

# **The effectiveness of betel leaf to accelerate the healing of perineal wounds in postpartum mothers**

**RIZKI A PUTRI**  
Rizki189@gmail.com

## **Abstract**

Perineal wounds are tears in the birth canal or incisions made in the perineum during delivery of the fetus. Bethel leaf is a plant that contains essential oils from behephenol, chavicol, cavibetol, estrogen, eugenol, and carvarool. It is also an antioxidant that accelerates the healing of perineal wounds. Treatment of perineal wounds aims to prevent infection and speed up healing. Treatment of perineal wounds can be done with traditional treatment, namely by using herbal medicines, one of which is using boiled water from betel leaves which has an antibiotic effect. Based on this therapeutic effect, Bethel can also be used as an ingredient for washing water or personal hygiene. This research aims to determine the effectiveness of betel leaf boiled water in accelerating the healing process of perineal wounds in post-partum mothers. This research is a literature study and data source: Google Scholar (2015-2020) to take journals that are relevant to the emergence of writing topics that will be published in Indonesian. The journal search strategy uses sample criteria with keywords tailored to the writing topic. Journals are selected based on the abstract or full text before being included in the review according to the inclusion and exclusion criteria to be reviewed. This shows that the healing time for perineal wounds in the control group was slower than in the intervention group who were given boiled water from betel leaves. Using boiled water from betel leaves can speed up the healing of perineal wounds. You can apply boiled water from betel leaves (piper betle) to post partum mothers as a natural alternative treatment for perineal wounds.

**Keywords:** Bethel leaf; Wound; Perineum; Post Partum

## **BACKGROUND**

Postpartum period or *post partum* is the period after labor is completed until 6 weeks or 42 days. After the puerperium, the reproductive organs will gradually undergo changes as before pregnancy. During the puerperium period needs more attention because the maternal mortality rate of 60% occurs during the puerperium. Maternal mortality rate (MMR) is the cause of many women dying from a cause is lack of attention to women *post partum*.

According to the data released *World Health Organization* (WHO, 2018) Maternal Mortality Rate (MMR) is one indicator of the success of a country's services. Every day, about 830 women die from preventable causes related to pregnancy and childbirth. 99% of all maternal deaths occur in developing countries. About 830 women die from pregnancy or childbirth

complications worldwide every day. One of the targets under Sustainable Development Goal (SDG) 3 is to reduce the global maternal mortality ratio to less than 70 per 100,000 births, with no country having a maternal mortality rate more than twice the global average.(WHO, 2017)

Maternal Mortality Rate (MMR) is an indicator of the health status of a nation, in the world there are 42 maternal deaths every day, while in Indonesia in 2019 it is still 305 per 100,000 live births even though the Millennium Development Goals (MDGs) target is 102 per 100,000 live births. According to the health profile report, the Maternal Mortality Rate (MMR) in North Sumatra throughout 2019 decreased compared to 2018. Maternal Mortality Rate (MMR) As many as 179 out of 302,555 live births or 59.16 per 100,000 live births. This figure decreased compared to MMR in 2018, which was 186 out of 305,935 live

births or 60.79 per 100,000 live births.(Ministry of Health of the Republic of Indonesia, 2020)

Based on the Basic Health Research (Riskesdas) report of the district / city in 2017, the number of maternal deaths was recorded at 205 deaths, lower than the data recorded in 2016 which was 239 deaths. The highest number of maternal deaths in 2017 was recorded in Labuhan Batu Regency and Deli Serdang Regency with 15 deaths, followed by Langkat Regency with 13 deaths and Batu Bara Regency with 11 deaths, The lowest number of deaths in 2017 was recorded in the cities of Pematang Siantar and Mount Sitali with 1 death each.(Ministry of Health of the Republic of Indonesia, 2018)

Women die from complications during and after pregnancy and childbirth. The main complications that cause nearly 75% of all maternal deaths are severe bleeding after childbirth, infections, high blood pressure during pregnancy (pre-eclampsia and eclampsia), complications from childbirth, and unsafe abortions. Puerperal infections can be caused by perineal lesions that do not heal. Infection in *postpartum* mothers is caused by perineal wound care that is not sterile, good, or not up to standard.

