

Jurnal Penelitian Kebidanan & Kespro	Vol. 7 No. 1	Edition: Oktober 2024 – April 2025
	http://ejournal.delihusada.ac.id/index.php/JPK2R	
Received : 18 Oktober 2024	Revised: -----	Accepted: 29 April 2024

THE EFFECT OF AVOCADO JUICE ADMINISTRATION ON LOWERING BLOOD PRESSURE IN PREGNANT WOMEN WITH GESTATIONAL HYPERTENSION IN JULIANA DALIMUNTHE CLINIC KEC. PERCUT SEI TUAN

Putri Krina, Deswizar Syaputri, Anita Damayanti

Institut Kesehatan Deli Husada Deli Tua, Institut Teknologi dan Bisnis
Indragiri, Universitas Haji Sumatera Utara
e-mail: putrikrisna25@yahoo.com

Abstract

Pregnancy is the intrauterine growth and development of the fetus from conception to the beginning of labor and the duration of pregnancy from ovulation to parturition is around 40 weeks and no more than 43 weeks. Gestational hypertension is hypertension that occurs after 20 weeks of pregnancy without urine protein and blood pressure increases >140/90 mmHg. Avocados contain potassium and flavonoids. The potassium in avocado is very high so it can stabilize blood pressure, especially preventing high blood pressure attacks which can be minimized. Meanwhile, flavonoids act as inhibitors of Angiotensin Changing Over Enzyme (ACE), a drug that helps relax veins and arteries to lower blood pressure. The aim of this study was to determine the reduction in blood pressure before and after consuming avocado juice in pregnant women. This type of research is a quasi experiment using a one group pretest-posttest approach. This research uses a purposive sampling technique, where samples are taken according to the criteria set by the researcher. The population in this study was pregnant women with gestational hypertension with a sample of 15 people. The results of bivariate analysis using the Wilcoxon test show that the p-value is $0.000 < 0.05$, so it can be concluded that there is an effect of giving avocado juice on reducing blood pressure in pregnant women.

Keywords: *Pregnant Women, Gestational Hypertension, Avocado Juice*

1. PENDAHULUAN

Indonesia is one of the agricultural countries, the maternal mortality rate in Indonesia is still very high, this is a medical condition that has not been fully resolved. Based on the Ministry of Health in 2020, the maternal mortality rate increased by 10.25% from 2019. The maternal mortality rate (MMR) in 2020 was 98.6/100,000 live births (4,627

cases), an increase inversely proportional to the MMR in 2019 of 76.93/100,000 live births (419 cases) (Ministry of Health, 2020).

The highest case of hypertension occurred in all regions of North Sumatra with a total of 67.57% until 2021 this case also included hypertension in pregnancy (Preeclampsia). The number of complications in pregnancy was 126,806, in North Sumatra the

number of maternal deaths reached 328 per 10,000 live births. The leading causes of death according to the Sample Registration System (SRS) are hypertension in pregnancy 33.7%, obstetric bleeding 27.3%, non obstetric complications 15.7% and other obstetric complications 12.04% (Health Profile of North Sumatra Province, 2021).

Hypertension or high blood pressure is a medical problem that usually occurs during pregnancy and causes complications in 2-3% of pregnancies. Hypertension in pregnancy is common in 6-10% and increases the risk of morbidity, mortality in the mother and fetus. Risks to the mother are placental abruption, shock, organ failure (liver and kidney) and blood supply abnormalities. While the risk to the fetus is premature birth and intrauterine death. Hypertension in pregnancy can be divided into several, namely chronic hypertension, preeclampsia, eclampsia, chronic hypertension with preeclampsia and gestational hypertension. (Syam et al., 2023).

Gestational hypertension is hypertension that occurs after 20 weeks of pregnancy without urinary protein, with an incidence of 6%, some 25% of women develop preeclampsia. Severe gestational hypertension is a condition of increased blood pressure >160 mmHg blood pressure will be the norm at 10 days postpartum (Alasta, 2019).

