

Poor glycaemic control and its associated risk factors among diabetic patients in Kuala Krai district, Kelantan

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ABSTRACT

Introduction: Diabetes is a global public health concern with poor glycaemic control being a major challenge in developing countries despite availability of effective management strategies. Identification of the magnitude of the problem and risk factors enable us to devise targeted interventions. This study aimed to determine the prevalence and the associated risk factors contributing to poor glycaemic control among type 2 diabetes patients in Kuala Krai district. **Materials and Methods:** A cross-sectional study was done using the study population of T2DM cases registered in the National Diabetic Registry for Kuala Krai district from 2012 to 2022. Variables with more than 30% missing data were excluded. Sociodemographic and clinical information for the 1508 eligible samples were extracted from the registry. Glycaemic control was defined as good (HbA1c \leq 6.5%) and poor (HbA1c $>$ 6.5%). Descriptive analysis, simple logistic regression and multiple logistic regression were performed to determine the prevalence and risk factors for poor glycaemic control. **Results:** 75.1% (95% CI: 72.9, 77.3) of diabetic patients in Kuala Krai have poor glycaemic control. The mean HbA1c of diabetic patients in Kuala Krai is 8.7% (SD 2.41). Male patients were better controlled than female (63.3%) while Indian ethnicity (80%) were relatively poorly controlled followed by Malay (76%) and Chinese ethnic (21%). Most patients with poor glycaemic control (63.9%) were overweight or obese. Among patients with poorly controlled HbA1c, more than half (56.3%) were 60 years old and below while 87.1% were first diagnosed when they were young adults (less than 40 years old). Multiple logistic regression revealed that younger age (AOR 0.96, 95%CI: 0.95, 0.97), longer duration of diabetes mellitus (AOR 1.08, 95%CI: 1.05, 1.11) and higher level of total cholesterol (AOR 1.22, 95%CI: 1.12, 1.33) were associated with poor glycaemic control. Gender, ethnicity, age of onset, BMI and presence of hypertension are not statistically significant in this study. **Conclusion:** This study highlights the need for healthcare practitioners to promptly identify and anticipate patients with potential poor glycaemic control and deploy more aggressive approaches in managing them. From these findings, public health personnel should formulate more effective public health strategies to target specific risk factors known to contribute to poor glycaemic control.