Mock Abstract

 **Effect of Anti-diabetic medication on HbA1C level in**

 **Type 2 Diabetic Mellitus Patients at Hospitals in Thailand**

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 Abstract

**Background**: Diabetes Mellitus (DM) is a clinical syndrome characterized by hyperglycemia due to absolute or relative deficiency of insulin which is one of the global pandemic which involve Type 2 DM. Several complications associated with type 2 DM, can be delayed or prevented with regular monitoring of blood glucose level, adequate follow up, and timely treatment for elevated blood glucose.

**Objective**: To assess the glycemic control of Type 2DM patients who were on anti-diabetic medication by HbA1C level.

**Methods**: A cross-sectional study was conducted by using DAMUS study data. Nationally representative sample surveys of 59750 patients with type 2 DM were interviewed at 549 hospitals in Thailand. Patients who reported taking only OHA, only insulin, both OHA and insulin, at the hospitals were classified as taking anti-diabetic medication. Independent variables such as medications and HbA1C level (dependent variable) are presented with frequency and percentage. As the normal level of HbA1C is <7mg%, it is divided into two groups HbA1C <7mg% as a control group and > 7mg% as an uncontrol group.. Multiple logistic regression was done to assess the association between independent variables and the dependent variables with p<0.05 taken to indicate statistical significance.

**Results**: -xx.x% (95%CI: xx. x to xx.) of Type 2DM patients had been on anti-diabetic medications (only OHA, only insulin, both OHA and insulin during the previous 12 months). Only OHA was reported with a frequency of xxx% while that of only insulin was xx x%. Patient who took both insulin and OHA was reported in xx.x% of all Type 2DM patients. Multiple logistic regression analysis was done by using OHA group as reference category and it was found that insulin alone group was x.xx times more controlled than reference group (OR = x.xx; 95%CI: x.xx to x.xx; *p* = 0.0xxx), and that with both OHA and insulin was x.xx times more controlled than reference group (OR = x.xx; 95%CI: x.xx to x.xx; *p* = 0.0xxx).

**Conclusions**: Type 2DM patients got well control of their blood glucose level, HbA1C when they were on anti-diabetic medications. To maintain the normal blood glucose level and HbA1C level, regular follow up, investigations and quality treatment are needed. These can be achieved by giving health education, providing accessible to health care service and further qualitative research on effects of anti-diabetic medications are needed.

**Key Words**: Type 2DM, HbA1C, Oral Hypoglycemic agents, Insulin