventricular.pdf.