

The Effectiveness of Green Betel Leaf Decoction on Perineal Wounds Healing in The Work Area of The Puskesmas Siak Hulu II, Kampar Regency

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ABSTRACT

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Health Center Working Area, all maternity in the work area of the puskesmas Siak Hulu Public Health Center II Working Area have never been treated with green betel leaves, so far the pharmacological treatment of perineal wounds is using iodine with a healing period of 7-14 days. The purpose of this study was to determine the effectiveness of using green betel water stew on healing perineal wounds in the working area of the puskesmas Siak Hulu II Health Center. This type of research is quantitative with a quasy experiment design and research design Pretest-Posttest one group design. The study was conducted in January-July 2019. The population in this study 122 people in the work Area of the Puskesmas Siak Hulu II Health Center in Kampar Regency with a total sample of 16 people using Purposive Sampling techniques. The results of this study are that the majority of respondents before being given green betel water decoction experienced poor perineal wounds as much as 81.2%, the majority of respondents after being given green betel water decoction experienced poor perineal wounds as much as 81.2%. Bivariate results, namely the effectiveness of green betel water stew on the healing of perineal wounds in the Work Area of the Puskesmas Siak Hulu II Health Center in Kampar Regency ($p = 0,000$). The suggestion is that health workers can practice and teach this technique to mothers to accelerate the healing of perineal wounds and the results of this study can be an innovation and alternative treatment option naturally for the health center.

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1. Introduction

Childbirth is the process of moving the fetus, placenta and membranes out of the uterus through the birth canal. A very constant normal process of labor consists of regular progression of uterine contractions, progressive thinning and dilation of the cervix, and progression of decreasing presentation. If the birth canal is not elastic in labor, it will trigger a tear in the birth canal (tear of the perineum). This perineal tear must be prevented so that it is necessary to perform an episiotomy on the perineum (Ambarwati, 2010).

Postpartum infection is the second leading cause of maternal death in Indonesia after bleeding. The Maternal Mortality Rate (MMR) based on the 2012 IDHS reached 359 per 100,000 live births. MMR in 2017 was 304 per 100,000 live births. In the 2014-2019 National Medium Term Development Plan (RPJMN), the government targets to reduce MMR to 276 per 100,000 live births. The incidence of infection in the mother is 20%. Perineal wound infection accounts for 11% of maternal deaths. Infections that are not handled properly, such as infection in the bladder or infection from the birth canal can cause death in the postpartum mother. Various attempts have been made to overcome the infection, but these efforts are still not optimal (Kemenkes, 2018).

In Riau Province, the MMR in 2017 was 108 per 100,000 live births, where the causes of maternal death were bleeding (50%), hypertension in pregnancy (25%), circulatory system disorders (8%), metabolic disorders and infections (2%).) and other causes (44%). Based on data from the Kampar District Health Office, the maternal mortality rate in 2013 was 86 per 100,000 live births. The maternal mortality rate in 2014 was 121 per 100,000 live births, the maternal mortality rate in 2015 was 142 per 100,000 live births, in 2016 it was 115 per 100,000 live births, while in 2017 it was 113 per 100,000 live births.

It can be ascertained that birth canal injuries occur at every delivery that will provide entry to commensal bacteria that are infectious. This increases the risk of post partum infection with traces of perineal injury due to episiotomy, spontaneous rupture and fetal trauma. Although these wounds are local in nature, proper care is needed to avoid spreading the infection systemically. Poor care of the perineal wound leads to infection. Perineal conditions affected by lochia and humidity will

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greatly support the proliferation of bacteria which can cause infection in the perineum (Varney, 2009).

Wounds to the perineum that are caused during childbirth need proper care so that the wound will heal quickly. Perineal wound healing during the puerperium takes an average of 7-14 days. This time is considered long enough because micro-organisms can reproduce within 48 hours (2 days), plus the perineal conditions during the puerperium which are always moist by lochia so that it can cause infection (Prawirohardjo, 2009). The use of drugs that can be done pharmacologically in perinimum is the use of red medicine for wounds or iodine. However, this drug is not recommended to be used continuously because it is feared that resistance will occur in the wound (Ambarwati, 2010).