There are two ways to treat hypertension, namely by pharmacological and non-

pharmacological means. Pharmacological treatment is treatment by taking anti-hypertensive drugs to reduce circulatory tension, natural side effects of taking drugs can cause dependence, significant expenditure and other problems. Meanwhile, non-pharmacological treatment can be used without drugs and can reduce the pulse rate compared to pharmacological treatment alone (Marliani and Tantan, 2017).

Avocados can lower the pulse rate because they contain potassium and flavonoids. Which is where the potassium content in avocados is very high so that it can stabilize blood pressure, especially prevent high blood attacks that can be minimized. While flavonoids act as indicators Angiotensi Changing Over Enzym (ACE) is a drug that can help reduce veins and arteries to lower blood pressure (Robinson, 2019).

2. METODE

The method in this study is analytical quantitative research, namely a study used to analyze the effect of giving avocado juice on lowering blood pressure in pregnant women with gestational hypertension. The population in this study were all pregnant women who experienced gestational hypertension at the Juliana Dalimunthe Clinic, Percut Sei Tuan Kec. 15 people. This research design uses a quasy experiment with a one group pretest-posttest approach, namely a research design in which measurements are taken

before treatment (pretest) and after treatment (posttest).

servant jobs were 4 respondents (26.7%).

3. RESULT

Table 1. Frequency Distribution of Respondent Characteristics

Variable	Characteristik	Frequency	%
Age	≤21	5	33,3
	≥35	10	66,7
	Total	12	100
Parity	Primipara	4	26,7
	Multipara	11	73,3
	Total	15	100
Education	SMP	4	26,7
	SMA	7	46,7
	D3 dan S1	4	26,7
	Total	15	
Job	IRT	7	46,7
	Wiraswasta	4	26,7
	PNS	4	26,7
	Total	15	100

Obtained from 15 pregnant women with gestational hypertension, the majority of respondents were aged > 35 years, namely 10 respondents (66.7%), the minority of respondents aged <21 years were 5 respondents (33.3%). Respondents with the majority of multiparous parity were 11 respondents (73.3%), the minority of respondents with primiparous parity were 4 respondents (26.7)%. In education, the majority of respondents had a high school education as many as 7 respondents (46.7%), the minority of respondents with junior high school education were 4 people (26.7%) and respondents who had D3 and S1 education were 4 respondents (26.7%). Based on occupation, the majority of respondents were housewives as many as 7 respondents (46.7%), the minority of respondents with self-employed jobs were 4 respondents (26.7%) and civil

Table 2: Pretest Blood Pressure

Blood Pressure	Frequency	%	Min	Max
Grade I Hypertension	10	66,7	140	160
Grade II Hypertension	5	33,3		
Total	15	100,0		

Based on univariate analysis of respondents' blood pressure before giving avocado juice (pretest) on day 1, it was found that the majority of respondents were in the category of grade I hypertension, namely 10 respondents (66.7%). The pretest minimum value obtained is 140 and the maximum value obtained is 160.

Blood Pressure	Frequency	%	Min	Max
Normal	5	33,3	120	139
Prehypertensi	10	66,7		
Total	15	100,0		

Based on the table above, blood pressure after giving avocado juice (posttest) on day 7, it was found that the majority of respondents were in the prehypertension category, namely 10 respondents (66.7%). The minimum value obtained after giving avocado juice is 120 and the maximum value obtained is 139.

Table 4. Wilcoxon Signed Ranks Test Results Based on the bivariate analysis table with the Wilcoxon Signed 4

	Ranks			Z	P-Value
	N	Mean Rank	Sum Of Rank		
Kategori Posttest	Negative Rank	15	8.00	120.00	0,00
	Posstive Ranks	0	,00	,00	
	Ties	0			
Kategori Pretest	Total	15			

Ranks Test test, the average difference in systolic blood pressure before and after consuming avocado juice is p value 0.00. Based on the statistical test above, the results obtained p value $0.00 < \alpha = 0.05$ so that H_a is accepted, which means that there is an effect of giving avocado juice on lowering blood pressure in pregnant women with gestational hypertension at the Juliana Dalimunthe Clinic Kec. Percut Sei Tuan Year 2024.

