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Comparison of Presenting Characteristics and Cardiovascular Outcome Between Indigenous and Non-Indigenous Patients With Peripheral Artery Disease

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Background: The risk factors for peripheral artery disease (PAD) are more common in Indigenous than non-Indigenous Australians; however, the presentation and outcomes of PAD in Indigenous Australians have not been previously investigated. The aim of this prospective cohort study was to compare the presenting characteristics and clinical outcomes of Indigenous and non-Indigenous Australians with PAD.

Methods: Patients with PAD were prospectively recruited since 2003 from an outpatient vascular clinic in Townsville, Australia. Presenting symptoms and risk factors in Indigenous and non-Indigenous patients were compared using Pearson's Chi-squared test and Mann-Whitney U test. Kaplan Meier survival analysis and Cox proportional hazards analysis compared the incidence of myocardial infarction (MI), stroke or death (major cardiovascular events) among Indigenous and non-Indigenous patients.

Results: A total of 401 PAD patients were recruited, of which 16 were Indigenous and 385 were non-Indigenous Australians. Indigenous Australians were younger at entry (median age 63.3 (54.7–67.8) vs 69.6 (63.3-75.4)), more commonly current smokers (56.3% vs 31.4%), and more frequently had insulin-treated diabetes (18.8% vs 5.2%). During a median follow-up of 2.5 years, five and 45 combined events (MI, stroke or death) were recorded amongst Indigenous and non-Indigenous Australians, respectively. Indigenous Australians were at a four-fold greater risk of major cardiovascular events (adjusted hazards ratio 4.03, 95% CI 1.17–13.87, $p = 0.027$) compared to non-Indigenous Australians.

Conclusions: These findings suggest that Indigenous Australians with PAD present at a younger age, have higher rates of smoking and insulin-treated diabetes, and poorer clinical outcomes compared to non-Indigenous Australians.

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This abstract has been withdrawn.

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Current Outcomes of Valvular Surgery for Indigenous Australians With Rheumatic Heart Disease: A Single-centre Experience

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Purpose: Rheumatic heart disease (RHD) remains a problem amongst Indigenous Australians, with many presenting for surgery at a young age. Long-term outcomes of RHD surgery amongst Indigenous Australians remain unreported. Hence, this study aimed to describe outcomes of valvular surgery for RHD in Indigenous Australians at a single centre.

Methods: Indigenous Australian patients with RHD and who underwent valvular surgery (n = 112) between 2008 and 2016 were reviewed. Data were prospectively collected, and follow-up was obtained from cardiologists. Multivariate analysis was performed to determine predictors of mortality.

Results: Mean age was 43 ± 16 years (range 13–73) with 82 (73%) being females. Surgery was performed on the mitral valve in 93 (83%), aortic valve in 51 (46%), and tricuspid valve in 28 (25%) patients. In patients aged ≤50 years (n = 73), there were 45 bioprosthetic (62%) valves implanted. Operative mortality was 2.7%. Nine (8%) patients had reoperation for infective endocarditis (n = 3), bioprosthetic valve degeneration (n = 4), mechanical valve thrombus (n = 1), and progression of RHD in other valves (n = 1). There were 18 (16%) late deaths, and survival at 5 years was 83 ± 4.1 (95% CI 73–89%). Risk factors for mortality were concomitant coronary artery bypass grafting ($p = 0.008$) and preoperative left ventricular ejection fraction (LVEF) ≤40% ($p = 0.043$). The mean follow-up for survivors was 5 years (2 months–9 years) with 97% of patients in New York Heart Association class I or II.

Conclusions: Valvular surgery for RHD in Indigenous Australians can be performed with low operative mortality. In patients aged ≤50 years, bioprostheses were the valve of choice. Concomitant coronary artery disease and LVEF ≤40% were predictors of mortality.

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