



High Prevalence of Diabetes in Stroke Patients at BBH

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Ballarat **Health** Services
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Background & Objectives



Diabetes Mellitus & Strokes

- Increased risks of both ischaemic and haemorrhagic strokes by at least 2-3 folds. (1-3)
- Previous studies reported a widely varying prevalence of known diabetes (8-20%) as well as potentially unrecognised diabetes (6-42%). (4)
- In 2010, INTERSTROKE study from 22 countries showed that the prevalence of diabetes in acute ischaemic strokes was 21%. (5)
- National Diabetes Service Scheme (NDSS) showed that general population in Ballarat has a higher prevalence of diabetes compared to Melbourne CBD. (5.4% vs 3.1%)
- Lack of published Australian data on prevalence of diabetes in strokes.

Aims:

1. Prevalence of diabetes in patients admitted with acute strokes or TIA
2. Relationship of diabetes with subtypes of strokes



Study Design & Analysis



Study design:

- Retrospective analysis of the Australian Stroke Clinical Registry (AuSCR) data from Jan 2015 to December 2016 for patients admitted to Ballarat Health Services with acute strokes or TIAs
- Exclusion criteria
 - Stroke mimics: atypical migraines, seizures, delirium
 - Incomplete scanned medical records on Bossnet
- Diabetes
 - Documented diagnosis in medical records for pre-existing diabetes
 - New diagnosis based on biochemical and clinical findings

Analysis:

- Descriptive data for prevalence and baseline demographics
- Chi-square test for independence to determine if there is any relationship between diabetes and subtypes of ischaemic stroke as well as mechanisms of stroke



Results

Basic Demographics:



Stroke type	Ischaemic	Haemorrhagic	TIA
Subjects (N)	260	42	75
Age (SD)	71.74 (14.06)	71.29 (13.73)	68.91 (13.13)
Female (%)	41.54	61.9	48
Diabetes (%)	26.92	19.05	21.33
AF (%)	34.23	23.81	21.33
HTN (%)	68.07692308	61.9047619	68
Previous strokes/TIA (%)	29.61538462	14.28571429	34.66666667

Key Findings: *2015 data presented as a poster at World Stroke Congress, Montreal, 2018 (6)

1. High prevalence of diabetes in strokes – 27% ischaemic strokes, 19% haemorrhagic strokes
2. Predominant mechanism of ischaemic stroke being cardioembolism (43%)
3. No significant relationship was found between diabetes and stroke territory as well as mechanism (p-value of 0.943 and 0.184 respectively)
4. In ischaemic stroke patients with diabetes, 33% of them have poor glycaemic control (HbA1c >8.0)
5. For ischaemic stroke patients with no history of diabetes, 6 subjects (3%) had fasting glucose >7.0 while 104 subjects (54.7%) had no records on system
6. There were 4 new diagnoses of diabetes in the ischaemic stroke patient group



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Abstracts

Hu, C-C, Low, A., Yoo, P., Hair, C., Sharma, A., Oqueli, E., Kraemer, T., Lau, M., Sahathevan, R. 2018. Prevalence of diabetes mellitus in acute cerebrovascular events in regional Australia. *World Stroke Congress Abstracts, International Journal of Stroke*, 13(2_suppl), 3–217. <https://doi.org/10.1177/1747493018789543>
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Thank You!



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