

COMPARISON OF ADMINISTRATION OF BELT LEAF AND BINAHONG LEAF BOILING ON THE HEALING OF PERINEUM WOUNDS AT TPMB DARMAULI

Masluroh *, Darmauli Manihuruk

Sekolah Tinggi Ilmu Kesehatan Abdi Nusantara

Jl. Swadaya No.7, RT.001/RW.014, Jatibening, Kec. Pd. Gede, Kota Bks, Jawa Barat 17412, Indonesia

Email: imasluroh@yahoo.co.id

Abstract

Background: WHO in 2020 stated that maternal deaths worldwide were 295,000 women, Africa WHO in 2020 stated that maternal deaths worldwide were 295,000 women, Africa, Sub-Saharan and South Asia accounted for around 86%. The maternal mortality rate in Indonesia is 230/100,000 live births. The direct cause of maternal death in 90% is complications that occur during labor and after delivery. Infections that often occur in mothers after giving birth are infections of the perineum. Data obtained at TPMB Darmauli in the last three months gave birth to women who experienced grade II perineal wounds, namely in August 2023 there were 66.67%, in September 2023 73.33% and in October 2023 there were (64.28%). Objectives: Knowing the difference between giving decoction of betel leaves and binahong leaves in healing perineal wounds. Methods: Quasi-experimental with posttest group design research type. The sample in this study was all 30 postpartum mothers who experienced perineal wounds at TPMB Darmauli in December 2023. The sampling technique was total sampling. Results: The majority of perineal wound healing in the betel leaf group was normal and the majority in the binahong leaf group was fast. The average healing time for perineal wounds in the betel leaf group was 7.13 days and 5 days in the binahong leaf group. Binahong leaves are faster for healing perineal wounds in postpartum women compared to betel leaves (p. value 0.000). Conclusions and Suggestions: Binahong leaves are faster for healing perineal wounds in postpartum women compared to betel leaves. It is hoped that midwives can improve counseling regarding perineal wound care by using boiled water from binahong leaves to speed up wound healing.

Keywords: Betel Leaves, Binahong Leaves, Postpartum Mothers, Perineal Wounds

Introduction

One of the direct causes of maternal death is postpartum infection caused by perineal wounds that arise due to lack of maintaining perineal hygiene. The World Health Organization (WHO) in 2020 stated that maternal deaths during pregnancy, childbirth, and postpartum were as many as 295,000 women throughout the world. Africa, Sub-Saharan and South Asia account for approximately 86% of all maternal deaths worldwide (WHO, 2020).

The maternal mortality rate (MMR) in Indonesia in 2020 was 230 per 100,000 live births. The direct cause of maternal death is 90% of complications that occur during labor and after delivery. The causes of maternal death were bleeding (30.0%), hypertension (27.1%), infection (7.3%), prolonged labor (1.8%), abortion (1.6%), and others (40.8%), (Indonesian Ministry of Health, 2021).

Infections that often occur in mothers after giving birth are infections of the perineum. The causes of infection in the perineum include exogenous bacteria that come from outside, autogenous, namely germs that enter from other places in the body and endogenous bacteria that enter from the

birth canal itself. Poor perineal wound care can cause infection which will slow down the healing process of perineal wounds (Utami, 2020)

The incidence of perineal rupture in birthing mothers in the world in 2020 was 2.7 million cases, and this figure is estimated to reach 6.3 million in 2050. On the Asian continent alone, 50% of mothers in labor experienced perineal rupture. In Indonesia, the prevalence of birthing mothers who experience birth canal injuries is 85% of the 20 million mothers giving birth. Of the percentage, 85% of women in labor experienced injuries, 35% of mothers in labor experienced perineal rupture, 25% experienced cervical tears, 22% experienced vaginal injuries and 3% experienced uterine rupture (Lestari, 2022).

Perineal wounds when a mother gives birth can occur due to an episiotomy or because of tearing of the perineum when the baby's head comes out of the vagina. Healing of perineal wounds can occur within 7 days. Good management can prevent infections. Therefore, during the postpartum period, maternal hygiene must be maintained to prevent complications and infections. The speed at which each person's perineal wound heals varies depending on the influencing factors. Factors that influence perineal wound healing include postpartum mothers' knowledge of how to care for wounds, nutritional factors, and personal hygiene factors (Milah, 2021).

The impacts that occur if wound healing is hampered include pain and fear of moving, which can cause many problems including uterine sub-involution, uneven discharge of the lochea, and postpartum hemorrhage which is the first cause of maternal death in Indonesia (Indrayani et al., 2020).

Efforts to prevent perineal wound infections can be provided with pharmacological therapy and non-pharmacological therapy (Himawati & Febrinasari, 2021). Pharmacological therapy is by administering antibiotics and antiseptic drugs (povidone-iodine) to treat perineal wounds, however these drugs and ingredients have side effects such as allergies, inhibiting the production of collagen which functions for wound healing. Meanwhile, non-pharmacological therapy that can be given to speed up wound healing to prevent infection is using betel leaf extract, red betel leaf extract, soursop leaf extract, and binahong leaf extract (Oktaviani, 2019)

Betel leaves contain chemicals that have the effect of being an antiseptic and antibacterial drug. Apart from that, betel leaves also contain chemicals as anti-inflammatory ingredients which are good for use on mothers with wounds, especially perineal wounds, which can help speed up the healing process of perineal wounds. Many postpartum mothers use boiled betel leaf water as a substitute for betadine because it contains substances that are effective in treating wounds (Peristiowati & Farida, 2018).

