

Hypertensive Diet Compliance With Blood Pressure For The Elderly In Muara Besar Village, The Working Area Of The Ogodeide Health Center

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ABSTRACT

Hypertension is a problem that is difficult to control because hypertensive patients rarely feel a symptom that the sufferer does not realize until they experience complications in vital organs such as the heart, brain and kidneys. Prevention of hypertension can be done by continuing a hypertensive diet to prevent further severe impacts. Objective: To find out if there is Dietary Compliance with Hypertension with Blood Pressure in the Elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency. The design used in the study was observational The population was All Elderly Hypertension. The sample size was 37 respondents using *the Simple Random sampling* technique. The Independent Variable of the study was dietary adherence. The dependent variable is Blood pressure. The data was collected using a questionnaire, then the data was analyzed using *the Spearman rho* test, with a significance level of $\alpha \leq 0.05$. The results of the study were obtained that $p=0.021$ with $\alpha=0.05$, which means that H_0 is rejected and H_1 is accepted so that it can be interpreted that there is a relationship between hypertensive dietary compliance with blood pressure reduction in the elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency, with a correlation coefficient of 0.379 which means that there is a strong relationship. Hypertensive patients who are regular in their diet will increase the stability of blood pressure through the relaxation mechanism of blood vessels located in the vasomotor center which results in vasodilation activity so that blood pressure becomes stable.

Keywords : Blood Pressure, Elderly, Hypertension Diet

INTRODUCTION

Non-communicable diseases (NCDs) are a group of diseases whose pathological processes are chronic, burden heavy public health problems, become the main cause of death and are quite difficult to overcome and control. Chronic disease itself is defined as a medical condition or health problem related to symptoms or disabilities that require long-term management (Smeltzer & Bare, 2002). Hypertension is often referred to as *the "silent killer"* because often people with hypertension have not felt any disorder or symptoms for many years and without realizing it, the sufferer has experienced complications in vital organs such as the heart, brain and kidneys. Symptoms due to hypertension such as dizziness, visual disturbances, headaches often occur when hypertension has advanced when blood pressure has reached a certain meaningful number. Hypertension that occurs for a long time and continuously can trigger strokes, heart attacks, heart failure, and is the main cause of chronic kidney failure (Purnomo, 2009).

The World Health Organization (WHO) noted that in 2012 there were at least 839 million cases of hypertension, estimated to be 1.15 billion by 2025 or about 29% of the world's total population. The prevalence of Hypertension in Indonesia reaches 31.7% of the population aged 18 years and above. Of that number, 60% of hypertensive patients experience stroke complications. while the rest have heart disease, kidney failure and blindness (Riskesdas 2018). Based on data from the Central Sulawesi Provincial Health Office, hypertension has decreased



from the total number of cases, 78. 589 in 2013, to 76. 726 cases in 2014, and decreased to 72. 120 in 2015. Tolitoli Regency 4699 new cases were discovered out of 223. 318 people (Disease Control and Environmental Health Division / P2PI Central Sulawesi Health Office 2015) and for 2017 the discovery of new cases of hypertension 3067 out of 225. 875 people, and for the discovery of new cases of hypertension patients in the work area of the Ogodeide health center, namely 417 out of 12816 people (Disease Control and Environmental Health Division / P2PL of the Health Office and the Non-Communicable Disease Control Section of ToliToli Regency 2017). The results of a preliminary study at the Ogodeide Health Center found that the average number of new cases of hypertension was 62 cases, and the number of cases of hypertension in the elderly was 42 out of 57 elderly people (74%).

Hypertension is not known for sure, but several risk factors have been found that can cause high blood pressure, namely old age, a history of high blood pressure in the family, in addition to the increase in blood pressure is also influenced by how many risk factors include age, gender, overweight followed by lack of physical activity, dietary patterns (excess consumption of fatty and high-salt foods), lifestyle habits such as Smoking and Drinking Alcohol. For those who have this risk factor, they should be more vigilant and earlier in making preventive efforts, the simplest example is routine blood pressure control more than once, and trying to avoid factors that trigger Hypertension (*baradiro*). Indonesia has a lower level of health awareness, the number of patients who are unaware that they have hypertension and do not comply with medication is more likely. where Hypertension is one of the degenerative diseases, generally blood pressure increases slowly with age, and hypertension is a relatively *silent* problem but contains great potential for bigger problems. For this reason, proper management is needed in efforts to prevent and control hypertension.

