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## **EFFECT OF LILIN VEGETABLE (SETARIA PALMIFOLIA) AGAINST BLOOD PRESSURE DECREASE IN PREGNANT WOMEN IN GOSOMA VILLAGE TOBELO SUB-DISTRICT NORTH HALMAHERA**

**Elnora N Lainata<sup>1\*</sup>, Arend L Mapanawang<sup>2</sup>, Samad Hi Husen<sup>3</sup>**

<sup>1</sup> Midwife Department of Akbid Makariwo Tobelo, North Halmahera, North Moluccas, Indonesia.

<sup>2</sup> Nursing Department of STIKES Halmahera, Yayasan Medika Mandiri.

<sup>3</sup> Health Polytechnic Of Health Ministry Ternate, North Moluccas, Indonesia.

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**\*Correspondence to Author:**

**Elnora N Lainata**

Midwife Department of Akbid  
Makariwo Tobelo, North  
Halmahera, North Moluccas,  
Indonesia.

**E-mail:**

[elnora.lainata@yahoo.com](mailto:elnora.lainata@yahoo.com)

### **ABSTRACT**

Hypertensive disease in pregnancy (Preeclampsia and eclampsia) is one of three major causes of maternal death where approximately 85% of preeclampsia occurs in the first pregnancy, preeclampsia occurs in 14% to 20% of fetuses with more than one fetus and 30% of patients have anomaly of the uterus Weight, Indonesia's health profile data 2015, indicates that maternal mortality increased to 359 per 100,000 and hypertension in pregnancy has a proportion or coverage increased by more than 25% of maternal deaths in Indonesia caused by hypertension in pregnancy. This study aims to determine the effect of administration Sayur Lilin against the drop in blood pressure in pregnant women.

This study uses quasi experimental method with one group pretest-posttest approach. With the number of samples used amounted to 10 respondents. Data collection was done by using data collection format and analyzed with SPSS 23.0 computer program

The result showed that the systole blood pressure measurements before treatment were obtained mean (mean) 143,9 mmHg. The result of systole blood pressure measurement after 1 week treatment was obtained mean (mean) 142,6 mmHg. The result of measurement of diastolic blood pressure before treatment was obtained mean (mean) 93,5 mmHg. The result of measurement of diastolic blood pressure after treatment for 1 week was obtained mean of 92,6 mmHg.

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There was influence of linear vegetation on the blood pressure in pregnant woman with  $P = 0,000$  ( $P < 0,005$ ). The conclusion of this study is the provision of wax vegetables to pregnant women can help lower blood pressure in pregnant women.

## INTRODUCTION

Pregnancy was an important episode at common women's life and a physiological condition. But there were some conditions which could cause pregnancy was full of threat; any mom's diseases that endangered her pregnancy and born process with risk.<sup>1</sup>

The data of Indonesia health profile 2015, showed that mom's death rate increased to 359 per 100.000 and Hypertension at pregnancy had proportion or the scope was increasing, more than 25% of mom's death caused by hypertension at pregnancy.<sup>5</sup>

Therefore, the government had done any breakthroughs in order to reduce the rate of mom's death caused by hypertension at pregnancy by increasing midwife's role and competency in handling those problems as early as possible by doing regularly checking to the pregnant mom and one of the program hoped to use plants as the medicine of any diseases, one of them was the using of lilin vegetable (*Setaria palmifolia*) that had some chemical contains of Tricosane (19,05%) Nonadecane (7,31%), nonadecyltrifluoroacetat (30,76%).

Plant of lilin vegetable was very useful for the rural community because before the government's program entered especially at the small villages such as Papua, North Maluku, this lilin plant was lots used as natural comestible at daily life toward the decreasing of blood sugar at the sufferers.<sup>7</sup>

So that, based on the data above, the writer took the title of "Influence of giving lilin vegetable (*Setaria Palmifolia*) toward blood pressure (TD) of pregnant mom".

## BASIC CONCEPT OF PREGNANCY

### Meaning

Pregnancy is a conception process in order to continue the generation until producing fetus which will grow inside the woman's womb.<sup>8</sup>

### Indication and Symptom of Pregnancy

According to Manuaba (2010), indications of pregnancy divided into 3:<sup>8</sup>

- 1) Indication of pregnancy suspects

a) Amneorea (late of menstruation), the first of the last menstruation with naegele formula could be determined the childbirth estimation.

b) Queasy and (emesis), influence of estrogen dan progesterone.

## Hypertension at Pregnancy

### a. Meaning of Hypertension

According to Manuaba 2008, the existence of systolic at least 90 mmHg. That value was measured minimum twice with the time difference of 6 hours, defined as systolic blood pressure  $\geq 140$  mmHg and diastolic blood pressure  $\geq 90$  mmHg. Significance of each blood pressure measurement was related with gestation age inside.<sup>8</sup>

### b. Etiology

According to Rukiyah 2010, the cause of hypertension was descendent or genetic, obesity, stress, cigarette, wrong way of eating, emotion of pregnant woman.<sup>10</sup>

### b. Indication and symptom

Indication and symptom of pregnant woman with hypertension are:<sup>10</sup>

- 1) Systolic blood pressure was indicator in handling hypertension at pregnancy.
- 2) Hypertension diagnose was made if the diastolic blood pressure 90 mm Hg of 2 measurements at 1 hour of more.
- 3) Hypertension at pregnancy could be divided into 2 parts:<sup>11</sup>
  - a) Hypertension because of pregnancy, if the hypertension was firstly occurred after 20 weeks pregnancy, during the childbirth, and or at 49 hours post childbirth.
  - b) Chronically hypertension, if the hypertension was occurred before 20 weeks pregnancy.

