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Editorial

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Is It Time to Expand the Indication of DOAC to Patients With Cardiac Amyloidosis and Atrial Fibrillation?

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▸ See the article "Direct Oral Anticoagulants in Patients With Cardiac Amyloidosis: A Systematic Review and Meta-Analysis" in volume 6 on page 36.

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Oral anticoagulation (OAC) stands as a fundamental cornerstone in the realm of stroke prevention for individuals with atrial fibrillation (AF).[1] Given the pivotal role played by randomized clinical trials (RCTs), direct oral anticoagulants (DOACs) have emerged as the predominant choice for OAC in patients with non-valvular AF.[1] Consequently, there has been a notable rise in the prescription of DOACs over the past decades.[2] However, it is essential to acknowledge that previous RCTs investigating DOACs had limitations, particularly in their applicability to populations with specific disease entities, such as cardiac amyloidosis.[3-6]

Concerning the restricted suitability of DOACs in special populations, recent research has been disseminated to broaden the utilization of DOACs.[7,10] Accumulating evidence has expanded the application of DOACs to individuals with hypertrophic cardiomyopathy, a history of stroke, and chronic kidney disease.[7,10] Nevertheless, uncertainties persist regarding the safety and efficacy of DOACs in comparison to vitamin K antagonists (VKAs) among patients with cardiac amyloidosis, and the available data is confined to small-scale studies.

The significance of OAC in patients with cardiac amyloidosis arises from the frequent occurrence of complications such as AF and thromboembolic events in this patient population.[11] The prevalence of AF varies from 9% to 69%, contingent on the particular type of cardiac amyloidosis.[11,12] The presence of AF alongside cardiac amyloidosis elevates the risk of thromboembolic events, underscoring the imperative for OAC regardless of the CHA_2DS_2-VASc score.[13,14] Patients diagnosed with cardiac amyloidosis often exhibit a higher likelihood of substantial fibrotic scar tissue within the left atrium, indicating more pronounced electrical and structural remodelling.[11] This factor should be considered when assessing the thromboembolic risk in individuals with cardiac amyloidosis and AF. Moreover, the frequently accompanying decline in kidney function is a crucial aspect to consider in the formulation of anticoagulation therapy strategies.[15] In the absence of pertinent data or guideline directives, the choice of anticoagulation agents for patients with both cardiac amyloidosis and AF is currently reliant on general guidelines established for individuals with AF.

In this issue of journal, a systematic review and meta-analysis comparing DOACs to VKAs in patients with cardiac amyloidosis and AF provide valuable insights by synthesizing findings from prior small-scale studies.[16] The principal observations of this investigation are 2-fold. Firstly, there were no discernible disparities in major bleeding events, defined as instances ne-

cessitating hospitalization or transfusion, between patients with cardiac amyloidosis and AF treated with DOACs versus VKAs. Secondly, thrombotic events were marginally lower in individuals receiving DOACs compared to VKAs in this specific patient cohort. Taken together, the prescription of DOACs may represent a viable alternative for anticoagulation in patients with both cardiac amyloidosis and AF.

Despite these findings, there are limitations to the interpretation of the results. Primarily, all studies included in the meta-analysis were of a retrospective design, predominantly conducted in single-center settings. Potential unadjusted confounders may exist due to the study design. Additionally, the evaluation of VKA control, as indicated by therapeutic time in range (TTR), was not consistently accessible across the included studies. The incidence of thromboembolic and bleeding events in patients treated with VKAs might have been impacted by the level of TTR. Thirdly, there is an uneven distribution of included amyloidosis subtypes, underscoring the necessity for further research that integrates data on light chain amyloidosis. Fourthly, there was a disproportionate representation of male sex and Caucasian ethnicity in the distribution of the study population. Additional research with a greater number of participants from the female sex and diverse ethnic backgrounds, particularly Asian, is essential for broader generalization.

This meta-analysis has provided extensive data suggesting that the use of DOACs may be as safe and effective as VKAs in anticoagulation therapy for patients with cardiac amyloidosis and AF. Nonetheless, additional confirmation is warranted through prospective randomized clinical trials.

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