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THE EFFECT OF CONSUMPTION OF BLACK CINCAU ICES ON REDUCING BLOOD PRESSURE IN PREGNANT WOMEN WITH HYPERTENSION

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ABSTRACT

Hypertension is a condition in which systolic blood pressure reaches or exceeds 140 mmHg and diastolic blood pressure reaches or exceeds 90 mmHg. The purpose of this study was to evaluate the effect of giving black grass jelly (Premna oblongifolia Merr) ice to pregnant women with hypertension.

The method used in this study was a pre-experimental design with a One Group Pretest Posttest using a cross-sectional time approach. The research population consisted of 20 respondents, with a sample of 10 respondents selected using purposive sampling method.

The results of this study concluded that giving black grass jelly ice has a positive effect, especially as an effective non-pharmacological method in reducing blood pressure in pregnant women who experience hypertension.

These findings indicate that giving black grass jelly ice can be an effective alternative in managing blood pressure in pregnant women with hypertension. This method holds promise as an adjunctive therapy that can reduce the risk of complications related to hypertension in pregnant women.

Keywords: Black Grass jelly; Blood Pressure; Hypertension.

1. INTRODUCTION

Hypertension or high blood pressure is a problem found in society, both in developed and developing countries, including Indonesia. Hypertension is a condition of increasing systolic blood pressure of more than equal to 140 mmHg and diastolic more than equal to 90 mmHg. Hypertension can be classified into two types, namely primary or essential hypertension whose cause is unknown and secondary hypertension which can be caused by kidney disease, endocrine disease, heart disease and child kidney disorders. Hypertension often causes no symptoms, while blood pressure that is persistently high for a long time can cause complications. Therefore, hypertension needs to be detected early by checking blood pressure regularly (Sidabutar 2009).

The highest maternal mortality rate in 2019 was in Situbondo Regency, which was 198.00 per 100,000 live births, with 18 people. Meanwhile, the lowest maternal mortality rate is in Batu City, which is 31.23 per 100,000 live births or as many as 1 person. For the City of Kediri 2019 there were no maternal deaths. (Profil Kesehatan Jatim, 2019) The highest cause of maternal death in 2019 was pre-eclampsia/eclampsia, which was

31.15% or 162 people, bleeding, namely 24.23%, other causes, namely 23.1% or 120 people.

Other causes decreased because some were included in the criteria for causing metabolic disorders, and some were included in the criteria for circulatory disorders. While the causes of infection increased from 2018, namely 6.73% or as many as 35 people. (Profil Kesehatan Jatim, 2019) Hypertension in East Java Province, The estimated number of hypertension sufferers aged ≥ 15 years in East Java Province is around 11,952,694 residents, with the proportion of males 48% and females 52%. Of this amount, 40.1% or 4,792,862 residents received health services for people with hypertension. (Profil Kesehatan Jatim, 2019).

Based on data obtained from the East Java Health Office in 2015 there were 427,085 pregnant women, and 11,056 people with hypertension. While data from the Lamongan District Health Office in 2016 there were 17,002 pregnant women and 143 people with hypertension. (Bidang Layanan Kesehatan Kabupaten Lamongan, 2016). At PMB Indarsih, Amd., Keb. From 1 January 2020 to 30 January 2020, 102 pregnant women visited ANC and 11 people with hypertension were found. Hypertension in pregnant women is a cause of maternal death, but hypertension deaths are 150/100,000 births (Manuaba, 2008).

90% of pregnant women die from obstetric complications caused by the classic triad, namely bleeding 40-60%, hypertension 21-30%, infection 20-30% (Soejoenes, 2009). In Makassar the causes of maternal death are bleeding 42.4%, hypertension 33.3% and infection 18%, therefore early diagnosis and treatment of hypertension need to be implemented immediately to reduce maternal and perinatal mortality (Manuputty 2010).

Hypertension is very closely related to lifestyle factors and diet. Lifestyle is very influential on the shape of a person's behavior or habits that have a positive or negative influence on health. Hypertension is not widely known as a dangerous disease, even though hypertension is a silent killer, because people with hypertension feel healthy and without significant complaints so they consider their disease mild. So that hypertension examination is found when routine examinations are carried out / when patients come with other complaints. The serious impact of hypertension when complications have occurred, is only realized when it has caused organ disorders such as impaired coronary heart function, kidney function, impaired cognitive function/stroke. Hypertension basically

reduces the life expectancy of sufferers. This disease is the estuary of various degenerative diseases that can result in death.