## Hipertensi Patofisiology

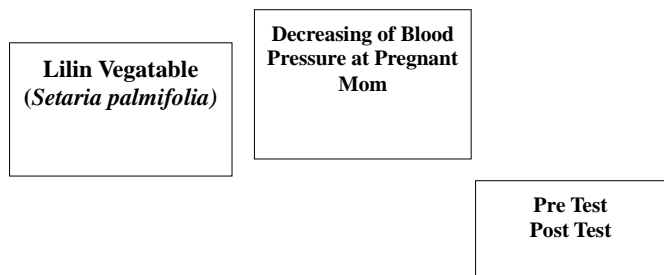
According to Manuaba 2008, gestosis symptom couldn't be explained with a factor or theory but it was multifactor that described any complex clinically manifestation called disease of theory. According to diet theory of pregnant mom, the needs of calcium for pregnant mom was high enough in order to form bone and other organs.

## Plant of Lilin Vegetable (*Setaria palmifolia*)

Plant of lilin vegetable (*Setaria palmifolia*) included into horticulture plants that used it's leave stem.<sup>13</sup>

Plant of lilin vegetable (*Setaria palmifolia*) could be planted at lowland and plateau.

### Conceptual Framework



Note :

□ : Independent variable

□ : Dependent Variable

### METHODS

This research used *Quasy Experiment Design* with pretest and post test designs<sup>15</sup>

Pretest	Intervention	Posttest
O <sub>1</sub>	X	O <sub>2</sub>

Explanation : O<sub>1</sub> measurement result before intervention.

O<sub>2</sub> measurement result after intervention.

### RESULTS

This research was conducted in Gosoma Village Tobelo Sub District North Halmahera Regency with the purpose to see the influence of giving lilin vegetable (*Setaria Palmifolia*) Toward the Decreasing of Blood Pressure at Pregnant Mom in Gosoma Village Tobelo Sub District North Halmahera Regency in 2017.

Sample total of this research were 10 persons who had fulfilled inclusion criteria. The data of research had been analyzed became information with the purpose that the research was described in the form of table and explanation. The data was analyzed with *SPSS program for windows*, that was divided into univariat and bivariat analysis.

#### Respondents Characteristic

Respondents characteristic was special characteristic adhered at the respondents. Respondents characteristic at this research included age, gender, education, and profession. Description of respondents distribution based on the patients' characteristic were as follow:

**Table 1.** Respondents' Characteristics based on Group of Age of Patients of Pregnant Mom in Gosoma Village in 2017.

Age	n	%
21 – 30	6	60
31-40	4	40
	0	0
Total	10	100

Based on Table 5.1, it showed that distribution of respondents' age at this research, the biggest proportion was at the group of age 21-30 years old, they were 6 persons (60.0%) and the smallest was respondents with age of 31-40 years old (40.0%).

**Table 2.** Respondents' Distribution based on Patients of Pregnant Mom's Education in Gosoma Village in 2017.

Education	n	%
SD	1	10
SMP	5	20
SMA	2	50
DIII/DIV/S1/S2	2	20
Total	10	100

Education at this research related with the last education or graduation certificate owned by the respondents. Based on table 2, distribution of education level of patients of pregnant moms who were become the respondents at this research, the most was SMA of 5 persons (50.%), while the least respondents was at the level elementary school of 1 person (10,0%).

**Table 3.** Distribution of respondents based on Profession of Patients of Pregnant Moms in Gosoma Village in 2017.

Profession	n	%
PNS	2	20
Entrepreneur	1	10
Housewife	7	70
Total	10	100

For the respondents' profession, it showed that the most of them was House wife of 7 persons (70.0%), while the least respondent was entrepreneur of 1 person (10.0%).

### DISCUSSION

This research was conducted by doing intervention with giving lilin vegetable for 10 pregnant moms appropriate with inclusion and measurement

criteria by using manual tension meter. After doing the data collecting, it was done the data procession and analyzing, so the discussion was as follow:

It was found that respondents' characteristic (pregnant mom at trimester II) which consisted of group of age, gender, profession, where at table 1 could be seen that at group of age 21-30 years old were 6 persons (60,0%), and the result of direct interview with respondents said that they didn't have hypertension profile at the previous and they got this hypertension when their pregnancy entered trimester II, it was caused many factors mainly their daily life style, and lack of activities where from 10 respondents, there were 70% were only as housewife and 50% respondents were only SMP graduated, so their understanding about keeping daily life style during pregnancy especially at the trimester II was lack. Dimana, salah satu penyakit yang ser

One of disease that threaten pregnancy was hypertension, direct cause of mom death were exsanguinations (28%), preeclampsia (24%), infection (11%), complication (8%), long partus (5%), trauma obstetric (5%), emboli obstetric (3%). According to WHO, there was about 585.000 moms death per year while pregnant or partus and 58,1 % of them caused by preeclampsia dan eklampsia<sup>2</sup>. The breakthrough in order to decrease moms death that caused by hypertension at pregnancy was using plant as medicine of any diseases, one of them was using lilin vegetable (*Setaria palmifolia*).

