Dietary pattern on elderly patient with hypertension: a qualitative analysis

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Abstract— many studies have been revealed that hypertension in elderly patient has significant factor in mortality. The non-drug treatment has been arisen since there are many complication drugs usage on this age. One of treatment which related to the hypertension is the lifestyle or dietary pattern. The qualitative analysis was performed to understand the multifactor of hypertension in elderly patient. Eighteen of elderly women with hypertension have been observed to understand how the dietary pattern influences the profile of hypertension of elderly patient. The patient age are ranged 56-84 years old. The substantial findings of this study include the fact that the more elderly concern on their eating behaviour, the more they could maintain their normal blood pressure. There are an evidence that patient has higher vegetable intake could reduce their high blood pressure constantly. However, stress and physiological condition of patient may stimulate the blood pressure in several cases.

Keywords— **Dietary pattern, hypertension elderly patient, qualitative analysis**

INTRODUCTION

Hypertension is a common health problem in adult, particularly in age above 50 years old. Hypertension is a major factor of stroke, heart failure, coronary artery disease, and renal failure (Kane et al., 2004). Hypertension is defined as systolic blood pressure (SBP) of 140 mmHg and or higher and or diastolic blood pressure (DBP) of 90 mmHg or higher (Joint National Committee, 1997).

There is a high prevalence of hypertension in the elderly, as evidenced by clinical and health behavioural policies (Pinna et al., 2012). However, there are uncertainties on how treatment should be made to maintaining eating behaviour of hypertension elderly patients. Many studies revealed that the prevalence of high blood pressure is rising 60% to people older than 60 year olds and 65 % to 75 % in people on 70 year old (Burt et al., 1995). Even tough, there are many studies have been done on this subjects, but there is still limited study focus on behaviour eating toward hypertension in elderly patient.

According to Setiati and Sutrisna (2005) revealed that the prevalence of hypertension without anti hypersensitive medication among 40 years and above adult population in Indonesia was 37.22 % (677 out of 1814 hypertensive subject). Based on this study, there are still many of hypertension patient with ages above 40 has limited treatment. Based on the fact above, this study is aiming to investigate the relationship between dietary pattern and hypertension in elderly patient particularly women.

MATERIALS AND METHODS

This study is using qualitative method. Direct observation involves trained researcher (nurses) directly observing participant food intake behaviour to ascertain food and portion of the consumer. The observation is used to provide an objective measurement of individual dietary intake or to validate another dietary assessment method. Eighteen hypertension patients with age above fifty-age years old were investigated. The observation has been made for three time during one week (initial, middle and end). Patients were examined their blood pressure by taking three replication. Likewise, dietary intake were also recorded 3 times (initial, middle and end). List of questioners has been made and covering questions related to, name, initial diagnoses, body mass Index (BMI). During the initial measurement, patient with hypertension were recommended to shift their food intake to more food-related-non hypertension (e.g. less Sodium fish, vegetables etc)

Statistical Analyses

Mean in systolic blood pressure (SBP) and diastolic blood pleasure (DBP) has been calculating by using Ms.Excel. Data was tabulated and presented into simple graphics.

RESULT

Body Mass Index (BMI) and Dietary intake

The result shows that BMI of the patient is ranged from 16.6 to 31.5. This reflected that BMI not only the indicator of the hypertension however in the most cases hypertension is mostly occurrence in women in high BMI profile (Brown et al., 1998). Obesity patients (BMI>30) has higher cardiovascular risk and maybe associated with in left ventricular wall thickness and heart volume and mass (Bertel et al., 1980). However, whether obesity worsens the prognosis of elderly adult with hypertension is not clear. An analysis from the INVEST study demonstrated that high BMI was associated with lower morbidity and mortality compare to normal BMI in a well-treated group of elderly adults with hypertension and coronary artery disease (Uretsky et. Al, 2007).

