

Cardiovascular Risk Factors in Youth with Type 1 Diabetes in Western Australia

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Introduction

- In Western Australia (WA), type 1 diabetes (T1D) incidence has been increasing by about 2-3% per year
- Cardiovascular disease (CVD) is a main cause of morbidity and mortality in T1D
- Early emergence of known later-onset CVD risk factors in T1D youth could inform future prevention strategies



WA is the largest state of Australia
(total land area: ~980,000 square miles)

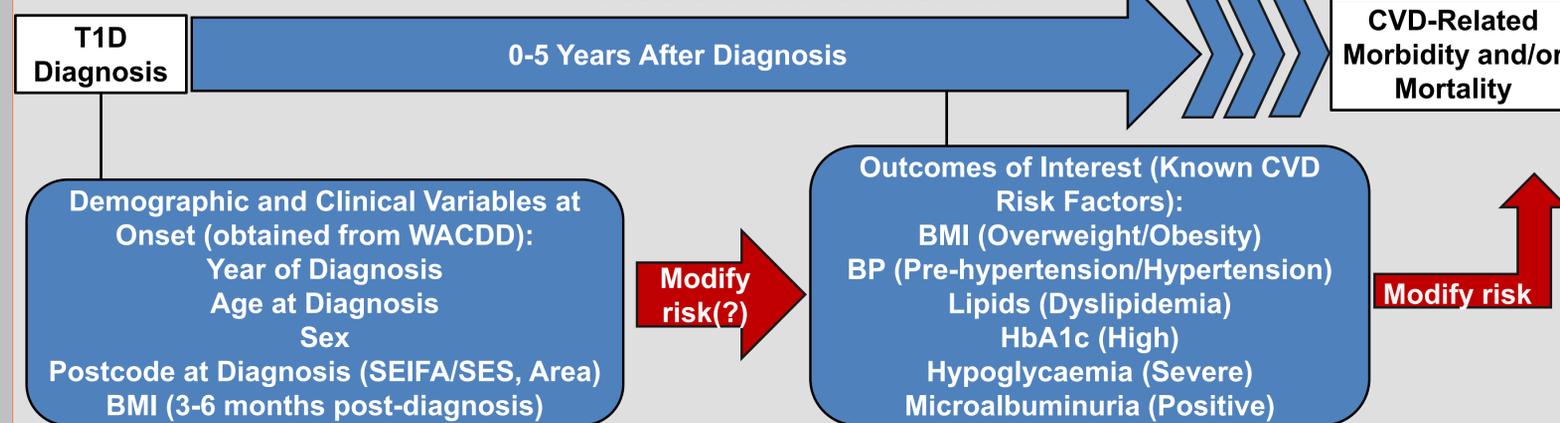
Objective of the Study

To investigate the association between characteristics at onset of T1D youth diagnosed <15 years in WA and the early emergence of known later-onset CVD risk factors within 5 years of diagnosis

Methods

- Study cohort: T1D youth diagnosed <15 years in WA from 1999-2014 with at least 5 years of follow-up data
- Analyzed demographic and clinical data obtained from the Western Australian Children's Diabetes Database (WACDD) from T1D diagnosis to 5 years follow-up
- Used logistic regression models to identify independent predictors of the early emergence of known risk factors for later-onset CVD

Research Context



Conclusion

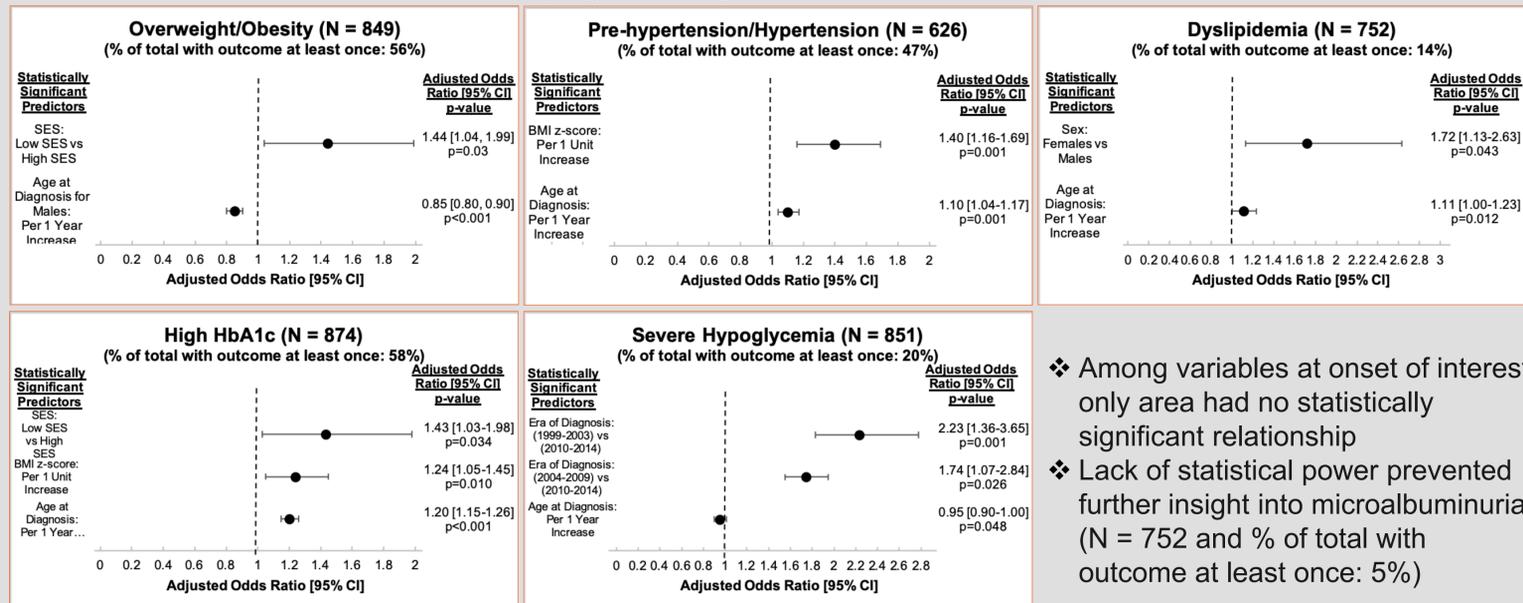
For youth with T1D, demographic and clinical characteristics at onset might independently predict the likelihood of the early emergence of known risk factors for later-onset CVD

Future Questions

- Assess known later-onset CVD risk factors over time
- Extend analysis time to further evaluate risk factor trajectories in later stages of youth and adulthood
- Consider other factors at onset (e.g. drug use, family structure) and their potential association with known later-onset CVD risk factors

Results

- Models were conducted by outcome of interest (i.e. known CVD risk factor)
- Number of cases identified from WACDD vary by outcome due to criteria (i.e. at least 15 measurements by outcome)
- To examine the association of interest, adjusted odds ratios (with associated 95% confidence interval (CI) and probability value (p-value) indicate the likelihood of a variable at onset (i.e. predictor) to independently predict the likelihood of presenting with an outcome of interest at least once during the 5-year period following diagnosis
- Adjusted odds ratios deemed statistically significant if p-value < 0.05



- Among variables at onset of interest, only area had no statistically significant relationship
- Lack of statistical power prevented further insight into microalbuminuria (N = 752 and % of total with outcome at least once: 5%)

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CDC is an integrated clinical and research centre within TKI which serves as the only pediatric clinical diabetes Centre for Research Excellence (CRE) in Australia