According to Yudhiarti's theory (2015), healing perineal wounds can use the traditional method, namely by boiling betel leaf water (*Piper Betle*) by way of cebok once a day can be done in the morning, afternoon and evening. Besides accelerating wound healing, it can also eliminate the smell of blood that comes out not fishy.(Yuliaswati & Surakarta, 2018)

The results of previous research conducted by Kurniawati and Ulfa (2016) with the title The Effect of Betel Leaf Decoction on Perineal Wound Healing Time, that betel leaf can also be used as an ingredient for perineal wound care which is usually used as water for cebok and soaking, things like this have been done by mothers after giving birth. While the results of Kusuma Ningsih's 2013 research in (Rostika, 2020) entitled The Effect of Betel Leaf Decoction on Perineal Wound Healing Time states that betel leaf has antiseptic abilities, has power as an antioxidation and fungicide. Essential oils and extracts are also able to fight some gram-positive and gram-negative bacteria, this can also affect wound healing quickly.(Kurniawati & Ulfa, 2015)(Rostika et al., 2020)

Perineal wound care aims to prevent infection, increase comfort and speed healing. One effort to prevent infection due to perineal wounds is used antiseptic. Perineal wound treatment is carried out by many Indonesian people who still use traditional methods, one of which is by using betel leaf boiled water (*piper betle*) to clean their genitals so that perineal wounds heal quickly and the smell of blood comes out not fishy. Betel leaf is classified as a plant that has many therapeutic effects. Based on the description above, researchers are interested in conducting this study, which aims to determine the effectiveness of siri leaf cooking water (*piper betle*) to accelerate the healing process of perineal wounds in *postpartum* mothers.

## METHODE

The method used in this research is a literature *study* or systematic literature review which was carried out in May-July 2021. A method that identifies, analyzes and interprets findings on a research topic to answer predetermined research questions. The keywords used are Perineal wound, Post partum, and betel. The population in this study was all journals related to betel betel (*piper betle*) and postpartum *perineal lesions*. In this study, inclusion and exclusion criteria were prepared to determine the sample to be used. The inclusion criteria are journals with a maximum update of 5 years from 2015 to 2020, indexed by the *Google Scholar database*, journals with the keywords betel leaf (*piper betle*) and post partum *perineal wounds*, published nationally. The exclusion criterion is journals that are not *full paper*.

This research began with searching research journals using a caridited electronic database, *namely Google Scholar* by typing keywords: perineal wound, betel leaf (*piper betle*), continued grouping research journals based on the effect of the effectiveness of betel leaf water as healing perineal wounds. Selecting research journals based on inclusion and exclusion criteria, publication year index based on the effect of the effectiveness of betel leaf boiled water as healing perineal wounds. Then read the research journal carefully, present in the chapter the results and disseminate and review the research journal.

## RESULT

After the collection of journals with a final of 5 years, indexed by the google scholar database, journals with keywords wound, perineal wound, post partum and betel leaf. And published nationally. From the journals reviewed, there are 8 journals that use Quasi-experimental research designs by pre-test and post-test.

The results of the study (Anggeriani & Lamdayani, 2018) using 30 respondents, the design of this study was experimental with the posttestonly type, it was found that in the control group given betadine the average wound healing for 7.60 days with a minimum healing of 6 days and a maximum of 8 days slower than the intervention group given betel leaf water (*Piper Betle*) is an average wound healing of 5.47 days with a minimum healing of 4 days and a maximum of 7 days. The normality results were obtained that in the control group given betadine accelerated wound healing ( $p\text{-value} = 0.082$ ) and in the experimental group using betel leaf boiled water (*Piper Betle*) obtained ( $p\text{-value} 0.082$ ) (PA), meaning that the data on the acceleration of wound healing in the control group were not normally distributed,<sup>31</sup> then evaluated so the duration of healing of perineal wounds after giving betel leaf boiled water (*Piper Betle*) which is the average or longest healing is 5.47 days, with minimal or fastest healing 4 days, while the maximum or longest healing is 7 days. This means that it can be concluded that in the intervention group the acceleration of perineal wound healing is faster than the control group.(Anggeriani et al., 2018)

The results of this research (Ari Kurniarum, 2015) include types of research that use quasi-experiments, in control grouping and experimental groups. Respondents who used betel leaf as many as 30 people (100%) and those who did not use betel leaf were betadine as many as 30 people (100%). In healing wet perineal wounds as many as 26 people (43.3%) and dry as many as 34 people (56.7%). The results of respondents who used betel leaf and those who used betadine showed a noticeable difference, where from 30 respondents the perineal wound was dry and 8 respondents (26.7%) who were still wet after 7 days post partum as many as 12 respondents (60%) still had a lot of perineal wounds. After evaluating the results of the study with a value of  $p = 0.009$  means  $p < 0.05$  that the

average birth canal injury will heal 6 to 7 days. So it can be concluded that the effect of betel leaf on the healing of perineal wounds dries faster than those who do not use betel leaf.(Ari Kurniarum, 2015)

