UNIVERSITI TEKNOLOGI MARA

PATTERN OF ANTI-DIABETIC DRUGS USED AND OUTCOMES FOR TYPE 2 DIABETES PATIENTS IN HOSPITAL SUNGAI BULOH AT MEDICAL CLINIC

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بِسْمِ اللَّهِ الرَّحْمَٰنِ الرَّحِيمِ

In the name of Allah, the Most Beneficent, the Most Merciful.

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"May Allah will reward you with goodness"

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ABSTRACT

Introduction: Diabetes Mellitus has been a vital public health problem among all countries. For the past few years, there is tremendous reformation in the utilization of anti-diabetic drugs including both oral and insulin. Yet the pattern of prescribing among physicians does not fully explore. Hence, drug utilization study of anti-diabetic drugs is really important to promote rational drug use to type 2 diabetes mellitus patients among the healthcare team.

Objective: To identify the pattern of anti-diabetic drugs prescribed among type 2 diabetes mellitus patients and their glycated hemoglobin level as the outcome.

Methods: A retrospective study without intervention was carried out among type 2 diabetic patients. The data was collected at medical clinic of Hospital Sungai Buloh. All the demographic data (age, gender and race), concurrent medications and HbA1c reading was recorded. These data were used to evaluate the association between demographic data and concurrent medications with HbA1c outcome of the patients.

Results: Data of 164 patients were recorded in this study which comprised of 49.4% male and 50.6% female. 23.8% of the patients have good glycemic control while 76.2% patients do not have good glycemic control. However, there is no association between demographic data and outcome of HbA1c. Metformin (31.7%) is the most common prescribed drugs followed by combination of metformin and gliclazide (12.8%), and combination of insulatard and actrapid (12.2%). In this study, it was found that there was association between pattern of prescribing drugs and HbA1c outcome.

Conclusion: Metformin was the most utilized (31.7%) antidiabetic drug for type 2 diabetes. This study revealed that the pattern of prescribing was rational and compliant to Clinical Practice Guideline for Type 2 Diabetes Mellitus.

Keywords: diabetes, metformin, HbA1c, pattern, outcome, type 2 diabetes

CHAPTER ONE

INTRODUCTION

1.0 Overview

Malaysia is in the top ten countries in the world that have greatest number of diabetic patients. The prevalence has increased gradually from 8.3 in the year 1996 to 14.9% in 2006. These disease affecting about 1.4 million adults aged more than 30 years old. More than 90% of the cases were type 2 diabetes mellitus (M et al., 1984).

Diabetes is a disorder of regulation of blood glucose. It is a group of metabolic diseases which characterized by hyperglycaemia resulting from defects in insulin secretion, action of insulin or it can be both. Chronic hyperglycaemia of diabetes is associated with long term damage or dysfunction of many organs like the eyes, kidney and heart. Diabetes requires constant attention to diet, exercises, glucose monitoring and medication in order to achieve good glycaemic control. To achieve long term glycaemic control, it is important to maintain adherence to anti-diabetic medications (Bezie et al., 2006).

Intensive lifestyle and pharmacological interventions can actually decrease the rate of progression to type 2 diabetes people with impaired glucose tolerance (IGT). Longer term follow-up for two of main diabetes preventions trials continue to