Non-pharmacological therapy should be given to all patients with primary hypertension with the aim of lowering blood pressure and controlling risk factors and other comorbidities. Non-compliance with lifestyle modifications, namely alcohol consumption, weight control including stress and anxiety control is one of the causes of resistant hypertension. From various research results, it is known that nutritional status is very related to blood pressure because those who suffer from hypertension and are obese are more than normal nutritional status (Seow, 2016). Results of the preliminary study / initial data collection conducted at the Ogodeide Health Center, Tolitoli Regency on January 9, 2018 from the results of interviews with 4 hypertensive patients conducted at the Muara Besar Village Elderly Posbindu, the researcher got an answer that how much food can affect the rise and fall of the patient's blood pressure, one of which is salted fish and high-fat foods (livestock meat, cows and pigs) on the sidelines, they also answered that since they knew that they had hypertension, they always checked their blood pressure to the health workers on duty in the village after composting the food and the results immediately increased, therefore they agreed with themselves that the food needed to be regulated in composting and even avoided which became a factor risk triggers for raising blood pressure. Several reasons for the non-compliance of hypertensive patients with low-fat and low-salt diets cause the success of prevention and recurrence of hypertension is still low. The purpose of this study is to determine the relationship between hypertensive dietary adherence and blood pressure in the elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency.

METHODS

The design used in the study was observational The population was All Elderly Hypertension. The sample size was 37 respondents using *the Simple Random sampling* technique. The Independent Variable of the study was dietary adherence. The dependent variable is Blood pressure. The data was collected using a questionnaire, then the data was analyzed using the *Spearman rho* test, with a significance level of $\alpha \leq 0.05$.

RESULT

Subject Characteristics

Table 1. The characteristics of the respondents in this study included age, gender, education, occupation, compliance and hypertension rate.

No	Characteristic	ΣN	Σ%
1	Age (year)		
	46-55	11	26,8
	56-65	17	41,5
	>65	9	22
2	Gender		
	Man	21	56,8
	Woman	13	43,2
3	Education		
	Not in school	1	2,7
	SD	26	70,3
	JUNIOR	5	13,5
	SMA	3	8,1
	PT	2	5,4
4	Work		
	Civil servants	3	8,1
	Private	7	18,9
	Not working	27	73
5	Compliance		
	Enough	5	13,5
	Good	32	86,5
6	Hypertension		
	Low	21	56,8
	Keep	13	35,1
	Heavy	3	8,1
	Total	37	100

DATA ANALYSIS

Table 2.

Correlations				
Spearman's rho	Compliance	Correlation Coefficient	Compliance	Blood pressure
			1,000	,379*
	Blood pressure	Sig. (2-tailed)	.	,021
		N	37	37
		Correlation Coefficient	,379*	1,000
		Sig. (2-tailed)	,021	.
		N	37	37

*. Correlation is significant at the 0.05 level (2-tailed).

The results of the statistical test were obtained $p=0.021$ with $\alpha=0.05$, which means that H_0 was rejected and H_1 was accepted so that it can be interpreted that there is a relationship between hypertensive diet compliance with blood pressure in the elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency, with a correlation coefficient of 0.379 which means that there is a fairly strong relationship.

DISCUSSION

Identifying Anti-hypertensive Diet Compliance in the Elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency

The results of the study found that the most respondents had good compliance as many as 32 respondents (86.5%), and at least had a sufficient level of compliance as many as 5 respondents (13.5%).

Compliance is the level of a person in implementing a rule in and recommended behavior. The definition of behavior is the level at which a person carries out treatment, treatment and behaviors suggested by nurses, doctors or other health workers. Compliance or *adherence* describes the extent to which patients behave to implement the rules in treatment and behaviors recommended by health professionals. According to Purwanto (2006) there are several factors that affect the level of compliance, namely demographics, knowledge, therapeutic communication, psychosocial, and family support; 1) Demographics. It includes age, gender, ethnicity, socioeconomic status, and education. Age and gender are important factors, the elderly have a relatively good level of adherence probably because of the healthy experience of being sick, efforts to return to health because of the illness and the blood pressure of men is generally higher than that of women it is influenced by hormones, (Endang Triyanto. 2014). 2) Low patient knowledge about treatment compliance can cause low awareness will have an impact and influence on patients in following the way of treatment, examination discipline which as a result can cause ongoing complications. 3) Therapeutic communication is the quality of instruction between patients and health workers, determining the level of compliance of a person because with a high quality of interaction, a person will be satisfied and finally increase his compliance with health recommendations in terms of hypertension treatment, so it can be said that one of the important determinants of compliance is the way of communication about how recommendations are given (Purwanto, 2006).