4. DISCUSSION

1. Blood pressure of pregnant women before and after avocado juice administration

Based on univariate analysis of blood pressure of pregnant women before giving avocado juice (pretest) it can be seen from the majority of pregnant women experiencing grade I hypertension, namely 10 respondents (66.7%). From the results and after giving avocado juice (posttest), the majority of respondents were in the prehypertension category, namely 10 respondents (66.7%). From the results of these blood pressure measurements it can be seen that not only the heart rate of pregnant women is normal but also has an impact on the blood pressure of pregnant women.

In consuming avocado juice, respondents are very fond of it, because they do not feel any negative effects while consuming avocado juice. They also realize that avocados also contain low sugar levels so they do not think about the side effects of avocado juice such as the onset of

cholesterol, diabetes and other diseases.

2. Effect of avocado juice on blood pressure reduction

From the analysis of blood pressure before and after giving avocado juice with the Wilcoxon test, the p-value is $0.00 < 0.05$ and the Z value is -3.493, it can be concluded that there is a difference in the average blood pressure of pregnant women before and after giving avocado juice, which means that there is an effect of giving avocado juice on lowering blood pressure in pregnant women with gestational hypertension at the Juliana Dalimunthe Clinic Kec. Percut Sei Tuan Tahun 2024.

Potassium is very useful for lowering systole and diastole blood pressure by inhibiting the release of renin resulting in increased sodium excretion, excess salt and water consumption. Increasing potassium levels in the blood can balance sodium levels while being able to reduce sodium levels excreted through urine so as to prevent increased blood pressure in pregnant women. In addition to potassium, avocados also contain magnesium and vitamin C. Magnesium will activate the cell membrane that pumps sodium out and potassium into the cell so that blood pressure decreases (Fahriza, 2018).

The results of this study are in line with research (Nurhayati, 2017) where the significant value of systole and diastole p $0.000 < 0.005$. These results indicate that after giving avocado juice for 5

days, blood pressure in pregnant women mostly tends to decrease.

The results of this study are also in line with research (Ariescha, 2022) where the p-value result is $0.00 < \alpha 0.05$, it can be concluded that there is an effect in giving avocado juice on lowering blood pressure in pregnant women with hypertension.

2007: National Report 2013. Jakarta: Agency for Health Research and Development, Ministry of Health.

William N Dunn, (1998), Introduction to Public Policy Analysis, Gajah Mada University Press, Yogyakarta.

5. CONCLUSIONS

1. The distribution of blood pressure before giving avocado juice (*pretest*) to pregnant women at the Juiana Dalimunthe Clinic, Percut Sei Tuan Kec. 2024 with grade I hypertension category is 10 respondents (66.7).
2. The distribution of blood pressure after giving avocado juice (*posttest*) to pregnant women in the Julianan Dalimunthe Clinic, Percut Sei Tuan Kec. 2024 with the prehypertension category, namely 10 respondents (66.7%).
3. Based on the *Wilcoxon* test, the *p-value* is $0.00 < 0.05$, which means that there is an effect of giving avocado juice on reducing pressure in pregnant women with gestational hypertension at Kinik Juliana Dalimenthe Kec. Percut Sei Tuan Year 2024.

LITERATURE

Barus, B., & Lestari, I. (2018). THE EFFECT OF GARLIC BULB AND SHALLOT BULB EXTRACTS ON BURNS IN RABBITS. *JOURNAL FARMASIMED (JFM)*, 1(1), 1-5. Retrieved from <https://ejournal.medistra.ac.id/index.php/JFM/article/view/86>

Ministry of Health RI. (2013). *Basic Health Research (Risksdas)*