Non-vitamin K antagonist oral anticoagulant use in underrepresented populations in atrial fibrillation: A survey of Australian Pharmacist Practice

shpa Specialty Practice Cardiology

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Introduction

Non-vitamin K antagonist oral anticoagulants (NOACs) are recommended as the first-line anticoagulation therapy for preventing strokes in patients with non-valvular atrial fibrillation (NVAF).

Certain patient groups, such as vulnerable geriatric patients, those with end-stage kidney disease (ESKD), and patients with obesity, were not well represented in the landmark trials for NOACs. The choice of drug is often based on the preferences of the clinician and patient and their understanding of the unique characteristics of each drug.

There is a lack of real-world data on pharmacists' perceptions regarding the use of NOACs for stroke prevention. Understanding the experiences of pharmacists in using NOACs with under-represented populations can offer insights into practice and help identify areas for further education and research to align patient care with evidence-based practice.

Aim

To explore pharmacists' perceptions in using NOACs among patients with NVAF and advanced age, obesity or ESKD

Methods

Study design
We conducted a cross sectional, self-administered survey of Australian pharmacists who were members of the following specialty practice streams of the Society of Hospital Pharmacists Australia (SHPA): Cardiology; Critical care; General medicine; Nephrology; Surgery and Perioperative Medicine

Survey design
Study data were collected and managed using Research Electronic Data Capture (REDCap) tools hosted at Grampians Health Ballarat. The final survey consisted 70 questions and consisted of multiple choice, check-box, and free text formats. The questions were spread across four parts: Participant demographics; management of NVAF; off-label use prescription of NOACs, and follow up/education

Data analysis
Analysis was performed using Stata v18.0 (College Station, TX, USA) and Microsoft Excel

Ethics
Ethical approval for this study was approved by the Grampians Health Human Research Committee (95233)

Results

31% (45/145) of practice group members responded

Results

NOAC use in advanced age

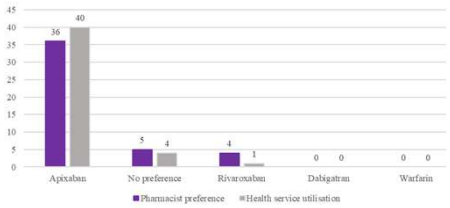

Figure 1: Non-vitamin K oral anticoagulant use in individuals with advanced age (defined as age greater than 75 years of age) (n = 45)

- 84% (37/45) of participants indicated that the doses of NOAC were reduced in accordance with the product information (PI) in their daily practice
- 16% (7/45) indicated they would recommend a reduction in NOAC dosage that deviates from PI

NOAC use in obesity

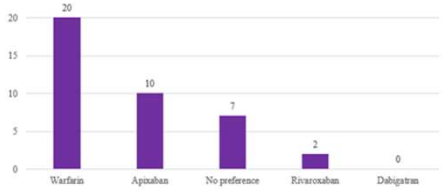

Figure 2: Preferences for oral anticoagulants when individuals are beyond obesity cut-offs. (Note responses based on individuals definition of obesity as per their own clinical practice) (n = 39)

- Survey results indicated that a variety of parameters were used to define obesity
- The most commonly used measurement for obesity cut-off was total body weight (46%, 19/41), followed by adjusted body weight (24%, 10/41)
- The minimum cut off for body mass index (BMI) was 30kg/m^2 or an actual body weight of 120 kg

NOAC use in ESKD

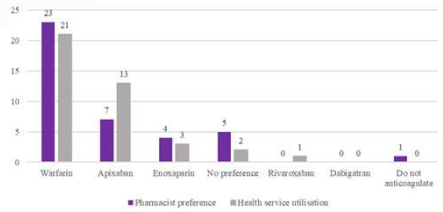

Figure 3: NOAC use in individuals undergoing haemodialysis (n=40)

- 29% (12/41) of participants would recommend dose reduction of NOAC when managing patients with NVAF based on kidney function outside of PI suggestions

Results

NOAC use in ESKD (continued)

Creatine clearance cut-offs	NOAC	Minimum	Median	Maximum
For initiation	Apixaban (n=40)	10	18	30
	Rivaroxaban (n=40)	15	15	50
	Dabigatran (n=37)	30	30	60
For cessation	Apixaban (n=38)	10	15	30
	Rivaroxaban (n=37)	10	15	37
	Dabigatran (n=37)	30	30	60

Table 1. Creatine clearance (mL/min) cut-offs for initiation and cessation of NOACs

- 5% (2/40) participants noted no minimum cut-off for apixaban initiation and 16% (6/38) participants noted no minimum cut-off for cessation

Discussion

Although some participants may suggest reducing the dose for elderly patients beyond the PI recommendation, the literature indicates that inappropriately reduced NOAC doses lead to less favourable outcomes in terms of thromboembolic events (1).

While most participants preferred warfarin for anticoagulation in patients with obesity, there is growing evidence that NOACs, especially apixaban and rivaroxaban, may be preferred for obese patients with NVAF. However, the evidence for patients with a BMI over 40 kg/m^2 is less conclusive (2,3).

Within the context of haemodialysis, 18% of participants expressed a preference for using apixaban. However, the evidence for safety and efficacy data for using the NOACs in NVAF patients with ESKD is still emerging. It is therefore important to engage in individualized discussions with patients regarding the risks and benefits of various treatment options and to consider the "off-label" use of these medications (4).

Conclusion

This survey of Australian pharmacists demonstrated variability in perception and trends regarding the use of NOACs in managing NVAF among patients with advanced age, obesity and ESKD.

Large scale RCTs are warranted to establish the role of NOACs in under-represented populations. Our findings highlighted potential focus areas for targeted education to optimise the utilisation of NOACs in patients with NVAF.

Acknowledgements

The authors thank Suzanne Newman and Annabel Steffens for supporting the SHPA Cardiology Leadership Committee, and for providing data and communication of the survey.

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