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SCIENTIFIC EDITORIAL

Stroke prevention in atrial fibrillation: Still room for practice improvement

Prévention des accidents vasculaires cérébraux de la fibrillation atriale : des pratiques encore perfectibles

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Besides evidence-based guidelines issued by professional medical societies and the development of new drugs, stroke prevention is fundamentally affected by the way in which scientific knowledge is applied and novel therapies are implemented in routine clinical practice. Sabouret et al., in this issue of the journal, present important data about the ''real-life'' medical practice of stroke prevention in a large sample of patients with atrial fibrillation (AF). The aims of their observational study were to reflect the prescription behaviors of general practitioners (GP), who are significantly involved in the primary and secondary prevention of stroke in patients with AF, and to compare their results with the European Society of Cardiology (ESC) guideline recommendations for stroke prevention issued in 2010 and updated in 2012 [1,2]. Data were collected from a representative network of 1200 GP offices in France. The population consisted of 15,623 adults with AF who attended at least one GP consultation between July 2010 and June 2011. The patients' mean CHADS2 score was 1.5 ± 1.1 and their mean CHA2DS2-VASc score was 2.9 ± 1.5. In terms of adherence to the 2010 ESC guidelines on stroke prevention in AF, the study showed that only 56.3% of the patients received the guideline-recommended antithrombotic therapy, while it was overused in 11.2% of patients and underused in 13.0%. According to the CHA2DS2-VASc score, as recommended in the 2012 ESC guidelines, adherence to guideline-recommended therapy was even lower. However, as noted by the authors, this finding has to be interpreted with caution because the survey was completed before publication of the updated guidelines.

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These results highlight the difficulty of widespread implementation of guidelines in clinical practice from the perspective of the professionals actually involved in stroke prevention in AF. The gap between science and clinical practice has been emphasized previously. The reasons for this gap can be categorized into two main themes, the first being practical limitations to the use of oral anticoagulants, and the second to lack of knowledge or usual use of guidelines in clinical practice. Although the evidence supporting the efficacy of warfarin in stroke prevention leaves little room for interpretation, the practical limitations associated with this oral anticoagulant are clear. The array of warfarin limitations includes its unpredictable pharmacokinetics and pharmacodynamics and narrow therapeutic index. These inherent limitations explain why patients and physicians may have problems initiating and adhering to warfarin therapy. Warfarin is underutilized in most clinical practice settings outside of clinical studies. And even when the drug is initiated, the intensity of anticoagulation is often inadequate. The study by Sabouret et al. focuses on anticoagulant treatment with vitamin K antagonists (VKAs). Other ''novel'' drugs have entered the market, leading to a decline in the use of VKAs, as documented recently [3], and which reported a significant decline in the proportion of patients with AF starting warfarin concurrent with the availability of non-vitamin K oral anticoagulant agents (NOACs). NOACs present a promising alternative to overcome the limitations of warfarin. Their convenient route of administration, with a fixed dose and lack of requirement for coagulation monitoring, may translate into better adherence to guideline-recommended therapy. But there is still some way to go, as the use of NOACs for stroke prevention in AF is still suboptimal [4]. The EURObservational Research Programme Atrial Fibrillation (EORP-AF) Pilot General Registry provides contemporary data on oral anticoagulation prescribed by European cardiologists for AF. Although the uptake of VKA oral anticoagulation has improved since the Euro Heart Survey was conducted a decade ago, antiplatelet therapy is still commonly prescribed, with or without oral anticoagulation, and elderly patients are commonly undertreated. Overall, 95.6% of patients with a score ≥ 1 received antithrombotic therapy, 80.5% with oral anticoagulation. However, 83.7% of those with a score ≥ 2 received antithrombotic therapy, 70.9% with oral anticoagulation. VKAs were used in 64.1% and NOACs in 6.9% [5].

In the present study by Sabouret et al., the decision-making for thromboprophylaxis was largely the responsibility of the GP. Many reports have shown major discrepancies between provider specialty regarding treatment strategies in AF. Detailed educational programmes on the efficacy, safety and limitations of these treatments are urgently needed to improve rates of use of appropriate antithrombotic therapy. As illustrated by the findings reported by Sabouret et al., alongside other sources that show strongly consistent data, these programmes should be especially dedicated to GPs and internal medicine physicians. Sabouret et al.'s study also raises the issue of the difficulty of implementing guideline recommendations because of their multiplication: the simultaneous use of old and new guidelines, or of guidelines issued by different organizations, can lead to a degree of confusion or contradictory guidance.

Observational studies and phase 4 clinical trials are essential in providing data on elderly patients, who are primarily affected by AF [6,7]. In this ''real world'' cohort from the AFIGP survey, the mean age of the patients (74.6 years) was greater than that of patients included in recent phase 3 clinical trials on antithrombotic therapy in non-valvular AF (71.5 years). It was also very close to the cut-off of 75 years, which adds an additional point on the CHA2DS2-VASc score, but is also an additional risk factor for bleeding in the HAS-BLED score [8]. Advanced age is frequently an exclusion criterion in clinical trials. The comparative safety of oral anticoagulant therapy in elderly patients with non-valvular AF was reported recently, using data from the Medicare database [7]. The study involved 134,414 patients with AF older than 65 years who were followed over 2 years (between 2010 and 2012); the patients' risk factors were assessed using the CHADS2 and HAS-BLED scores. Anticoagulant treatment with warfarin was noted in 41—43% of the patients aged 65—84 years and in only 16% of those older than 85 years.

Interestingly, the report by Sabouret et al. provides information on anticoagulant prophylaxis for stroke prevention in a single western European country. Guidelines published by the ESC and other societies have tried to recommend a uniform evidence-based approach to management. Despite the availability of such guidelines and efforts to improve their implementation, differences in adherence to recommended treatments are still evident. Therefore, the results should be analyzed in view of country differences in patient characteristics and management practices. Indeed, the findings from the EORP-AF registry have shown differences between countries and regions within Europe: a CHA2DS2-VASc score ≥ 2 was highest in East and South countries (93.0 and 95.3%, respectively) versus 80.8% in West countries ($P < 0.0001$); a HAS-BLED score ≥ 3 was also highest in East and South countries (18.0% and 29.2%, respectively) compared with 4.8% in West countries ($P < 0.0001$). Use of oral anticoagulation in West, East, and South countries was 72.0%, 74.7%, and 76.2%, respectively, and antiplatelet therapy was used alone in 13.6%, 15.4%, and 12.4% [9]. Worldwide, adequate antithrombotic therapy is inconsistent at global, country and regional levels, and may be influenced by factors including the degree of awareness of updated guidelines. While in Europe oral anticoagulants are used in nearly 60% of patients with AF, outside of Europe, in the United States, registry data indicate a lower use of oral anticoagulants (i.e. 50%). The same is observed in Asia versus Japan and non-Asian regions (i.e. 36% vs 54% and 55%, respectively) [10].

In conclusion, the present study provides systematic collection of contemporary data on the current management and treatment of AF by GPs in France. Compliance with evidence-based treatment guidelines for patients at low or high risk of stroke remains suboptimal. Observational data such as these are key for generating measures aimed at increasing the implementation of guidelines in clinical practice, encompassing practical and organizational aspects, educational efforts, and improvements in access to therapy.

Disclosure of interest

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