



## The Effect Giving Vulva Hygiene of White Betel Leaf Boiled Water on Perineal Wound Healing Rates on First Day Postpartum Mothers

Nurasmi<sup>1\*)</sup>, Mutmaina<sup>2</sup>

<sup>1\*)</sup>,<sup>2</sup> Diploma III Midwifery study program, Widya Nusantara College of Health Sciences Palu

### ARTICLE INFO

#### Article history:

Received 1 August 2021  
Accepted 30 September 2021  
Published 15 October 2021

#### Keyword:

Betel Leaf  
Perineal Wound  
Vulva Hygiene

#### \*) corresponding author

Nurasmi  
Diploma III Midwifery study program, Widya  
Nusantara College of Health Sciences Palu

Email: nurasmi@stikeswnpalu.ac.id  
DOI: 10.47679/makein.2021136

### ABSTRACT

A condition where a birth canal tear occurs naturally or due to an incision made in the perineum during delivery of the fetus is the definition of a perineal wound. Handling perineal wounds can be done with traditional treatments, namely by using herbal medicines, for example, making betel leaf boiled water as cebok water or vulva hygiene that can be used to heal perineal wounds because the betel leaf boiled water has many benefits and contains many active compounds. This study aimed to determine the effect of giving vulva hygiene boiled water of white betel leaf on the rate of healing of perineal wounds. This research method is quantitative analytic observational with this type of research design using a quasi-experimental method with a pretest-posttest one-group design. The study was conducted on June 20, 2021, to June 30, 2021, with a sample of 14 people using the total sampling technique. Aspects of data measurement using observation sheets with data analysis. Based on the bivariate analysis using the paired t-test test, it was found that the p-value = 000 ( $p < 0.05$ ) that there was an effect of vulva hygiene use of boiled water of white betel leaf on the rate of healing of perineal wounds in postpartum mothers on the first day at Tinatapura Hospital Palu. It is recommended to health workers, to provide health promotion to postpartum women about perineal care using traditional medicines such as betel leaf.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



### INTRODUCTION

Maternal Mortality Rate (MMR) is one of the indicators that can show that the society in a country is not developed. According to the World Health Organization, the global maternal mortality rate in 2015 was 216 per 100,000 live births, or an estimated number of maternal deaths was 303,000, the highest in developing countries at 302,000 deaths. Maternal mortality in developing countries is 20 times that of developed countries or 239 per 100,000 live births, while in developed countries only 12 per 100,000 live births recorded in WHO data in 2015 (World Health Organization, 2015).

Maternal mortality cases in Indonesia are still very high, this makes Indonesia in the 3rd highest position that has AKI cases compared to other countries in ASEAN. Several triggering factors can cause the causes of maternal mortality cases. The most common causes of maternal mortality in Indonesia are direct obstetric causes, namely bleeding 28%, preeclampsia/eclampsia 24%, and infection 11%, while indirect causes are obstetric trauma 5% and others 11% (Depkes RI, 2014).

Maternal mortality in Central Sulawesi in 2015 was 132 cases and continued to decline to 82 cases, unfortunately in 2018 maternal mortality cases increased again until 2019 there were 97 cases of maternal death in Central Sulawesi. The number of maternal deaths in the Regency / City of Central Sulawesi Province in 2019 was 97 cases of maternal death with the causes of death namely, bleeding, hypertension in pregnancy, infectious causes, and metabolic disorders (Dinkes Provinsi Sulawesi Tengah, 2019).

The cause of infection is the third cause with a percentage of 11% as one of the triggers for maternal mortality cases in Indonesia after bleeding and preeclampsia / eclampsia, this is evidenced by WHO data and supported by SDKI data in 2012. One of the causes of infection during the postpartum period is due to perineal wounds.

The postpartum period or commonly called puerperium is counted from the first 1 hour after the birth of the placenta until the 6th week (42 days) afterwards. Postpartum services must continue to be carried out during the puerperium to meet the needs of mothers and babies, the services include prevention of infection, early detection and treatment of complications that may occur, as well as the provision of

breastfeeding services, how to regulate pregnancy spacing, and nutrition for mothers (Saifuddin, 2014).

