Prevalence of atrial fibrillation in remote Indigenous and non-Indigenous populations: A ten-year study in Central Australia

Nicholas A. R. Clarke  
Nadarajah Kangaharan  
Celine Gallagher  
Bradley M. Pitman  
Rajiv Mahajan  
Dennis H. Lau  
Prashanthan Sanders  
Christopher X. Wong

Introduction: Although limited data from mainly urban settings exists on the prevalence of atrial fibrillation (AF) among Indigenous Australians, it is not clear if there is a similar prevalence in rural and remote populations.

Methods: Consecutive patients with a diagnosis of AF admitted to Alice Springs Hospital (ASH), the only secondary hospital and provider of specialist cardiac care in the region, were identified over a 10-year period from 2006-2016. Age and gender-standardised prevalence rates, in addition to rate-ratios, for Indigenous and non-Indigenous patients were estimated for AF using Census population data.

Result: Of 57,056 total patients over the study period, 1,210 (46% Indigenous) had a diagnosis of AF. Indigenous patients with AF were younger (mean age 56.6±1.23 years versus 66.1±1.08 years). The Indigenous and non-Indigenous age-standardised AF prevalence rates for males <45 years was 105.5 and 50.3 per 10,000 respectively (ratio=2.10 [95%CI 1.45-3.04]) and for females < 45 years was 97.9 and 12.4 per 10,000 (ratio=7.92 [95%CI 4.10-15.32]). In contrast, the Indigenous and non-Indigenous AF prevalence for males >65 years was 1,577 and 2,326 per 10,000 respectively (ratio=0.68 [0.51-0.90]) and for females >65 was 1,713 and 1,897 per 10,000 respectively (ratio=0.90 [95% CI 0.71-1.15]).

Conclusion: The prevalence of AF in remote Central Australia is significantly higher in younger Indigenous individuals, and particularly females, supporting trends seen in the urban setting. These data raise the possibility that AF may be in part contributing to the gap in morbidity and mortality experienced by Indigenous Australians in rural and remote settings.