Dietary intake of eighteen patients has been recorded and can be seen as figure 1 below.
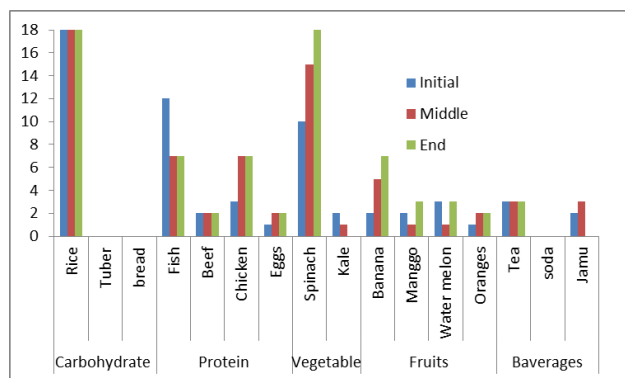

Fig. 1 Number of patients vs. dietary intake diversity (n=18)

There are dietary changes during observation particularly protein source food and vegetable source food. Even though, high number of fish intake but this not reflected to lower number of blood pressures on patient profile. This evidence may be due to salted fish which contain high in Sodium Chloride which effected to the high blood pressure.

The increasing number of patients choosing spinach in their diets is probably one of the features reducing the SBP and DBP, however this is not directly reflect that spinach has significant impact, this data only show the shifting of diets may reduce other food-related-hypertension. Patient is aware to what they eat and what dominantly evidence their hypertension.

Fruit and beverages have no changes during the measurement. Fruits are often consumed seasonally; there is no particular occasion to consume fruit. Banana and water melon were mostly consumed by patient. Most of

patient has drink regularly black tea with high contains of sugar and some of the patient keeping their habit to consume traditional herbal drinks (Jamu).

SBP and DBP

Fig. 2 and Fig. 3 show that SBP and DBP were declined during intervention of dietary recommendation. Number SBP were dropped 20 mmHg in averages, meanwhile, Number of DBP dropped 30 mmHg in averages.
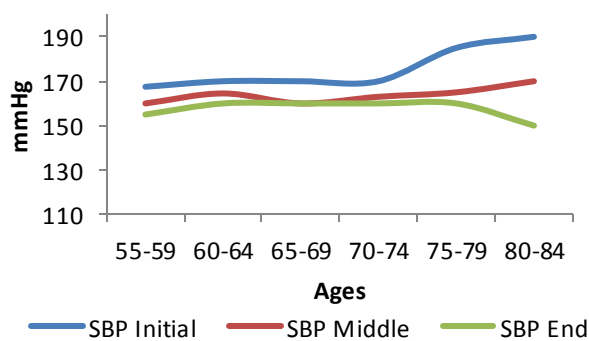

Fig. 2. Mean systolic blood pressure (SBP) mmHg (n=18)

In this study we found that, the higher number of SBP occurred in the age above 80 years old. The SBP is relative similar in average 170 (age ranged 55- 75 years old).
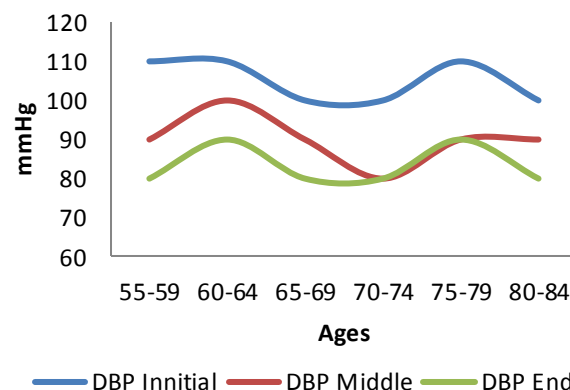

Fig.3 Mean diastolic blood pressure (DBP) n = 18

Unlike SBP, DBP has fluctuate figure were in the age of 60-64 and 75-79 has highest number of DBP and 65-69 is relatively low number of DBP.

Several studies have shown that treatment of hypertension in elderly is highly recommended in term of reduced mortality. Apart of drug-therapy, life-style modification includes discipline in dietary intake would be an option to whom which have a problem with complication with several drug.

CONCLUSIONS

Hypertension in elderly patient needs consistent treatment. Several studies have shown that treatment of hypertension in elderly is highly recommended in term of reduced mortality. Apart of drug-therapy, life-style modification includes discipline in dietary intake would be an option to whom which have a problem with complication with several drug. This study has a limited number of samples therefore, it will be appropriate to have a large scale sampling to justify the intervention method as well as cross sectional with psychological condition of patients.

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