## CONCLUSION

Based on the research result and discussion described at the previous chapter, it could be concluded as follow:

1. Mean of Systole and Diastole blood pressure before the giving of lilin vegetable (*Setaria palmifolia*) were 143.9 mmHg and 93.5 mmHg.
2. Mean of Systole and Diastole blood pressure after the giving of lilin vegetable (*Setaria palmifolia*) 143.2 mmHg and 93.0 mmHg).

## REFERENCES

1. Melati, A. M. Midwifery Education of Pregnant Moms at three Semester III at Mrs. S with Hypertension at Pregnancy in RSUD

- Sukoharjao.Surakarta: Sekolah Tinggi Ilmu Kesehatan Kusuma Husada, 2013.
2. Radjamuda, N., Montolalu, A., Risk Factors related with Hypertension at Pregnant Moms in Poli Klinik Obs-Gin Rumah Sakit Jiwa. Midwife Scientific Journal, 2014; Vol 2 (1):1-10.
3. Hollegaard B Byars, S G Lykke J, & Boomsma J J, Parent-Offspring Conflict and the Persistence of Pregnancy-Induced Hypertension in Modern Humans. Journal Plos One, 2013; Vol 8 (2): 1-10, DOI : 112/ORGJPO3127.
4. Wikström, A. K., Gunnarsdottir, J., Nelandar, M., Simic, M., Stephansson, O., Cnattingius, S. Prehypertension in Pregnancy and Risks of Small for Gestational Age Infant and Stillbirth. Hyperaha Journal, 2016;Vol 02(1): 619-621, DOI : 10.1161.Hypj/org.0964.
5. Health Ministry of Republic Indonesia. health Profile 2015. Jakarta:Indonesia, 2016.
6. Health Department. Health Profile of North Halmahera Regency. Tobelo: Health Department of North Halmahera Regency. 2017.
7. Pangkey S, Mapanawang A L, Lamidja L, Killing M, Ismail, & Wenno W C, Influence of Giving Lilin Vegetable (*Setaria Palmifolia*) Toward the Decreasing of Blood Sugar Degre at the Diabetes Mellitus Sufferer. International Journal Of Health Medicine And Current Research (IJHMCR), 2016; Vol 1(02):46-53, DOI : 10.22301/IJHMCR.2528-3189.85.
8. Murtowah S, Midwifery Education of Pregnancy with High Risk at Mrs. S with Chronical Hypertension in RSUD Mojokerto. Midwifery Journal of STikes Mojokerto, 2012; Vol 04(1): 1-7.
9. Prawirohardjo, S. midwifery Science. Jakarta: PT. Bina Pustaka, 2010.
10. Widyastuti. Midwifery Education of Pregnant Mom with Clinical Pathology at Mrs. F with Hypertension in RSUD Gemolong Sragen. Surakarta: STikes Kusuma Husada, 2015.
11. VeerbeekJHW, Hermes W, Breimer A Y, & Rijn B B V, Cardiovascular Disease Risk Factors After Early-onset Preeclampsia, Late-Onset Preeclampsia, and Pregnancy-Induced Hypertension. Hyperaha Journal, 2015; Vol 02(1): 600-613,DOI : 10.1161.Hypj/org.0964.
12. Qin J Z, Pang L H, Li M J, Fan X J, & Huang R D, Obstetric Complication in Women With Polycystic Ovary Syndrome : A Systematic Review And Meta-Analysis. Journal Reproductive Biology And Endocrinology,

- 2013; Vol 1(2): 10-17, DOI: 10.1186/1477-7827-11-56.
13. Tualeka A, Mapanawang A L, Sangaji E H, Ismail, Identification of Tricosane Compound Contained in Lilin Vegetable Extract (*setaria pamifolia*). International Journal Of Health Medicine And Current Research (IJHMCR), 2016; Vol 1(02):46-53, DOI : 10.22301/IJHMCR.2528-3189.85.
  14. Mapanawang A L, Research of Health Department. Tobelo: Yayasan Medika Halmahera Utara. 2016.
  15. Notoatmodjo S, Health Research Method. Jakarta: PT. Rineka Cipta, 2010.
  16. Arikunto S, Quantitative and Qualitative Research Method. Jakarta:Rineka Cipta, 2006.
  17. Sudewa I W, Ismanto A Y, Rompas S, Influence of Mahkota Dewa Fruit (*Phaleria Macrocarpa*) Toward the Decreasing of Blood Pressure at Hypertension Sufferer in Werdhi Agung Village of Central Dumoga Sub District of Bolaang Mongondow Regency, Manado: Ilmu Keperawatan Fakultas Kedokteran, 2012.

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