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Temporal trends and regional differences of initial oral antiarrhythmic drug options in patients with new-onset atrial fibrillation: a report from the GLORIA-AF registry

B. Huang¹, H.M. Lam¹, H. Ishiguchi¹, Y. Liu¹, T.-F. Chao², B. Olshansky³, M. Huisman⁴, G. Lip¹

¹University of Liverpool, School of Medicine, Liverpool, United Kingdom of Great Britain & Northern Ireland

²Taipei Veterans General Hospital, Taipei, Taiwan

³University of Iowa Hospitals and Clinics, Iowa, United States of America

⁴Leiden University Medical Center, Stafcentrum Hartziekten C5-P, Leiden, Netherlands (The)

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Background: New-onset atrial fibrillation (AF) is common and antiarrhythmic drugs (AADs) are commonly used for treating such patients. However, whether there are temporal changes and regional differences in the choice of AADs in direct acting non-vitamin K oral anticoagulants (DOACs) era is less studied.

Purpose: The present study aimed to analyze the temporal trends and regional differences of initial oral AAD options in patients with new-onset AF in the GLORIA-AF registry, based on a proposed modernized classification of AADs in 2018 (Circulation, 2018, PMID: 30354657). AADs involved in the present study included traditional Vaughn-Williams Class I to Class IV AAD, Class IId AAD (digoxin), and Class VII AAD, which acts on the upstream of arrhythmia including angiotensin converting enzyme inhibition, angiotensin receptor blocker, and stains.

Methods: Temporal changes regarding the AAD use between the two phases of GLORIA-AF and regional differences of AADs choice were investigated. Factors associated with the choice of different AADs were established by multivariate logistic regression.

Results: Among the 36,617 participants in the GLORIA-AF registry, 33,208 (90.7%) were prescribed with AADs: 74.0% were rate control and 10.2% were rhythm control, and among the prescribed AADs, single and dual AADs were used in 73.3% and 24.9%, respectively. Moreover, 70.5% patients received upstream target modulators (Class VII AAD). Class IIa AADs (beta-blockers) were the most commonly prescribed AAD and slightly increased from Phase II (60.58%) to Phase III (62.91%) while the use of Class IId AAD (e.g. digoxin) decreased regardless of single or combined use. AADs use varied significantly among regions but the temporal trends and regional differences were similar with that of the overall cohort. Age, gender, comorbidities, admission signs, region, and concomitant medications (e.g. anticoagulants) were associated with the choices of different AADs.

Conclusions: In the DOAC era, new-onset AF patients receiving AAD commonly included upstream therapy. Rate control was still the dominant strategy for patients with new-onset AF but the use of Class IId AAD significantly decreased with the increased use of Class IIa AAD. The choice of AADs demonstrated significant regional differences and concomitant anticoagulants played important roles.



Temporal trends in GLORIA-AF



Comparisons of AADs use in GLORIA-AF