Time to develop guidelines for screening and management of atrial fibrillation in Indigenous Australians

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Screening guidelines specific to the needs of Australia's Indigenous population are needed

One-third of all ischaemic strokes are associated with atrial fibrillation (AF).[1] Over the next 15 years, the number of AF-related strokes in Australia is likely to rise substantially because of the predicted rise in AF prevalence.[2] It is conservatively estimated that by 2034 more than 600 000 people in Australia will have AF, but these numbers do not take into account the higher prevalence of AF among Indigenous Australians.[2] The prevalence of AF among hospitalised Indigenous patients under 60 years of age was reported by one study to be 2.57%, compared with 1.73% for non-Indigenous patients.[3] These hospital-specific figures possibly underestimate prevalence, however, as they do not include cases of AF detected in Indigenous medical centres or general practices, or people with undiagnosed AF.

In this issue of the *MJA*, Nedkoff and colleagues highlight significant differences between Aboriginal and non-Aboriginal patients with respect to AF presentation, stroke risk, and cardiovascular mortality, particularly among Aboriginal people aged 20–59 years.[4] This is a consistent finding across the indigenous populations of Australia, New Zealand and North America, who are all reported to develop AF at a younger age, have higher cardiovascular risk, and have much poorer prognoses than non-indigenous people in their countries.[5,6] Earlier onset may be related to earlier development of cardiovascular risk factors that increase the risk of AF, and possibly also to genetic predisposition, greater alcohol intake, and undetected rheumatic valvular heart disease;[3,7] Nedkoff and colleagues also identified a higher burden of valvular heart disease in Aboriginal people than in other patients with AF (15% *v* 7%).[4] The combination of higher cardiovascular disease risk, earlier development of AF, and higher stroke risk with AF at a younger age contributes to health gaps between Indigenous and other Australians. In fact, Nedkoff and colleagues reported that Aboriginal patients died a mean 2.9 years after being first diagnosed with AF, compared with 3.3 years for non-Aboriginal patients.[4]

For this reason, it is imperative that AF is identified early, so that thrombo-prophylaxis can be commenced to prevent stroke. However, AF is often asymptomatic, so it is unlikely that people will attend a consultation to be assessed for AF.[8] Aboriginal people may be even less likely to seek medical review for AF; as Nedkoff and colleagues report, AF was the principal admission diagnosis for only 31% of admissions of Aboriginal patients, compared with 57% of non-Aboriginal patient admissions.[4]

Screening guidelines specific to the needs of Indigenous Australians are needed to close these health gaps. Hospital data show that the mean age of Indigenous patients with AF is 55–56 years, 13–20 years younger than non-Indigenous patients.[3,4] Consequently, if screening is commenced at 65 years, in line with Australian guidelines,[9] more than half of the cases of AF in Indigenous people will be missed. To determine the optimal age for commencing screening, we need to better understand the patterns and prevalence of AF in the community, not just in the hospital setting.

Further, Australian guidelines recommend opportunistic screening, usually carried out during primary care consultations. This pattern of screening may not be suited to Indigenous Australians. Unfortunately, only a few studies for guiding community AF screening of Aboriginal Australians have been undertaken.[10] As it is reported that people accept Aboriginal Health Workers and registered nurses from Aboriginal Community Controlled Health Services for delivering opportunistic AF screening services, it has been proposed that AF education and screening be incorporated into existing Aboriginal adult health checks.[11] Further exploration of potential screening models is required to determine sustainable and effective approaches that reduce barriers to

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health care. Models for screening should take cultural factors into consideration and involve Indigenous communities in co-designing appropriate services in order to ensure that screening is suitable and acceptable.

A significant challenge to AF screening is persuading people to return for medical review and treatment after possible AF has been identified.[11] A well designed and culturally sensitive pathway to treatment and follow-up will be required if AF screening is to be established and succeed. Treatment pathways should include options that allow screening, confirmation of the AF diagnosis, and assessment and initiation of appropriate treatment within a single consultation. Particularly in remote communities, access to local international normalised ratio (INR) monitoring is difficult, and treatment with affordable non-vitamin K-antagonist anticoagulants (NOACs), which do not require regular INR monitoring, would be preferable.[12] Adherence to treatment might be improved by educating people about AF and cultivating their cardiovascular health literacy, using culturally and linguistically appropriate resources.[11]

For patients with valvular AF, including those with mechanical valves or rheumatic mitral valve disease who have AF, the decision to treat with warfarin is clear,[9] despite difficulties with INR monitoring. For people with non-valvular AF, decisions about anticoagulation therapy are less clear cut. In general, these decisions are guided by the CHA_2DS_2-VA (stroke risk) score, which includes points for people over 65 or over 75 years of age.[9] As 76% of Indigenous patients with CHA_2DS_2-VA scores of 2 or more do not receive anticoagulation therapy, undertreatment is a major problem.[13] There is little evidence supporting the applicability of CHA_2DS_2-VA thresholds to Aboriginal patients,[9] and, given their higher stroke rates,[4] younger Aboriginal patients with non-valvular AF but CHA_2DS_2-VA scores below 2 might well benefit from anticoagulation therapy.

Finally, anticoagulation decisions must take the higher intracranial haemorrhage rates of Indigenous Australians into account.[14] Treatment with NOACs may be safer than with warfarin, as trials in Asian populations with similarly high intracranial haemorrhage risk have found that their rate is reduced by about 50% in patients receiving NOACs.[15] Unfortunately, evidence about the safety of NOACs for Indigenous Australians is scarce. Importantly, many factors associated with intracranial haemorrhage, including hypertension, are potentially modifiable.[9]

Screening for AF may provide an opportunity for preventing cardiovascular disease. In order to reduce both the growing burden of AF and stroke risk, a holistic approach is needed to not only identify and manage AF, but also to reduce the cardiovascular risk factors that underlie this common arrhythmia and its devastating complications. Australian consensus statements for opportunistic screening are therefore required, as are anticoagulation treatments and thresholds specific to Indigenous Australians, with a focus on younger people.

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