Based on the results of the study, it was found that respondents had good dietary adherence, adherence to therapy would support patients to be able to control their blood pressure. The results of the study also showed that the most respondents had good compliance with the age of 56-65 years (43.2%). In accordance with Purwanto (2006) that one of the things that supports compliance is age, the older you get, the better compliance will be because of the many experiences about being healthy and sick. Elderly dietary adherence is the patient's attitude towards compliance with health workers and acceptance of their diseases. The attitude of the elderly to accept and obey the diet is an obedience behavior and determines the level of compliance. A person's compliance is the result of the decision-making process and will affect perceptions and beliefs about health, and having confidence that health recommendations are considered correct, then compliance will be better.

Based on the results of the study, it was found that the most respondents had good adherence to the male gender (48.6%). In accordance with the results of Agrina (2014) research, it was revealed that the compliance of the elderly was influenced by the male gender of around 41%, this shows that the male elderly are more able to follow the hypertension diet rules recommended by health workers. Compliance with the elderly with hypertension is expected to improve the condition of hypertension in a sustainable manner and can control blood pressure and reduce symptoms and risks that may arise.

Based on the results of the study, it was found that the most respondents had good adherence to elementary education (67.6%), based on the results of the Novian (2013) study with the results of the study found a relationship between the level of education, and the compliance of hypertension patients. The elderly respondents have the most elementary education, which is related to health information to increase compliance can be obtained through health education from health workers. The higher the education and health information about the hypertension diet, the better the diet adherence and the more blood pressure the elderly with hypertension.

Based on the results of the study, it was found that the elderly had good compliance and did not work (70.3%). In accordance with the results of Nisfiani's (2014) research, one of them

is supported by respondents who are not working or as housewives. This is because the elderly who are not working are increasingly focused on their health, treatment and therapy provided. The elderly pay more attention to the diet that must be done to improve the quality of their health.

Identifying Blood Pressure in the Elderly in Muara Besar Village, the working area of the Ogodeide Health Center, Tolitoli Regency

The results of the study found that more than half of the respondents had mild hypertension as many as 21 respondents (56.8%). Based on the results of the study, it was found that most respondents had mild hypertension with the age of 56-65 years and could interfere with the health of the elderly, this is as expressed by Endang Triyanto (2014), An increase in blood pressure above normal can result in *morbidity* and mortality). The elderly receive their own attention or grouping whose population is 60 years old or older (M. Nadjib Bustan, 2015). With the physiological changes of aging, other risk factors for hypertension include diabetes, race, family history, gender, lifestyle factors such as obesity, high salt intake, excessive alcohol. This shows that the older you get, the physiological functions of the body will decrease and can cause hypertension. This is because the mechanism that controls the constriction and relaxation of blood vessels is located in the vasomotor center, in the medulla in the brain. From the vasomotor center this starts in the sympathetic nervous system, which continues down to the spinal cord and exits from the columnar of the spinal cord to the sympathetic ganglia in the thorax and abdomen. This group of elderly people receives special attention because they have their own characteristics and typical health problems.

Based on the results of the study, it was found that the most respondents had severe hypertensiveness with the gender of the respondents being male (37.8%). In accordance with the results of Kuswardhani's (2016) research, it was found that the elderly with hypertension are dominated by men (59.1%), this shows that men do not have blood pressure control hormones such as estrogen found in women, men have a poor lifestyle in their youth so that the condition of blood pressure is getting higher.

Based on the results of the study, it was found that the most respondents had mild hypertension with elementary education (43.2%), in accordance with the Novian (2013) research with the results of the study obtained education and experience information obtained about health can affect hypertension. The better the education and information obtained from certain health sources, the more patients can be treated or treated so that their blood pressure can be maintained. Based on the results of the study, it was found that the most respondents had mild hypertension by not working, this is likely due to the condition of patients who have a non-productive age, and hypertension conditions are obtained due to intrinsic factors such as gender, and age, or external factors such as previous medical history, lifestyle and adherence to hypertension diet.