The postpartum period is the most vulnerable period for infection for postpartum mothers if the mother does not take proper care. Most postpartum mothers do not know how to keep themselves clean, especially in the genitalia area. One of the actions that must be taken by postpartum mothers is to maintain the cleanliness of the body parts as a whole or commonly referred to as maintaining personal hygiene (Herlina et. al., 2018).

Based on the description of the problem above, injury to the perineum after childbirth is one of the causes of infection in the postpartum period. Preventing infection requires treatment of the perineal wound to keep bacteria from entering the wound from outside. Therefore, according to the results of observations by researchers at the Tinatapura Mother and Child Hospital in Palu, data obtained from November to December 2020 showed that there were 53 mothers who gave birth normally, indicating that the number of postpartum women increased in February-March 2021 as many as 72 mothers with normal delivery. Of the 72 mothers who gave birth normally, 31 had only abrasions to the perineum, 24 with a torn birth canal and 11 with episiotomy. This makes health care workers make more efforts to prevent the occurrence of perineal wound infection in post-saline mothers. The above problems make the researcher interested in raising the title "The Effect of Giving Vulva Hygiene of White Betel Leaf Decoction Water on the Rate of Healing of Perineal Wounds in First Day Postpartum Women at Tinatapura Hospital".

## METHODS

The type of research used in this study is quantitative. The research design used in this study was Quasi experimental research design using Pretest-Posttest without control design. This research was conducted at Tinatapura Maternal and Child Hospital, Palu, located at Raden Saleh Street, Palu, Central Sulawesi.

The population in this study were all first-day postpartum mothers who were admitted to Tinatapura Hospital, Palu City, Central Sulawesi, the total population in February 2021 was 35 people. Sampling was done using non probability sampling with purposive sampling technique.

The sample in the study amounted to 14 respondents. The instruments used in this study were observation and checklist to measure the level of healing of perineal wounds with indicators Good if the wound is dry, closed and there are no signs of infection, Moderate if the wound is wet, closed and there are no signs of infection and Poor if the wound is wet, closed / open and there are signs of infection. The test used paired t-test statistics.

**Table 3.**  
**The effect of giving vulva hygiene of white betel leaf decoction on the healing rate of perineal wounds in first-day postpartum women**

	Mean	SD	SE	P Value	N
Wound condition before treatment	2.57	.514	.137	.000	14
Wound condition after treatment	1.43	.514	.137	.000	14

Source: Primary data, 2021

In table 3 above, the difference in wounds before being given the treatment of white betel leaf decoction water with

## RESULTS AND DISCUSSION

**Table 1.**  
**Distribution of respondents based on age, education, Jobs in first day postpartum women.**

Age	f	%
20-25 Years	8	57.1
26-30 Years	3	42.9
Total	14	100
Education		
Senior high school	8	57.1
Bachelor degree	6	42.9
Total	14	100
Jobs		
Housewife	6	42.9
Honorarium employee	4	28.6
Civil Servants	4	28.6
Total	14	100

Source: Primary data, 2021

Based on table 1, it shows that respondents aged 20-25 years are 8 people (57.1%), and respondents aged 26-30 years are 6 people (42.9%). Respondents who have a senior high school education are 8 people (57.1%), and respondents who have a bachelor's degree are 6 people (42.9%). respondents who have a housewife job are 6 people (42.9%), honorarium employee as many as 4 people (28.6%) and civil servants as many as 4 people (28.6%).