The application of compresses and complementary medicines are considered beneficial for healing perineal wounds. Green betel leaf decoction can be used as a compress and complementary medicine. Betel contains arecoline in all parts of the plant which is useful for stimulating the central nervous and intellectual power, increasing peristalsis, and relieving snoring. The eugenol content in betel leaf can kill the fungus *Candida albicans*, prevent premature ejaculation, and have analgesic properties (Arisandi, 2013). Betel leaf is also often used by people to get rid of bad breath, treat wounds, stop bleeding gums, canker sores, and get rid of body odor. Betel leaves have antibacterial effects against *Streptococcus mutans*, *Streptococcus sanguis*, *Streptococcus viridans*, *Actinomyces viscosus*, and *Staphylococcus aureus* (Hariana, 2018).

Boiled betel leaf water can be used by mothers who have perineal wounds by washing the wound area (Mustarichie, 2011). In a study conducted by Kurniawati (2015), it was found that in the treatment group the average perineal wound treatment day required was about 3 days shorter than the control group which took a minimum of 5 days, which means that there is a significant difference in the duration of perineal wound healing between the experimental group and control. Research by Yuliaswati (2018) reveals that there is a significant difference in the duration of healing perineum wounds in respondents who use green betel stew.

Based on a preliminary study in the Siak Hulu II Public Health Center the average delivery per month is 30. All mothers who give birth in the Siak Hulu II Community Health Center have never been given treatment with green betel leaves, so far pharmacological perineal wound care is using iodine for a long time. healing of 7-14 days.

Based on the results of pre-experiments conducted by researchers on 3 postpartum mothers with perineal wounds in the Siak Hulu II Public Health Center, it was found that postpartum mothers who were given boiled green betel water said that the pain of the perineum wounds they experienced had decreased. While the pre-experimental results of 3 postpartum mothers who were given red betel, only 1 mother said that her perineal wound pain was reduced.

Based on the above background, the researcher is interested in researching the "Effectiveness of Using Green Betel Water Stew on Perineal Wound Healing in the Work Area of Puskesmas Siak Hulu II, Kampar Regency". The purpose of this study was to determine the effectiveness of using boiled green betel water to heal perineal wounds in the Puskesmas Siak Hulu II. The hypothesis of this study is that boiled green betel water is effective in healing perineal wounds in post partum mothers.

2. Method

This type of research uses a quantitative approach to quasi experimental design, using a pretest-posttest one group design research design. The researcher used one group, namely the design used to measure the treatment in the experimental group.

This research was conducted in the working area of Puskesmas Siak Hulu II, Kampar Regency. This research was conducted in January-July 2019. The population in this study were 122 post partum mothers in the January-December 2018 work area of the Puskesmas Siak Hulu II, Kampar Regency, with a sample size of 16 people. The data sources are primary and secondary data. Instruct the perineal wound examination guide sheet and the REEDA sheet. Data processing techniques are editing, coding, data entry and cleaning. The data analysis used was univariate and bivariate analysis using the t-dependent test.

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3. Result and Discussion

Puskesmas Siak Hulu II is one of the Community Health Centers located in Kubang Jaya, Siak Hulu, Kampar Regency. The work target is public health. The boundaries of Puskesmas Siak Hulu II are:

North : Teratak Buluh

South : Jalan Teropong

East : Kec. Siak Hulu

West : Kec. Bukit Raya

3.1 Univariate Analysis

Univariate analysis aims to explain or describe the characteristics of each research variable. Univariate analysis was used to determine the description of the distribution of respondents' characteristics to obtain an overview of the variables studied, namely the average perineal wound healing before and after the intervention.

a. Perineal Wounds Before Giving Boil Green Betel Water in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

Based on the results of the research that has been carried out, the distribution of perineal wound healing of the respondents before being given boiled green betel water can be seen as follows:

Tabel 1. Perineal Wounds Before Giving Boil Green Betel Water in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

No.	Perineal Wounds	Amount	
		f	%
1	Moderate	13	81,2
2	Severe	3	18,8
	Amount	16	100

Based on table 1, the majority of respondents before being given green betel water stew in the working area of the Puskesmas Siak Hulu II, Kampar Regency, experienced poor perineal injuries as much as 81.2%. The rest had bad perineal injuries as much as 18.8%.

b. Perineal Wounds After Giving Boil Green Betel Water in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

Based on the results of the research that has been carried out, the distribution of perineal wound healing of respondents after being given boiled green betel water can be seen as follows:

Tabel 2.

