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PATTERN OF ANTIHYPERTENSIVE DRUGS USED AND OUTCOME AT MEDICAL CLINIC OF HOSPITAL SUNGAI BULOH

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بِسْمِ اللهِ الرَّحْمَنِ 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: The pattern of antihypertensive drugs used in treatment of hypertension changes from time to time in response to any changes in the hypertension treatment guidelines as well as the new formulation and innovation of the drugs. Furthermore, the used of antihypertensive drugs according to the class varies from one country to another.

Objectives: The aim of this study was to determine the trends of antihypertensive medication use according to class and its impact on blood pressure control. In addition, this study wants to determine the association between demographic data and type of therapy with the blood pressure outcome.

Method: A retrospective observational and cohort study with no intervention was conducted. All the clinical notes profiles with diagnosis of essential hypertension were analyzed. Prescriptions for hypertension with other co-morbidities were also included.

Results: A total of 200 patients aged 30-90 years old from the medical clinic of Hospital Sungai Buloh were included in this study which comprised 102 male patients and 98 female patients. The most frequent antihypertensive drugs used which based on the class of drugs were CCB (67.5%), ACEI (57.5%), followed by β-blockers (45%), diuretics (27.5%), ARB (22%) and α adrenergic blockers (5%). Among 200 patients, 92 patients (46%) were having controlled blood pressure and another 54% were having uncontrolled blood pressure with no significant association (p=0.258). 79% of the patients were on combination therapy, which the most favoured combination drug was ACEI and CCB (16.5%). 21% of patients were on monotherapy treatment, which the most frequent used was ACEI (8.5%). There was no association between demographic data and therapy with outcome.

Conclusion: ACEI and CCB were the most frequent used of antihypertensive drugs. This study revealed that the medication treatment was rationale and complies with the Malaysian Hypertension Guideline.

Keywords: *Pattern, hypertension, blood pressure outcome, controlled, uncontrolled, BP, combination therapy, monotherapy, trends, antihypertensive.*

CHAPTER 1

INTRODUCTION

1.1 Overview

Hypertension or high blood pressure is one of the important risk factor for the future development of cardiovascular disease. It also can be explained as a condition where the blood pressure is elevated above the normal range most of the time (Board, 2012). Nowaday, hypertension became a serious matter in world, including Malaysia. Cardiovascular diseases are now responsible for 30% of all deaths worldwide (Gaziano, Bitton, Anand, Abrahams-Gessel, & Murphy, 2010).

Elevated blood pressure can be correlate tracked well from youth to adulthood, it makes blood pressure in youth person a useful predictor of essential hypertension in adulthood (Mijinyawa, Iliyasu, & Borodo, 2008). Thus, hypertension is an important public health problem worldwide because of its high prevalence and its serious issues. It is a major risk factor for cardiovascular disease, which it will contribute greatly to morbidity and mortality (Sander, 2002; Yap et al., 2003).

It influence the development of other diseases such as stroke, myocardial infarction, end stage renal disease and congestive heart failure (A. Ramli, Ahmad, &

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