**Table 2.**  
**Distribution of respondents based on wound condition before and after giving white betel leaf decoction.**

Wound condition before being given the treatment of white betel leaf decoction	F	%
Good	0	0
Medium	6	42.9
Bad	8	57.1
Total	14	100
Wound condition after being given the treatment of white betel leaf decoction		
Good	8	57.1
Medium	6	42.9
Bad	0	0
Total	14	100

Source: Primary data, 2021

Based on table 2, shows the condition of the wound before being given the treatment of white betel leaf decoction water on the healing of perineal wounds that most respondents had a bad wound condition, namely as many as 8 people (57.1%). the condition of the wound after being treated with white betel leaf decoction water on the healing of perineal wounds that most respondents had a good wound condition as many as 8 people (57.1%).

after being given the treatment of white betel leaf decoction water in first-day postpartum women. The results of the

paired t-test statistical test that the  $\rho$  value is 0.004. Based on the criteria for accepting a hypothesis with a  $\rho$  value  $\leq 0.05$ ,  $H_a$  is accepted, which means that there is an effect of giving vulva hygiene white betel leaf decoction water on the rate of healing of perineal wounds in first-day postpartum women at Tinatapura Hospital, Palu.

## DISCUSSION

### Wound condition before treatment

Based on the data from the results of the study, with a total of 14 respondents, all of whom were given the treatment of white betel leaf decoction water on the healing rate of perineal wounds in first-day postpartum women. Before this treatment, respondents were given a pre-test using a checklist sheet of perineal wound healing in first-day postpartum women. Table 2 shows that there were 8 respondents with poor wound category and 6 respondents with moderate wound category.

According to the researcher, the mother's perineum will spontaneously tear after giving birth to the fetus. In this study, the second-degree tear was taken where the wound still appeared wet. This is in line with the theory that perineal injury is a condition of discontinuity of body tissue that can cause disruption of body function so that it interferes with daily activities because trauma can cause injury to the skin. Wounds are divided into two types, namely, intentional and unintentional wounds.

Accidental wounds are wounds exposed to radiation or surgery, while unintentional wounds are divided into closed and open wounds. Closed wounds are wounds that do not tear, while open wounds are wounds that tear such as abrasion wounds (wounds caused by friction), puncture wounds (wounds caused by puncture), and laceration wounds (wounds caused by tools used in wound care) (Rohani, 2011).

Vulvar hygiene can use boiled water of betel leaf that has been allowed to cool. Betel leaf is classified as a plant that has many therapeutic effects. Among the betel are essential oil, hydroxycavicol, kavicol, kavibetol, allylpyrokatekol, cyneole, caryophyllene, cadinene, estragol, terpenene, sesquiterpene, phenyl propane, tannin, diastase, sugar and starch. Among these contents, betel has antibiotic and antiseptic effects, based on this therapeutic effect, betel can also be used as an ingredient for wound care (Fauziah, 2007).

### Wound condition after treatment

Based on the data from the results of the study, with a total of 14 respondents, all of whom were given treatment in the form of giving vulva hygiene white betel leaf decoction water to the level of healing of perineal wounds in first-day postpartum women. After being given this treatment, respondents were first given a post test using a perineal wound healing checklist sheet. From table 2. it can be seen that there are 8 respondents who have a good wound category.

According to the researcher, the state of the wound after being given the treatment of giving vulva hygiene white betel leaf decoction water that the wound will dry faster which on average heals on day five where the normal perineal wound will heal on day seven after giving birth to the fetus. This is in line with the theory that says that some of the content classified in betel leaves is essential oil consisting of

bethephenol which has euganolally pyrocatechine compounds, cavicol, seculterpenes, cavibekol, estrogen, euganol, and terpinen. In this content, betel leaf has a function as an antibiotic, because it has a therapeutic effect, betel leaf can be used as a traditional medicine in the treatment of healing perineal wounds which are usually done by washing or vulva hygiene (Fauziah, 2007).

This is in line with research conducted by Debi Novita Siregar (2020) with the title "Effectiveness of Betel Leaf Decoction on Perineal Wound Healing" obtained a value of  $p = 0.000$  ( $\alpha < 0.05$ ) means that treatment of perineal wounds using betel is more effective than treatment of perineal wounds using antiseptic drugs, so it can be concluded that betel leaves will be more effective than antiseptic drugs in the treatment of perineal wound healing in the post partum period because the ethanol extract in betel leaves can be made into an antiseptic that can destroy staphylococcus aureus and eschericia coli bacteria. Betel leaves also contain phytochemical compounds and many other chemical compounds such as volatile oils that function as very effective antibacterial and anti-fungal.

