

Incipient Albuminuria in Persons with Newly Diagnosed Type 2 Diabetes Mellitus: A 5-Year Retrospective Cohort Study

Shermin Tan, ¹MBBS, MPH, GDM, Lai Yin Wong, ¹BA, MMed (Traditional Chinese Medicine), MPH, Matthias Paul HS Toh, ¹MBBS, MMed (Public Health), FAMS

Abstract

Introduction: This study aimed to determine the 5-year incidence of albuminuria among Asian persons with newly diagnosed type 2 diabetes mellitus (DM), and to identify the risk factors at diagnosis for progression to albuminuria. **Materials and Methods:** A retrospective 5-year closed cohort study was conducted among 1016 persons aged ≥ 18 years old who were diagnosed with type 2 DM between 1 January 2007 and 31 December 2009 at primary care facilities in Singapore. The cumulative incidence of progression from normoalbuminuria to albuminuria—termed “progression”—was determined. The risk factors associated with progression were evaluated using multiple logistic regression analysis. **Results:** A total of 541 (53.2%) participants were men. The mean (SD) onset age of type 2 DM was 54 (11) years. From diagnosis of type 2 DM, the 5-year cumulative incidence of progression was 17.3% and mean (SD) duration to progression was 2.88 (1.23) years. Higher onset age (OR 1.02; 95% CI, 1.00-1.04), history of hypertension (OR, 1.88; 95% CI, 1.32-2.70) and higher glycated haemoglobin (HbA1c) (OR, 1.17; 95% CI, 1.09-1.26) at diagnosis were associated with progression. In addition, being on angiotensin converting enzyme inhibitors (ACEIs) or angiotensin receptor blockers (ARBs) treatment at baseline modified the effect of hypertension on progression. **Conclusion:** This study highlighted the importance of early screening and treatment of diabetes as well as prevention of hypertension, which could potentially delay the onset of microalbuminuria in persons with type 2 DM. Persons on ACEI or ARB treatment should continue to be monitored regularly for progression to albuminuria.

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¹Chronic Disease Epidemiology, Population Health, National Healthcare Group, Singapore
Address for Correspondence: Dr Shermin Tan, Chronic Disease Epidemiology, Population Health, National Healthcare Group, Singapore, 3 Fusionopolis Link, #03-08 Nexus@one-north (South Lobby), Singapore 138543.
Email: tanshermin@yahoo.com