According to Muhammadun (2010), hypertension and complications can be prevented through two types of therapy, namely pharmacology & non-pharmacology. Pharmacological therapy is used to prevent/reduce blood pressure by using antihypertensive drugs. While non-pharmacological therapy using traditional medicine or natural ingredients. One of the plants that is widely used by Indonesian people, especially people on the island of Java, is grass jelly (Premna oblongifolia Merr.) as a medicinal plant. According to Katrin et al. Black grass jelly can reduce systolic blood pressure in hypertensive patients Black grass jelly is one of the non-pharmacological drugs. which is made from black grass jelly leaves which can reduce systolic blood pressure by preparing 20 pieces of black grass jelly leaves then boiling and immediately filtering black grass jelly water and drinking it for 1 week in 1 day consumed 2 times a day.

Inside the black grass jelly contains carbohydrates, fiber, calcium, minerals, calories (low), protein and vitamin A and vitamin C are also found, in addition to that found phenolic compounds, flavonoids, steroids and caffeine. Through the phenolic compounds in black grass jelly which plays an important role in reducing blood pressure. From the diuretic properties of black grass jelly, the salt content in the blood is also reduced so that it can ease the work of the heart in pumping blood, so that blood pressure decreases (Septian, 2014)

Based on the problems above, the researcher is interested in conducting research on the effect of black grass jelly ice on changes in blood pressure in pregnant women with hypertension at PMB Indarsih Amd., Keb. Lamongan.

2. METHOD

The design used was a pre-experimental research design, the One Group Pretest Posttest design and the approach used in this study was a cross sectional approach.

This research was conducted for 1 week which was carried out in July 2022. Population of 20 respondents and a sample of 10 respondents with the sampling technique purposive sampling method.

The results of data collection will be processed in the form of editing, scoring, and tabulating, then the researcher will test the normality of the data to find out the distribution of the data using the Kolmogorov Smirnov and Shapiro-Wilk tests. The

hypothesis test used is the Wilcoxon test with an error limit or alpha value (α = 0.05).

3. RESULT AND DISCUSSION

1) Age

Table 5.1 Characteristics of Respondents by Age in Pregnant Women with Hypertension at PMB Indarsih Amd., Keb. Lamongan Regency

No	Mother's Age	Amount	Percentage (%)
1	< 20 Th	2	20
2	21-30 Th	5	50
3	31-40 Th	3	30
		10	100

Based on table 5.1, it can be concluded that of the 10 respondents, half (50%) were aged 21-30 years and a small portion (20%) were aged <20 years.

2) Jobs

Table 5.2 Characteristics of Respondents Based on Occupation in Pregnant Women with Hypertension at PMB Indarsih Amd., Keb. Lamongan Regency.

	Mother's Job	Amount	Percentage (%)
1	Housewife	7	70
2	Private Sector Worker	3	30
		10	100

Based on table 5.2, it can be concluded that of the 10 respondents, most (70%) of the mothers did not work or were housewives, and almost half (30%) worked in the private sector.

3) Education

Table 5.3 Characteristics of Respondents Based on Education in Pregnant Women with Hypertension at PMB Indarsih Amd., Keb. Lamongan Regency.

No	Mother's Education	Amount	Percentage (%)
1	Elementary school	0	0
2	Junior high school	4	40
3	Senior High School	6	60
		10	100

Based on table 5.2, it can be concluded that of the 10 respondents, most (60%) had high school education, while almost half (40%) of the respondents had junior high school education.

4) Blood pressure before being given grass jelly ice

Table 5.4 Characteristics of Respondents Based on Blood Pressure in Pregnant Women with Hypertension before being given Black Grass Jelly Ice (Premna oblongifolia Merr) at PMB Indarsih Amd., Keb. Lamongan Regency.

No	Mother's Blood Pressure	Amount	Percentage (%)
1	mild hypertension	0	0

2	moderate hypertension	4	4
3	severe hypertension	6	60
		10	100

Based on table 5.4 above, it can be concluded that most of the 10 respondents (60%) included severe hypertension, and a small proportion (40%) included moderate hypertension.

