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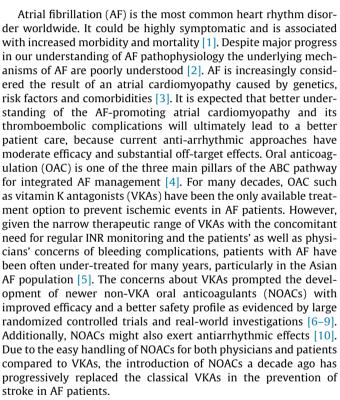


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## Editorial Stroke prevention of atrial fibrillation: Improving geographic under-use of contemporary antithrombotic approaches remains a challenge



Despite intrinsic limitations of real world data, registries are an important source of information about geographic differences in AF treatment [11]. The Global Registry on Long-Term Oral Antithrombotic Treatment in Patients With Atrial Fibrillation (GLORIA-AF) was a global registry performed in different stages. Patients with newly diagnosed nonvalvular AF were enrolled into the registry during 3 separate phases. Phase 1 was conducted before approval of NOACs in each region. Phase 2 began in each country when dabigatran, the first approved NOAC, was introduced. Data including AF characteristics, pre-existing medical conditions and medications were collected. From November 2011 to December 2014, a total of 15,641 patients at 984 centers in 44 countries were enrolled in phase 2... Of those, about 70% were European or North American. About 20% of patients were enrolled in Asia, 6% in Latin America and 4% in the Africa/Middle East (AME) region. Interestingly, up to 20% in North America and up to 45% in Asia were either treated with acetylsalicylic acid or not at all, indicating lack of stroke prevention in a substantial proportion of patients. The underuse of anticoagulants might be a consequence of concordance with the U.S. guidelines at that time, which advised antiplatelet therapy or no antithrombotic therapy as an alternative to OAC in patients with CHA2DS2-VASc scores of 1 [12]. Of note, the 4% of patients enrolled in the AME region had a much higher anticoagulation rate (only 10% received ASA and <2% remained untreated), with patients in Europe having the highest anticoagulation rate [13].

In this issue of the International Journal of Cardiology Heart & Vasculature Azar et al. report about the treatment of patients from the Africa/Middle-East Region Sub-Study of the GLORIA-AF [14]. They compare the baseline characteristics, concomitant medication, medical treatment as well as effectiveness and safety outcomes in this particular patient collective to the overall data of the GLOARIA-AF registry, identifying a slightly younger patient collective with more comorbidities, but comparable CHA2DS2-VAScand HAS-BLED-scores. Most of the patients enrolled in the AME region were treated with a reduced dabigatran dose (110 mg twice daily), in contrast to the global cohort, where the 150 mg dose twice daily was the most frequent option. Of note, ischemic events and bleeding complications were very rare in this cohort, perhaps because of using a lower dose of dabigatran. In a comprehensive overview, the authors relate their real-world data to the outcome of the randomized "RE-LY" trial, and to the only multinational prospective registry on AF and OAC performed in this region, the Gulf SAFE registry that was performed in "before-NOAC-times", providing complementary evidence to those from randomized controlled trials, particularly because the latter usually under-represent a particular region or ethnicity. A direct comparison to the randomized RE-LY trial (that included 18,113 patients, compared to only 600 in this registry) cannot be made, as most of the patients enrolled in the AME region were treated with a reduced dose of 110 mg dabigatran twice daily. Moreover, the investigated patients were younger (67 vs 71 years in the RE-LY trial), with a higher proportion of comorbidities like arterial hypertension and diabetes, but less patients with a history of stroke [6]. Although a direct comparison cannot be made and the event rate in the reported registry was very low, dabigatran use was associated with a higher efficacy and a better safety [14]. The Gulf SAFE registry enrolled 2043 consecutive patients with AF from Kuwait, Bahrain, Qatar, United Arab Emirates, Oman and Yemen which were younger (57 vs. 67 years) and had fewer comorbidities, as indicated by the lower CHA2DS2-VASc score. Still, stroke/transient ischemic attack



rates (4.2%) and all-cause mortality (13%) were much higher in this registry (compared to less than 1%, or less than 2% respectively, in the GLORIA-AF sub study [14] presumably due to insufficient use of anticoagulation, because in the Gulf SAFE registry only 58% of patients received a VKA and of those only 50% underwent regular INR checks [15]. This highlights that use of NOACs instead of VKAs is associated with a better treatment of AF patients independent of ethnicity or geographic region.

In conclusion, prospective observational registries of AF patients from different world regions, as exemplified by Azar et al. [14], provide important insights into region-specific patterns of AF management, healthcare system features and unmet needs along with knowledge gaps, thereby helping to improve the management of AF patients and, ultimately, their outcome. Prospective randomized clinical trials are clearly required to determine the efficacy and safety of OACs in the prevention of thromboembolic events in the many in randomized clinical trials under-represented regions and ethnicities of the world.

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### **Conflict of interest**

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