Perineal Wounds After Giving Boil Green Betel Water in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

No	Perineal Wounds	Amount	
		f	%
1	Mild	3	18,8
2	Moderate	13	81,2
	Amount	16	100

Based on table 2, the majority of respondents after being given green betel water stew had less good perineal injuries as much as 81.2%. The rest had good perineal injuries as much as 18.8%.

3.2 Bivariate Analysis

Prior to the bivariate analysis, the normality test was conducted first. The normality test is a test to recognize whether or not the variances of two or more distributions, meaning that the normality test is carried out to determine whether the data in the independent variable and the dependent variable are homogeneous or not. From the data normality test with the Shapiro-Wilk test on respondents who numbered less than 50, the results obtained in the before and after groups were normally distributed data with p value > 0.05, namely 0.138 for before and 0.087 for after data. Thus it can be concluded that the data is normally distributed

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Bivariate analysis was used to see differences in perineal wound healing before and after being given green betel water boiled in the working area of the Puskesmas Siak Hulu II, Kampar Regency. This perineal wound healing technique is said to have an effect or is effective if the measured results show a p value $< \alpha$ (0.05). This study uses the t dependent test because the variables presented consist of numerical data and are normally distributed with p value $> \alpha$ (0.05).

Based on the results of data processing using a computer program, the following results were obtained:

Tabel 3.

The Effectiveness of Green Betel Leaf Decoction on Perineal Wounds Healing in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

Perineal Wound Healing	Mean	Perineal Wound Healing	
		Difference in Mean Value	<i>P</i>
Before	4,19	2,063	0,000
After	2,13		

Based on table 3, it is known that before being given boiled green betel water, the perineal wound healing has an average of 4.19 with a Standard Deviation (SD) of 1.276 and a Standard Error of 0.319. The average value of perineal wound healing after being given boiled green betel water is 2.13 with a Standard Deviation (SD) of 1.025 and a Standard Error of 0.256. The results of the t dependent statistical test obtained a p value of 0.000 $< \alpha$ (0.05), so that there was an effectiveness of boiling green betel water on the healing of perineal wounds in the working area of the Siak Hulu II Community Health Center, Kampar Regency ($p = 0.000$).

3.3 Discussions

a. The Effectiveness of Green Betel Leaf Decoction on Perineal Wounds Healing in the Work Area of the Puskesmas Siak Hulu II, Kampar Regency

The results of the univariate analysis showed that before being given boiled green betel water in the working area of the Puskesmas Siak Hulu II, Kampar Regency experienced poor perineal wound healing based on the REEDA score assessment of 81.2%. The rest experienced poor perineal wound healing as much as 18.8%. The majority of respondents after being given green betel water stew experienced poor perineal wound healing based on the REEDA score as much as 81.2%. The rest had good perineal injuries as much as 18.8%.

From the results of the bivariate analysis, it is known that perineal wound healing before being given boiled green betel water in the Puskesmas Siak Hulu II, Kampar Regency has an average of 4.19. The average value of perineal wound healing after being given boiled green betel water in the Puskesmas Siak Hulu II, Kampar Regency, Kampar Regency, is 2.13. The results of the t dependent statistical test obtained a p value of 0.000 $< \alpha$ (0.05), so that there was an effectiveness of boiling green betel water on the healing of perineal wounds in the working area of the Puskesmas Siak Hulu II, Kampar Regency ($p = 0.000$).

The results of this study are in line with the research conducted by Kurniawati (2015), it was found that in the treatment group the average perineal wound care day required was about 3 days shorter than the control group which took a minimum of 5 days, which means that there is a significant difference in wound healing time perinium between the experimental and control groups.

This study is also in line with research by Yuliaswati (2018) which revealed that there was a significant difference in the duration of healing perinium wounds in respondents who used green betel stew. In addition, research by Christiana (2014) found that perineal suture wounds in postpartum mothers healed and dried up on the 3-4th day post partum and there were no signs of infection, while the results of interviews with respondents indicated that respondents stated pain in suture wounds. the perineum also diminishes rapidly and feels more cramped. The results obtained from the results of the T test of this study are a significance level of 0.000 so that it can be concluded that the boiled water of betel leaf (Piperbetle) is effective against the speed of healing of perineal wounds in postpartum mothers.