### The effect of giving vulva hygiene water betel leaf decoction on the healing rate of perineal wounds in first-day postpartum women at Tinatapura Hospital

The results of this study indicate that there is an effect of giving vulvar hygiene white betel leaf decoction water on the healing rate of perineal wounds, this is evidenced by the results of data processing through SPSS using the paired t-test test obtained a p-value = 000 ( $p < 0.05$ ).

According to the researcher, the condition of the wound before being given the treatment of giving vulva hygiene white betel leaf decoction water has changed after being given the treatment. Data obtained from the results of observations during the post test using a checklist sheet obtained if the perineal suture wound in post partum mothers healed and dried up on day 4-5 post partum and there were no signs of infection. Based on data on the characteristics of respondents, it can be seen that most respondents are 20-25 years old and have a high school education. Respondents with these characteristics will tend to have slightly different healing times because it is the first time the mother has given birth so that the fear of touching the wound is still there.

This is in line with research conducted by Rini, et al (2018) that the length of healing of perineal wounds in postpartum women who use red betel leaf decoction on average is 4-5 days while in groups that do not use betel leaf decoction the length of healing of perineal wounds in postpartum women on average is 6-7 days, meaning that betel leaves are much more effective to use than iodine in treating perineal wounds.

### LIMITATION OF THE STUDY

This study only discusses the effectiveness of giving Vulvar Hygiene White Betel Leaf Decoction to the Healing Rate of Perineal Wounds in Postpartum Women, does not discuss the risks or side effects caused by the use of White Betel Leaf Decoction for Postpartum Women in the future.

### CONCLUSION AND RECOMMENDATION

The data processing results through SPSS using the paired t-test test obtained a p-value = 000 ( $p < 0.05$ ) that there is an

effect of giving vulva hygiene water betel leaf decoction on the healing rate of perineal wounds in first-day postpartum women at Tinatapura Palu Hospital. Suggestions for the research site, namely health workers on duty at Tinatapura Palu Hospital to pay more attention to the importance of caring for perineal wounds during the postpartum period using white betel leaf decoction water as an antiseptic.

#### **Funding Statement**

The authors did not receive support from any organization for the submitted work and not funding was received to assist with the preparation of this manuscript

#### **Conflict of Interest Statement**

The authors declare that they have no involvement with any external parties. This paper is purely from the sources listed in the bibliography and does not contain plagiarism from any journal article. All sources of writing have been listed in the bibliography

#### **REFERENCES**

- Anggeriani Rini dan Rindal Lamdayani. Efektifitas Pemberian Air Daun Sirih (Piper Betle L) Terhadap Kecepatan Penyembuhan Luka Perineum Pada Ibu Post Partum. *J Ilmiah Multi Science Kesehatan*. 2018;9(2)
- Departemen Kesehatan RI. 2014. Peraturan Menteri Kesehatan Republik Indonesia Nomor 5. Jakarta : Depkes RI
- Dinas Kesehatan Provinsi Sulawesi Tengah. 2019. Profil Kesehatan Provinsi Sulawesi Tengah 2019. Palu
- Fauziah, Mulisah. 2007. Tanaman Obat Keluarga (TOGA). Depok : Penebar Swadaya
- Herlina, Vera Virgia , Riska Aprilia Wardani. Hubungan Teknik Vulva Hygiene Dengan Penyembuhan Luka Perinium Pada Ibu Post Partum. *J Kebidanan*. 2018;4(1)
- Rohani. 2011. Asuhan Kebidanan Pada Masa Persalinan. Jakarta (ID) : Salemba Medika
- Saifuddin, BA. 2014. Ilmu kebidanan. Jakarta : PT. Bina Pustaka Sarwono Prawirohardjo.
- Siregar Debi Novita, Titin Sundari Nazara, Morina Sinaga. Efektivitas Rebusan Daun Sirih Merah Terhadap Penyembuhan Luka Perineum. 2020;2(4)
- WHO. World Health Statistics 2015: World Health Organization; 2015