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The Effect of Giving a Combination of Cucumber and Tomato Juice on Overweight Female Blood Pressure (Menopouse)

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ABSTRACT

Factors causing the occurrence of hypertension for women (menopause) are two types, factor that can not be changed and factor that can be changed, but the most dominant factor is the changable one (overweight/obesity). The occurrence of hypertension in some region could be an indicator of the welfareness level in that area. The purpose of this research was to determine the effect of cucumber and tomato juice combination on overweight women's blood pressure (menopause). The research design used is pre-experimental research. The population studied were all of overweight women (menopause) in Kantil Posyandu/IHC counted 18 people, and sample obtained with the accidental sampling technique was 13 people. The research instrument used was the observation sheet. The results of this research were analyzed with wilxocon signed rank. The results of this research showed that the majority of overweight women (menopause) with hypertension before the giving of cucumber and tomato juice combination were experiencing the stage 1 hypertension, and after the giving of cucumber and tomato juice combination, majority of respondents had a normal blood pressure and mostly were experiencing pre hypertension. The analysis showed the existence of effects from the combination of cucumber and tomato juice on overweight women's blood pressure (menopause). Based on the results, expected from the field researchers to improve the education and counseling program on both the suffering hypertension or not.

Keywords: blood, cucumber, tomato

INTRODUCTION

Hypertension is a condition where a person experiences an increase in blood pressure above normal which is indicated by the systole number (upper part) and diastolic number (lower part) during blood pressure examination using a blood pressure measuring device either in the form of a mercury cuff (sphygmomanometer) or other digital tools (Wahdah, 2011). Hypertension is defined as persistent blood pressure where the systolic pressure is above 140 mmHg and the diastolic pressure is above 90 mmHg (Sheps, 2008).

The prevalence of hypertension in the world in 2013 according to the World Health Organization (WHO) hypertension was highest in africa (46%) while the prevalence was lowest in america (35%). Overall, High-income countries have a lower prevalence of (35%) than those with a lower middle income group (40%). Researchers estimate that high blood pressure is almost 9.4 million deaths from cardiovascular disease each year (WHO, 2013).

According to the American Heart Association (AHA), Americans over the age of 20 suffer from hypertension at 74.5 million, but almost 90-95% of cases have no known cause. Hypertension is a silent killer where symptoms can vary in each individual and are almost the same as the symptoms of other diseases. The symptoms are headache / heaviness in the nape, mumet (vertigo), heart palpitations, easy leiah, blurred vision, ringing in the ears (tinnitus), and nosebleeds (Ministry of Health RI, data and information center, 2014).

The prevalence of hypertension in the population aged 18 years and over in Indonesia in 2013 was based on the diagnosis of health workers by 9.4%, and blood pressure measurement by 25.8%. This is a health problem with a high prevalence, which is 25.8%, according to Riskesdas 2013 data. In addition, hypertension control has not been adequate even though effective medicines are widely available (Ministry of Health of the Republic of Indonesia, data and information center, 2014). The prevalence of hypertension in Indonesia was 26.5% in 2013, but those diagnosed by health workers and a history of taking medications were only 9.5%. This indicates that most cases of hypertension in the community have not been diagnosed and affordable health services (Ministry of Health RI, 2013).

Based on a preliminary study conducted by researchers in October 2022 at the Kantil posyandu as many as 44 menopouse people, there were 18 people who had hypertension with blood pressures ranging from 140/90 mmHg to 180/90 mmHg. The main factors causing hypertension besides age, many factors cause hypertension such as gender, heredity, high salt intake, strees, obisity, smoking, drinking alcohol, lack of exercise, high cholesterol, caffeine and nutrition (Wulandari, 2011). The macro impact of an increase in blood pressure that lasts for a long time (persistent) can cause damage to the kidneys (kidney failure), heart (coronary heart disease) and brain (causing stroke) if not detected early and get adequate treatment. Hypertension will make the heart work harder and contribute to the formation of blockages that can disrupt blood flow. Too high blood pressure can cause rupture of cerebral blood vessels (stroke).

Hypertension management solutions are needed to control blood pressure and prevent complications that can occur due to hypertension. The management or therapy of hypertension can be done in two ways, namely by pharmacology and non-pharmacology. Pharmacologically management, namely by using kimimiawi drugs, several types of antihypertensive that are circulating today such as diuretics, calcium antagonists, inhibitors of angiotension conversion enzymes. However, pharmacological treatment causes side effects and these side effects vary depending on the type of drug, besides that pharmacologically treatment is considered expensive by the public. While one of the non-pharmacological treatments can actually be an alternative to natural medicine by using natural ingredients such as fruits, vegetables, and herbs, especially those that contain high potassium levels and low herbs. Juice therapy, both fruit and plant juices have long been used to help cure various diseases including hypertension because the nutrients that can be dissolved in the juice are most easily digested and absorbed by the body. One of the juice therapies that can be given to people with hypertension is a combination of cucumber juice (Cucumis sativus) and tomato (Lycopersium commune). This researcher aims to determine the effect of giving cucumber juice and tomato juice, which basically both contain food intake that contains high potassium, magnesium, and fiber, and low sodium is one of the ways to reduce risk factors for an increase in blood pressure. Potassium inhibits the release of renin by reducing sodium in urine and water in the same way as diuretics (Haris and Tambunan, 2009).

Based on the phenomenon and background that has been described above, researchers are interested in taking the title of "The Effect of Giving a Combination of Cucumber and Tomato Juice on

Blood Pressure in Overweight Women (Menopouse) at Posyandu Kantil Kelurahan Corner, Mojoroto District, Kediri City ". The purpose of this study was to determine the Effect of Cucumber and Tomato Juice Communication on Blood Pressure in Women (Menopouse) Overweight.