Analyzing the adherence of the hypertension diet with blood pressure in the elderly in Muara Besar Village, the working area of the Ogodeide Health Center, Tolitoli Regency

The results of the statistical test were obtained $p=0.021$ with $\alpha=0.05$, which means that H_0 was rejected and H_1 was accepted so that it can be interpreted that there is a relationship between anti-hypertensive diet adherence to blood pressure reduction in the elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency, with a correlation coefficient of 0.379 which means that there is a strong relationship.

Camous (2016) found that the provision of dietary health education can improve the attitude of hypertension respondents. A diet high in salt is linked to increased blood pressure and the prevalence of hypertension. The latest guidelines from the *British Hypertension Society* recommend limiting sodium intake to less than 2.4 grams a day, which is equivalent to 6 grams

a day or about 1 teaspoon/day. The following is the diet dosage for hypertension patients in integrated nursing services for hypertension patients (Endang Tryanto 2014). Hypertension is one of the diseases that is relatively *hidden (silent)* but contains great potential for bigger problems. For this reason, proper management is needed in efforts to prevent and control hypertension. Hypertension treatment can be broadly divided into two types, namely non-pharmacological and pharmacological (Lewis 2000). Pathological conditions require treatment or therapy, namely non-pharmaceutical therapy and pharmacological therapy.

Berdasarkan hasil penelitian terdapat hubungan antara kepatuhan diet hipertensi dengan tekanan darah pada pasien lansia. Sesuai dengan hasil penelitian bahwa Kepatuhan terhadap perawatan merupakan perilaku seorang untuk mentaati aturan dalam hal ini pengobatan yang meliputi perlakuan khusus mengenai gaya hidup seperti diet, Istirahat dan olahraga serta konsumsi obat yang harus dikonsumsi, jadwal waktu minum, kapan harus dihentikan, kapan harus berkunjung untuk melakukan kontrol tekanan darah (Gunawan 2011). Hasil penelitian sebelumnya berdasarkan Gunawan (2011) bahwa kepatuhan dalam melaksanakan diet hipertensi dapat dilakukan dan sangat membantu lansia dalam menjalankan terapi untuk mencegah hipertensi. Penderita hipertensi yang teratur dalam diet dan pengobatan maka akan meningkatkan kestabilan tekanan darah melalui pencegahan dan pengobatan. Kepatuhan diet dan juga pengobatan yang teratur akan mendukung kestabilan tekanan darah pada tekanan yang normal. Terapi-terapi tersebut jika dilakukan secara teratur maka akan menyebabkan mekanisme relaksasi pembuluh darah terletak dipusat vasomotor, yang mengakibatkan tambahan aktivitas vasodilatasi. Medulla adrenal akan menurunkan sekresi epinefrin, yang menyebabkan vasodilatasi, perubahan tersebut memiliki Konsekuensi aorta dan arteri besar meningkatkan kemampuannya dalam mengakomodasi volume darah yang dipompa oleh jantung dan mengakibatkan tekanan darah menjadi stabil. Pada tempat penelitian terdapat program Prolanis dan hasil identifikasi terdapat 3 responden dengan kategori hipertensi berat hal ini kemungkinan responden tersebut memiliki penyakit penyerta atau komplikasi, atau sedang menjalankan diet diabetes militus dimana dalam hal penataan diet agak sedikit berbeda yang dapat mempengaruhi tekanan darah pada responden tersebut, dan hal lain yaitu adanya kegiatan Prolanis salah satunya senam atau aktivitas fisik dimana responden tersebut tidak bisa mengikutinya.

CONCLUSION

1. The results of the study found that the most respondents had good compliance as many as 32 respondents (86.5%), and at least had a sufficient level of compliance as many as 5 respondents (13.5%).
2. The results of the study found that more than half of the respondents had mild hypertension as many as 21 respondents (56.8%), and at least 3 respondents had severe hypertension (8.1%).
3. The results of the statistical test were obtained $p=0.021$ with $\alpha=0.05$, which means that H_0 was rejected and H_1 was accepted so that it can be interpreted that there is a relationship between hypertensive dietary compliance with blood pressure in the elderly in Muara Besar Village, Ogodeide Health Center Working Area, Tolitoli Regency, with a correlation coefficient of 0.379 which means that there is a strong relationship.

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