

UNVEILING THE BURDEN: UNDERSTANDING DIABETIC COMPLICATIONS AND THEIR PREDICTORS AMONG TYPE 2 DIABETES MELLITUS PATIENTS IN KLUANG DISTRICT

Khalsom Samsudin
Kluang District Health Office

Linayanti Rosli
Kluang District Health Office

Hamenuddin Hamzah
Kluang District Health Office

Rahimahanim Abdul Aziz
Kluang District Health Office

Farha Ibrahim
MARA University of Technology

ABSTRACT

INTRODUCTION: Type 2 Diabetes Mellitus patients have risks for developing diabetic complications such as cardiovascular disease, stroke, retinopathy, nephropathy and peripheral vascular disease. **OBJECTIVE:** This study aims to identify the prevalence of diabetic complications and their predictors among type 2 diabetes mellitus patients in Kluang district. **METHODOLOGY:** A cross-sectional study was done to identify the predictors of diabetic complications among the type 2 diabetes mellitus patients attending the health clinics in Kluang District. Patients' annual audit data between the year 2014 to 2023 was obtained from the National Diabetes Registry (NDR) system. Data was analysed using IBM SPSS Version 25.0 using descriptive analysis and binary logistics regression. **RESULTS :** A total of 6969 patients were included in the study. About 44% (N=3091) patients was diagnosed with at least one diabetic complication. Specific diabetic complications observed included ischemic heart disease (10%, N=737), stroke (3.1%, N=213), retinopathy (10.3, N=10.3), nephropathy (34.8%, N=2378) and diabetic foot ulcer (1.6%, N=112). Male patients were 1.3 times more likely to develop diabetic complications compared to female patients (AOR 1.374, 95% CI 1.224, 1.543, $p<0.05$). Patients with dyslipidemia (AOR 1.818, 95%CI 1.557, 2.123, $p<0.001$) and hypertension (AOR 2.623, 95% CI 2.179, 3.144, $p<0.001$) were more likely to develop complications compared to those without comorbidities. A 1.0% increase in HbA1C increases the risk of diabetic complications by 10% (AOR 1.104, 95% CI 1.074, 1.135, $p<0.001$). **CONCLUSION:** The prevalence of diabetic complications among type 2 diabetes mellitus in Kluang District was high. Predictors of diabetic complications among the type 2 diabetes mellitus patients in Kluang District were male, coexisting hypertension and dyslipidaemia and higher HbA1C level. This study highlighted the need to ensure good glycaemic control among type 2 diabetes mellitus patients, particularly patients with existing comorbidities to prevent diabetic complications.

Keywords: Type 2 diabetes mellitus, complications. Kluang, Malaysia
