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ABSTRACT 87

Determinants of Glycaemic Control in Older Persons with Type 2 Diabetes: Data from the Adult Diabetes Control and Management Registry

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Background Type 2 diabetes in older person is a global health problem associated with increase disability, morbidity, mortality and healthcare cost. Identifying the determinants of glycaemic control facilitates better management of type 2 diabetes. However, few studies focused on older persons.

Objectives To determine glycaemic control and its determinants among older persons with type 2 diabetes in Malaysia.

Methods A cross sectional study using secondary data from the Adult Diabetes Control and management database (ADCM) was conducted. Data of 20,368 persons over 60 years with type 2 diabetes notified to ADCM between 1st January and 31st December 2009 were extracted. A standard on-line clinical report form was used to record demographic data, clinical factors (diabetes duration, concomitant morbidity, and treatment modalities), cardiovascular risk factors, diabetes complications and laboratory assessments. Poor glycaemic control was defined as HbA1c $\geq 6.5\%$. A multivariate logistic regression analysis was conducted.

Results Only 10,363 older persons ≥ 60 years with HbA1c results were included in the analysis. The proportion of poor glycaemic control was 58.3%. The characteristics of older persons with poor glycaemic control were aged 60-74 years (OR=1.4, $p < 0.001$), Malay ethnicity (OR=1.2, $p = 0.014$), duration of diabetes 5-10 years (OR=1.2, $p = 0.001$) and more than 10 years (OR=1.8, $p < 0.001$). Normal weight (OR=1.4, $p = 0.031$), pre-obesed (OR=1.5, $p = 0.01$) and obesed individuals (OR=1.5, $p = 0.026$) had poor control compared to underweight individuals. Poor control also was associated with triglycerides ≥ 1.7 mmol/L (OR=1.6, $p < 0.001$). Those using either oral anti-hyperglycaemic agents (AHA) alone (OR=4.1, $p < 0.001$), insulin alone (OR=8.4, $p < 0.001$) or both AHA and insulin (OR=16.7, $p < 0.001$) when compared to lifestyle management had poor control.

Conclusions Young old, Malay ethnicity, having diabetes over 5 years, normal weight, pre-obesity, obesity, triglycerides not targeted and use of anti-hyperglycaemic agents were associated with poor glycaemic control. Better provision of care could be facilitated through identification of these factors.

Keywords: older persons, type 2 diabetes, Malaysia