The results of the study (Harini, 2019) used 18 respondents, there were 2 groups, namely the group that was treated using betel leaves, and the other group that did not use betel leaves, the group that used antiseptics. From the results of the study obtained data that the time difference in healing perineal wounds between those who did not do treatment using betel leaf water (*Piper Betle*) for cebok 2x a day after bathing, can accelerate wound healing with a value of mostly 62.5% experiencing perineal wound healing on day 5. Based on the test results, we get a sig value ( $0.00 < \alpha (0.05)$ ). So it can be concluded that there is a difference in perineal wound healing time between the group that uses betel leaves and the group that does not use betel leaves.(Harini, 2019)

In a study conducted (Rostika, 2020) using 15 respondents involving a control group who used a cream or ointment in addition to the experimental group. The intervention of the duration of healing perineal wounds showed that the average healing time of perineal wounds after the use of betel leaf boiled water (*Piper Betle*) the experimental group was 5.80 days with a median of 5.00 days and a standard value of 1.506. The fastest is 3 days and the longest is 9 days. Postpartum maternal perineal wound healing time in the experimental group after the use of betel leaf boiled water (*Piper Betle*) ranged from 4.73 to 6.87. In the control group that used the cream or ointment, the average perineal wound healing time was 7.80 days with a median of 8.00 days and a standard or slow value of 1.014. And the fastest value is 6 days and the longest is 10 days. The experimental group studied obtained the average healing time of perineal wounds after the use of betel leaf cooking water (*Piper Betle*) was 5.80 days while in the control group 7.80 days meant that the experimental group was 2 days faster than the control group.(Rostika et al., 2020)

The results of the research conducted (Sari, 2017) obtained the characteristics of 30 respondents. In this study respondents were divided into 2 groups, of which the first group used betadine 15 people with a percentage of 50%, who

treated perineal wounds using betel leaf boiled water (*Piper Betle*). While those who do not use betel leaves 15 people. After the study, there was a difference in the length of healing time for perineal wounds that did not use betel leaves (*Piper Betle*) or those using betadine with a fast healing time value of 0 category, with a slow value of 8 people with a mean of 7.53. While after being given intervention using betel leaves (*Piper Betle*) totaled 15 people with a fast category healing time value of 11 people, a normal value of 4 people and a slow value of 0 with a mean of 3.27. Of the 30 respondents who carried out perineal wound treatment, there were 15 people. There were 11 people whose perineal wound healing was classified as fast with a percentage of 36.7% normal, 11 people with a percentage of 36.7%, slow 8 people with a percentage of 26.7%. A p-value of  $0.000 \leq 0.05$  is obtained. This means that it can be concluded that there is a difference between healing perineal wounds using betel leaf boiled water (*Piper Betle*) and those who do not use betel leaf cooking water (*Piper Betle*). (Sari, 2017)

The results of the study (S. A. Sitepu et al., 2020) using 31 respondents from the 31 respondents there were a majority of perineal aged 30 years before betel leaf decoction was given to postpartum mothers it was found that the majority of degree 0 was 26 people with a percentage of 83.9% and the minority of degrees as many as 5 people with a percentage of 16% based on the results obtained the mean pre-test was 0.48 and post test 0.16 means the average healing of perineal wounds after betel leaf decoction was given is 0.48 and the average healing of perineal wounds after betel leaf is 0.16 so it can be seen that the decrease is 0.32. The p-value results of  $0.018 < 0.05$  can be concluded that there is a significant influence between betel leaf administration on perineal wound healing. (Sitepu et al., 2020)

In the study (Yuliaswati, 2018) the sample in the study amounted to 50 respondents. The characteristics of respondents in experiments using betel leaf boiled water (*Piper Betle*) mostly aged 20-35 years with a proportion of 65.0%, in the control group using betadine most respondents were also aged 20-35 years with a proportion of 45.0% while the least proportion in the experimental group with the age of 20 years

was with a proportion of 25.0%. From the results of the study illustrates that the duration of healing of perineal wounds in the experimental group using betel leaves (*Piper Betle*) averaged  $5.85 \pm 1.226$ , while the control group using betadine averaged  $6.85 \pm 0.988$ . Thus the use of betel leaf can accelerate the healing of perineal wounds. With a value of  $p = 0.010$  ( $p < 0.05$ ), which means that there can be a significant difference in premium wound healing time between the experimental and control groups. (Yuliaswati & Surakarta, 2018)

After conducting research, it can be concluded that betel leaf cooking water (*Piper Betle*) can accelerate the healing of perineal wounds. 8. Research results (Y. R. B. Sitepu & Simanungkalit, 2019) The research sample was 30 respondents. Control groupings were carried out that did not use srih leaves (*Piper Berle*) or who took betadine Most respondents were aged 23-27 years. Characteristics of respondents education level, the majority of respondents have a high school education. The results of 30 respondents obtained Wilcoxon test results before the pre-test and after the post-test of betel leaf cooking water (*Piper Betle*) to all 30 respondents, Z: -4460 and P- value: 0.000 with a significant level of  $P < 0.05$ , indicating that the effectiveness of betel leaf decoction against perineal lesions. (Sitepu et al., 2020)

The time for giving betel leaf water (*piper betle*) is given for 5 consecutive days, used 4x a day as vulvar hygiene splash water, then evaluated the length of healing time for perineal wounds after a splash using betel leaf cooking water (*piper betle*), the longest time for 7 days, 4 days late and with the fastest perineal wound healing 3 days. And the results of the study showed that all respondents (100%) experienced perineal wound healing time, the results of data analysis obtained z: -4460 value and P-value : 0.000 with a significance level of  $p < 0.005$ .