5) Blood pressure after being given grass jelly ice

Table 5.5 Characteristics of Respondents Based on Blood Pressure in Pregnant Women with Hypertension before being given Black Grass Jelly Ice (Premna oblongifolia Merr) at PMB Indarsih Amd., Keb. Lamongan Regency.

No	Mother's Blood Pressure	Amount	Percentage (%)
1	mild hypertension	2	20
2	moderate hypertension	4	40
3	severe hypertension	40	40
		10	100

Based on table 5.5 above, it can be concluded that from 10 respondents there was a decrease, initially 2 people had severe hypertension to moderate hypertension, as well as those with moderate hypertension, 2 people experienced a decrease to mild hypertension.

DISCUSSION

Based on the results of bivariate analysis with the Wilcoxon test, a significance value of 0.006 (p <0.05) was obtained, which means that there was an effect of black grass jelly ice (Premna oblongifolia Merr) on reducing blood pressure in pregnant women with hypertension at PMB Indarsih Amd., Keb. Lamongan Regency.

According to researchers, hypertension in pregnancy is caused by many things including heredity, the age of pregnant women who are too young or too old, first pregnancy, history of hypertension, pregnant women who are obese or overweight, stress and lifestyle factors such as smoking and diet.

The first factor is age, based on table 5.1 there are 2 (20%) pregnant women who have less than healthy reproductive age and 3 (30%) pregnant women with an age exceeding healthy reproduction. The second factor is work, based on table 5.2 most pregnant women work as housewives where the work is not limited in time and takes a lot of energy which results in pressure and stress that can trigger hypertension.

According to Katrin (2015) Black grass jelly can reduce systolic blood pressure in hypertensive patients. Black grass jelly is one of the non-pharmacological drugs. which is made from black grass jelly leaves which can reduce systolic blood pressure by preparing 20 pieces of black grass jelly leaves then boiling and immediately filtering black grass jelly water and drinking it for 1 week in 1 day consumed 2 times a day. Inside the black grass jelly contains carbohydrates, fiber, calcium, minerals, calories (low), protein and vitamin A and vitamin C are also found, in addition to that found phenol, flavoid, steroid, caffeine and diuretic properties. Black grass jelly has phenolic compounds and diuretic properties which play an important role in reducing blood pressure.

This is in accordance with research conducted at PMB Indarsih Amd., Keb, out of 10 respondents 9 of them experienced a decrease in blood pressure after drinking black grass jelly ice (Premna oblongifolia Merr) for 7 days. This is because black grass jelly contains phenol and flavonoids. From the diuretic properties of black grass jelly, the salt content in the blood is also reduced so that it can ease the work of the heart in pumping blood, so that blood pressure decreases. From the data obtained, half of the respondents (50%) were of healthy reproductive age, so the intervention provided had a positive effect, namely a decrease in blood pressure.

The results of the study Table 5.5 shows that before being given black grass jelly ice (Premna oblongifolia Merr) to pregnant women with hypertension, the results showed that some respondents who had severe hypertension turned into moderate hypertension after being given black grass jelly ice. Whereas in moderate hypertension some respondents experienced a decrease in blood pressure to mild hypertension, and a small number of respondents did not experience a change.

4. CONCLUSION

The blood pressure of pregnant women with hypertension before being given Black Grass Jelly Ice (Premna oblongifolia Merr) at PMB Indarsih, Amd., Keb, Lamongan Regency is mostly severe hypertension. The blood pressure of pregnant women with hypertension after being given black grass jelly ice (Premna oblongifolia Merr) at PMB Indarsih, Amd., Keb, Lamongan Regency is mild hypertension. The Effect of Black Grass Jelly Ice (Premna oblongifolia Merr) on Blood Pressure of Pregnant Women with

Hypertension at PMB Indarsih, Amd., Keb, Lamongan Regency.

Based on the results of bivariate analysis with the Wilcoxon test, a significance value of 0.006 (p <0.05) was obtained, which means that there was an effect of black grass jelly ice (Premna oblongifolia Merr) on reducing blood pressure in third trimester pregnant women with hypertension at PMB Indarsih, Amd., Regency of Lamongan Regency.

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