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Green betel leaf decoction can be used as a compress and complementary medicine (Arisandi, 2013). Betel leaf is also often used by people to get rid of bad breath, treat wounds, stop bleeding gums, canker sores, and get rid of body odor. Betel leaves have antibacterial effects against *Streptococcus mutans*, *Streptococcus sanguis*, *Streptococcus viridans*, *Actinomyces viscosus* and *Staphylococcus aureus* (Hariana, 2018). Boiled betel leaf water can be used by mothers who have perineal wounds by washing the wound area (Mustarichie, 2011).

The assumption of the researchers is that boiled betel leaf water can be used by mothers who have perineal wounds by washing the wound area. It can be ascertained that birth canal injuries occur at every delivery that will provide entry to commensal bacteria that are infectious. This increases the risk of post partum infection with traces of perineal injury. Betel contains arecoline in all parts of the plant which is useful for stimulating the central nervous and intellectual power, increasing peristalsis, and relieving snoring. The eugenol content in betel leaf can kill the fungus *Candida albicans*, prevent premature ejaculation, and have analgesic properties. Although these wounds are local in nature, proper care is needed to avoid spreading the infection systemically. Poor care of the perineal wound leads to infection. Perineal conditions that are exposed to lochia and humidity will greatly support the proliferation of bacteria which can cause infection in the perineum. Green betel leaf decoction can be used to accelerate the healing of perineal wounds.

The assumption of the researchers is that betel leaf has extraordinary benefits, one of which is that it can be used to treat and accelerate the healing of perineal wounds. Perineal wound care is one way to prevent infection of the birth canal wound. Treatment of perineal wounds using traditional methods, one of which is using boiled water of the betel leaf for washing so that the perineal wound heals quickly and the smell of blood that comes out is not fishy. Betel plant is a type of herbal plant and is known as a living pharmacy. Treatment using betel leaf is favored by most people because of the ease of obtaining it, it is cheap, it is easy to process and is included in the herbal medicine series that is very popular with the people of Indonesia. The use of herbal plants, such as betel leaf is also a natural remedy because the side effects they cause can be minimized, unlike the use of chemical products.

4. Conclusion

- a. The majority of respondents before being given boiled green betel water in the working area of the Puskesmas Siak Hulu II, Kampar Regency, suffered from unfavorable perineal injuries as much as 81.2%. The rest had bad perineal injuries as much as 18.8%.
- b. The majority of respondents after being given green betel water stew had less good perineal injuries as much as 81.2%. The rest had good perineal injuries as much as 18.8%.
- c. There is effectiveness of boiled green betel water on perineal wound healing in the working area of Puskesmas Siak Hulu II, Kampar Regency ($p = 0.000$).

5. References

- [1] Ambarwati dan Eny Retna. (2010). *Asuhan Kebidanan Nifas*. Yogyakarta: Mitra Cendekia Press.
- [2] Arisandi, Y. (2013). *Therapi Herbal Berbagai Penyakit*. Jakarta: Eska Media.
- [3] Christiana, A. (2014). *Efektivitas Air Rebusan Daun Sirih dalam Mempercepat Penyembuhan Luka Perineum*. Jurnal Ilmiah Kesehatan Media Husada Vol. 2 No. 2.
- [4] Hariana, A. (2018). *Tumbuhan Obat dan Khasiatnya*. Jakarta: Penebar Swadaya.
- [5] Kementerian Kesehatan Republik Indonesia. (2018). *Data dan Informasi Profil Kesehatan Indonesia 2017*. Jakarta: Kementerian Kesehatan.
- [6] Kurniawati, S.L.C. (2015). *Perbedaan Penggunaan Daun Sirih Terhadap Waktu Penyembuhan Luka Perineum*. Jurnal Ners dan Kebidanan Vol. 2 No. 3.
- [7] Mustarichie, R. (2011). *Metode Penelitian Tanaman Obat*. Bandung: Widya Pajajaran.
- [8] Prawirohardjo, S. (2009). *Buku Acuan Nasional Pelayanan Kesehatan Material dan Neonatal*. Jakarta: Yayasan Bina Pustaka.
- [9] Varney, H. (2009). *Buku Saku Bidan*. Jakarta: Buku Kedokteran EGC.
- [10] Yuliaswati, E. (2018). *Upaya Mempercepat Penyembuhan Luka Perineum Melalui Penggunaan Air Rebusan Sirih Hijau*. Indonesian Journal On Medical Science Vol. 5 No. 1. (<http://ejournal.stikesborromeus.ac.id/> diakses pada 10 Januari 2019).