METHODS

Design and Samples

This type of research is pre-experimental. The independent variable in this study was the combination of cucumber juice and tomato juice and The dependent variable in this study was overweight female blood pressure (menopouse).. The sampling technique is taken by using purposive sampling with a total of 15 mother with menopause.

Data Collection

The chosen respondent is mothers menopause from 13 July to 13 August 2022 which has been following the criteria of inclusion. After the permit is completed, the researcher goes to the field to explain to the research respondent and if the respondent agrees, he is asked to sign an inform consent sheet. After that, conducted an interview and gave treatment to respondents pre and post consumption of cucumber and tomato juice.

Data Analysis

Data processing using computer-based SPSS computer programs for windows 24. Univarat analysis was performed to analyze the data that had been collected using the descriptive percentage method and Bivarat analysis was used with a device test marked from wilcoxon with an error rate of 5%.

RESULTS

Analysis of the Effect of Cucumber and Tomato Juice Combination Administration on Before and After Sistolic Blood Pressure in women (menopouse) overweight will be presented in table 1.

Table 1. Effect of Combination Administration of Cucumber and Tomato Juice on Before and After Systolic Blood Pressure in overweight women (menopouse)

Systolic Blood Pressure Before Combined Administration of Cucumber and Tomato Juice	Blood Pressure After Combined Administration of Cucumber and Tomato Juice											
	Normal		Pre Hypertension		Stage Hypertension 1		Stage hypertension 2		Stage hypertension 3		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Normal	0	0	0	0	0	0	0	0	0	0	0	0
Pre Hypertension	0	0	0	0	0	0	0	0	0	0	0	0
Stage hypertension 1	7	53,8	0	0	1	7,7	0	0	0	0	8	61,5
Hipertensi tahap 2	2	15,4	1	7,7	1	7,7	0	0	0	0	4	30,8
Hipertensi tahap 3	0	0	0	0	1	7,7	0	0	0	0	1	7,7
Total	9	69,2	1	7,7	3	23,1	0	0	0	0	13	100

ρ value = 0,001 α = 0,05

Based on table 1, it can be interpreted that the results of statistical test analysis using the wilxocon signed rank test found that the magnitude of the ρ value of 0.001 is smaller than the value of α = 0.05 (0.001 < 0.05), so that H0 is rejected and H1 is accepted, meaning that there is an influence of giving a combination of cucumber and tomato juice on overweight female blood pressure (menopouse) at Posyandu Kantil Kelurahan Pojok Kecamatan Mojoroto Kota Kediri in 2022.

Analysis of the Effect of Cucumber and Tomato Juice Combination Administration on Before and After Diastolic Blood Pressure in women (menopouse) overweight will be presented in table 2

Table 1. Effect of Combination Administration of Cucumber and Tomato Juice on Before and After Diastolic Blood Pressure in overweight women (menopouse)

Diastolic Blood Pressure Before Combined Administration of Cucumber and Tomato Juice	Blood Pressure After Combined Administration of Cucumber and Tomato Juice											
	Normal		Pre Hypertension		Stage Hypertension 1		Stage Hypertension 2		Stage Hypertension 3		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Normal	0	0	0	0	0	0	0	0	0	0	0	0
Pre Hypertension	0	0	0	0	0	0	0	0	0	0	0	0
Stage hypertension 1	3	23,1	4	30,8	0	0	0	0	0	0	7	53,8
Hipertensi tahap 2	1	7,7	4	30,8	1	7,7	0	0	0	0	6	46,2
Hipertensi tahap 3	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	30,8	8	61,5	1	7,7	0	0	0	0	13	100

ρ value = 0,001 α = 0,05

Based on table 3, it can be interpreted that the results of statistical test analysis using the wilxocon signed rank test found that the magnitude of the ρ value of 0.001 is smaller than the value of α = 0.05 (0.001 < 0.05), so that H0 is rejected and H1 is accepted, meaning that there is an influence of giving a combination of cucumber and tomato juice on overweight female blood pressure (menopouse) in Posyandu Kantil Kelurahan Pojok Kecamatan Mojoroto Kota Kediri in 2022.

DISCUSSION

Analysis of the Effect of Giving a Combination of Cucumber and Tomato Juice on Blood Pressure in Women (menopouse) Overweight at Posyandu Kantil Kelurahan Corner, Mojoroto District, Kediri City in 2022.

Based on the results of research from 13 respondents at Posyandu Kantil Kelurahan Pojok Kecamatan Mojoroto Kota Kediri in 2022, the study was conducted for 5 days where respondents who had experienced a decrease in blood pressure on day 3, respondents were dismissed and respondents who were still experiencing high blood pressure continued their research until day 5, so that researchers did not comply with theory and SOP. However, respondents experienced a decrease in blood pressure, where before consuming a combination of cucumber and tomato juice the blood pressure value was mostly systolic (61.5%) and diastolic (53.8%) who had stage 1 hypertension and after consuming a combination of cucumber and tomato juice the blood pressure value was as large as respondents who experienced normal blood pressure (69.2%) and almost half had pre-hypertension (30.8%).

The results of the wilxocon blood pressure test before and after consuming a combination of cucumber and tomato juice obtained ρ value 0.001 then the value of ρ value < 0.05 which means that H0 is rejected and H1 is accepted. So in conclusion, there is an effect of giving a combination of cucumber and tomato juice on blood pressure in overweight women (menopouse.

According to researchers, there is a congruence between the theory and the fact that consuming a combination of cucumber and tomato juice can lower blood pressure. The combination of cucumber and tomato juice is highly recommended for people with hypertension because cucumbers and tomatoes are rich in potassium and low in fat and high in fiber.

CONCLUSION

There was an effect of giving a combination of cucumber and tomato juice on blood pressure in overweight women (menopause).

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