## CONCLUSION

Based on the entire journal that has been studied, it shows that the effectiveness of betel leaf cooking water (*piper betle*) in the process of accelerating the healing of perineal wounds in postpartum mothers.

For institutions, it is hoped that the education of the Harapan Mama Nursing

Academy in the library section will complete adequate reading materials so that it can facilitate researchers in the future. For the next researcher who wants to do research on *Study Literature* The effectiveness of betel leaf cooking water (*Piper Betle*) To accelerate the healing process of perineal wounds in postpartum mothers, it is hoped that they will further expand the aspects studied, multiply in finding references, information, and insights in using *Study literature* as a reference for compiling the final project. For future research, it is hoped that they can find or research on what are the factors that can accelerate the healing process of perineal wounds in mothers *post partum*. Then how much comparison is given for bombing using betel leaves (*Piper Betle*) based on the degree of perineal lesions on the mother *post partum*.

The limitations of this study are that it has not been able to equate the characteristics or variables discussed in each journal, the timing of intervention is still different. Each journal has differences in the healing time of perineal wounds.

## REFERENCES

- Anggeriani, R., Choirunnissa, & Rifiana, A. . (2018). ). The effectiveness of giving betel leaf water (*Piper betle* L) on the speed of healing of perineal wounds in post partum mothers. *Abdurahman Midwifery Academy Palembang*.
- Ari Kurniarum, A. K. (2015). The Effectiveness of Perineal Wound Healing in Postpartum Mothers Using Betel Leaves. *Integrated Journal of Nursing Science*, 4(2), 163.
- Harini, R. (2019). Efforts to accelerate the healing of perineal wounds in postpartum mothers with betel leaf antiseptic at the Wagir Health Center, Malang Regency. *Mesencephalon Journal of Health*, 5(2). <https://doi.org/10.36053/mesencephalon.v5i2.182>
- Ministry of Health of the Republic of Indonesia. (2018). *Riskesdas* 2018. [https://kesmas.kemkes.go.id/assets/upload/dir\\_519d41d8cd98f00/files/Hasil-riskesdas-2018\\_1274.pdf](https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf)
- Ministry of Health of the Republic of Indonesia. (2020). *Indonesia Health Profile 2020*. <https://pusdatin.kemkes.go.id/download.php?file=download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-Tahun-2020.pdf>
- Kurniawati, S. L. C., & Ulfa, M. (2015). Differences in the Use of Betel Leaves on Perineal Wound Healing Time. *Journal of Ners and Midwifery*, 2(3), 227–231. <https://doi.org/10.26699/jnk.v2i3.art.p227-231>
- Rostika, T., Choirunnissa, R., & Rifiana, A. J. (2020). Giving the Use of Red Betel Leaf Boiled Water to the Healing Time of Perineal Wounds Grade I and II at the Aster Clinic Karawang Regency. *Scientific Journal of Health*, 12(2), 196–204. <https://doi.org/10.37012/jik.v12i2.269>
- Sari, Y. (2017). Comparison between Perineal Wound Healing Using Betel Leaf Cooking Water and Those Not Using Betel Leaf Cooking Water at BPM Lismarini in 2016. *Journal of Chemical Information and Modeling*, 2(2), 77–87.
- Sitepu, S. A., Hutabarat, V., & Natalia, K. (2020). The effect of giving green betel leaf decoction on perineum wound healing in postpartum mothers at Pera Simalingkar B Clinic, Medan Tuntungan District, Medan City in 2019. *Kestra Midwifery Journal (Jkk)*, 2(2), 186–193. <https://doi.org/10.35451/jkk.v2i2.384>
- WHO. (2017). *Maternal mortality Evidence brief* (Issue 1, pp. 1–4). <https://apps.who.int/iris/bitstream/handle/10665/329886/WHO-RHR-19.20-eng.pdf>
- Yuliaswati, E., & Surakarta, A. (2018). Efforts to accelerate perineal wound healing through water of stew green betel stew. *IJMS- Indonesian Journal On Medical Science*, 5(1), 2355–1313.