

Prevalence of diabetes in vascular disease

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Background

- Diabetes mellitus (DM) is a major risk factor for atherosclerosis-related vascular diseases including ischaemic stroke (IS) and acute coronary syndrome (ACS).
- Diabetes prevalence in the general population of regional Australia is 6-7%.
- The overall prevalence of DM in stroke globally is 21%, and within Australia reported up to 26%.
- DM is reportedly prevalent in 22-30% of acute coronary syndrome presentations.
- There is limited data on the direct comparison of diabetes in vascular disease processes, particularly in the regional setting.

This study aimed to:

1. Compare the prevalence of DM in cerebrovascular and cardiovascular disease in a regional Australian hospital.
2. Assess how diabetic control is associated with each vascular disease progress

Methods

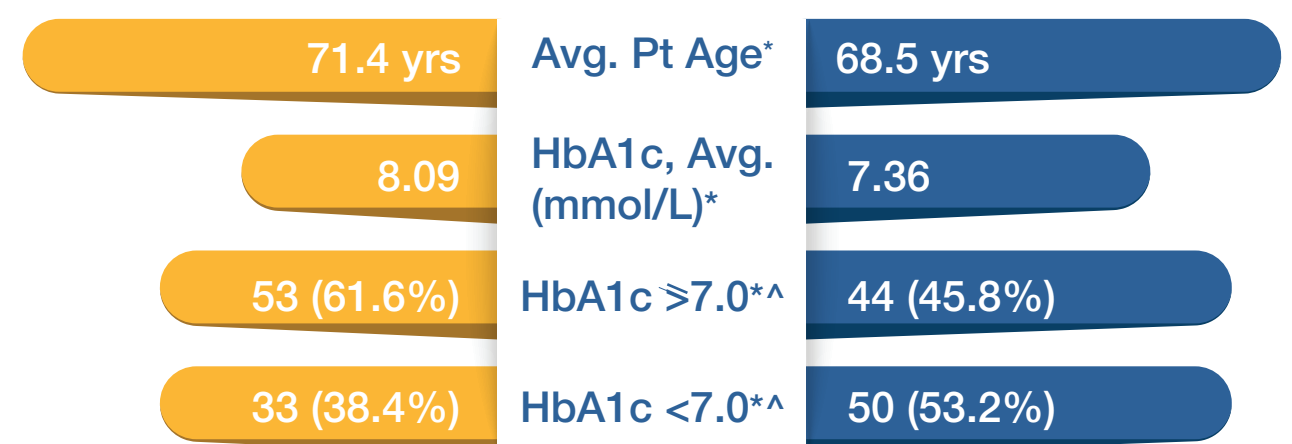
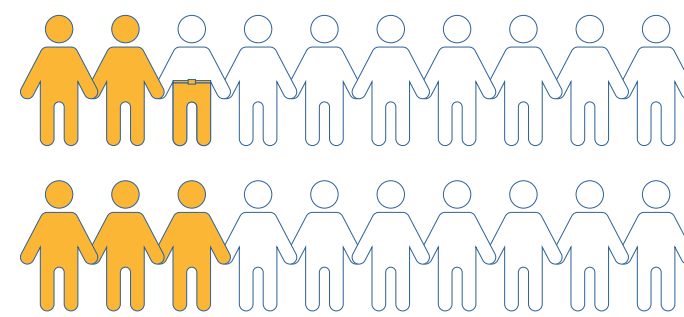
Retrospective data from 18 months of admissions at Ballarat Health Services for Ischaemic Stroke and Acute Coronary Syndrome.

Analysis of medical records documentation of diagnoses and investigations for diabetic patients, variables, respectively.

Prevalence of DM in each admission identified, then sub-analysis of diabetic control (measured as HbA1c mmol/L) was completed.

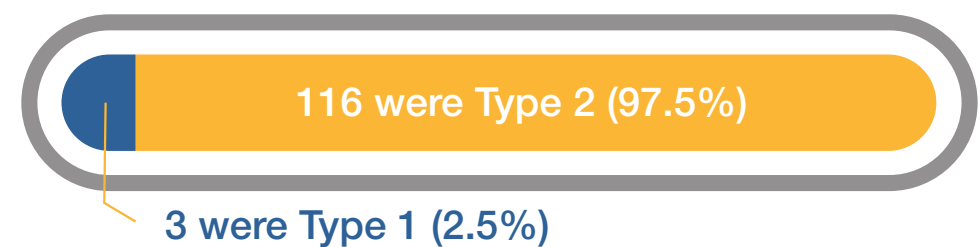
Statistical analysis for significance was completed using t-test and chi-square for continuous and categorical.

Results

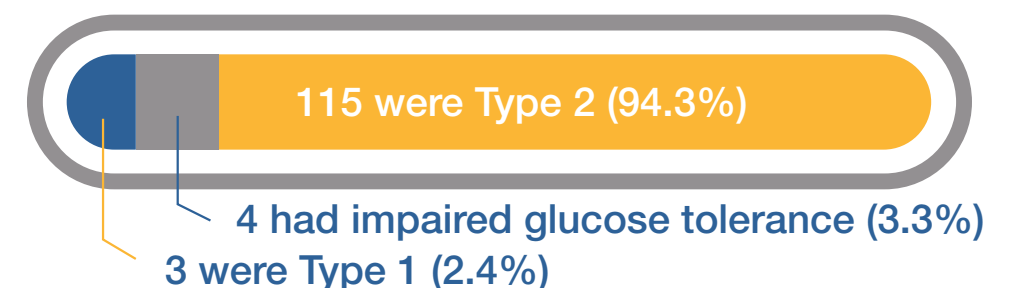


*indicates statistical significance met at $p = 0.05$
^not all diabetic patients had HbA1c measured

Diabetic Patients | Stroke



Diabetic Patients | Acute Coronary Syndrome



Discussion & Conclusion

- Rates of DM in both populations were similar [119 (25.3%) in IS; 122 (30.1%) in ACS; $p=0.118$] with type 2 DM being more frequent.
- Average HbA1c scores were substantially higher in IS (8.09%) than ACS (7.36%); $p=0.009$.
- There were significantly more IS patients (61.6%) with an HbA1c $> 7\%$ compared with ACS (45.8%); $p=0.05$.
- We found no difference in the prevalence of DM in IS and ACS. This reflects the increased risk of atherosclerosis, responsible for both disease processes, in patients with DM.
- However, those with poorer diabetic control were more likely to develop stroke than an ischaemic cardiac event.
- This might be because IS is caused by macro and microvascular disease, as opposed to ACS, which is almost exclusively a macrovascular complication of DM.
- Our results require validation in a larger and varied population.