Meanwhile, boiled water from binahong leaves is very good for healing perineal wounds. The antiseptic content in the binahong plant can kill germs, increase resistance to infection, and speed up wound healing (Ariani et al., 2022). Binahong leaves have benefits for patients who have recently experienced wounds through consuming the concoction.

During the healing period with the benefits of binahong leaves for wounds, patients can drink boiled water from binahong leaves every day as a natural and effective healing solution. Boiled water from squeezed binahong leaves can inhibit the growth of bacteria in vitro, namely salmonella typhi bacteria, Escherichia coli bacteria, and Propionibacterium acnes bacteria (Gusnimar, 2021)

Based on data obtained at TPMB Darmauli in the last three months, namely in August 2023 there were 12 mothers giving birth and 8 mothers (66.67%) experienced grade II perineal wounds, and in September 2023 there were 15 mothers giving birth, and 11 mothers (73, 33%) experienced grade II perineal wounds and in October 2023 there were 14 mothers giving birth and 9 mothers (64.28%) experienced grade II perineal wounds. Based on the background above, researchers are interested in conducting a research entitled "Comparison of giving boiled betel leaves and binahong leaves on the healing of perineal wounds at TPMB Darmauli Cipinang in 2023".

Research Methods

Quasi-experimental with posttest group design research type. The sample in this study was all 30 postpartum mothers who experienced perineal wounds at TPMB Darmauli in December 2023. The sampling technique was total sampling. The analytical method used is univariate and bivariate analysis with an independent simple test.

Research Result

Table 1 Frequency Distribution of Perineal Wound Healing Using Decoction Betel Leaves and Binahong Leaves

No	Perineal Wound Healing	Betel Leaf Group		Binahong Leaf Group	
		Frequency	%	Frequency	%
1.	Fast	4	26.7	13	86.7
2.	Normal	11	73.3	2	13.3
3.	Slow	0	0,0	0	0.0
Total		15	100.0	15	100,0

Based on the table above, it can be seen that in the betel leaf group, the majority of perineum wound healing was in the normal category, as many as 11 people (73.3%), and respondents with fast perineal wound healing were 4 people (26.7%). In the binahong leaf group, the majority of respondents with fast perineal wound healing were 13 people (86.7%) and 3 respondents with perineal wound healing in the normal category were 3 people (20.0%). Meanwhile, there were no respondents with perineal wound healing in the slow category, either in the betel leaf group or in the binahong leaf group (0%).

Table 2 Average Healing of Perineal Wounds Using Betel Leaf Decoction and Binahong Leaves

Group	N	Mean	Difference Mean	Min	Max
Betel leaf	15	7,13	2,13	5	9
Binahong leaves	15	5,00		3	7

Based on the table above, it can be seen that the average perineal wound healing in the betel leaf group was 7.13 days, and the average perineal wound healing in the binahong leaf group was 5.00 days, so the difference in average healing value was obtained. Perineal wounds between the betel leaf decoction group and the binahong leaf group were 2.13 days.

Table 3 Comparison of Giving Decoction of Betel Leaves and Binahong Leaves Against Perineal Wound Healing

Group Type	Perineal Wound Healing		Mean	SD	P Value
	Category	F			
Betel leaf	Fast	4	7,13	1.356	0,000
	Normal	11			
	Slow	0			
Binahong leaves binahong	Fast	13	5,00	1.195	
	Normal	2			
	Slow	0			

Based on the table above, it was found that the average perineal wound healing in the betel leaf decoction group was 7.13 days and the standard deviation was 1.356. In the binahong leaf group, the average perineal wound healing was 5.00 days and the standard deviation was 1.195. The statistical

test results obtained a p-value of 0.000 ($p < 0.05$), which means there is a significant difference between the average perineal wound healing in the betel leaf group and the binahong leaf group. Based on the data above, it can be concluded that giving binahong leaves is more effective in speeding up the healing of perineal wounds compared to betel leaf decoction, because there is a significant difference in the average value between the betel leaf group and the binahong leaf group, in other words giving binahong leaves is more effective in speeding up the healing process. healing of the perineum compared to betel leaf decoction.

Discussion

Average Healing of Perineal Wounds in the Betel Leaf and Binahong Leaf Decoction Group

From the research results, it can be seen that the average perineal wound healing in the betel leaf group was 7.13 days, and the average perineal wound healing in the binahong leaf group was 5 days, so the difference in the average value of perineal wound healing was obtained. between the group given boiled betel leaves and the binahong leaf group was 2.13 days.

A perineal wound is an injury to the perineum due to a tear in the birth canal either due to a rupture or an episiotomy during delivery of the fetus. Perineal wounds are injuries to the urogenital diaphragm and levator ani muscles, which occur during normal childbirth or instrumental birth, which can occur without injury to the skin of the perineum or vagina so that it is not visible from the outside, so it can weaken the pelvic floor and easily cause genitalia prolapse. Healing of perineal wounds is starting to improve with the formation of new tissue covering the perineal wound within a period of 6-7 days (Rukiyah, 2018).

The results of this research are in line with the research results of Fuji Yulianti Herliman (2020) which stated that the average healing time for perineal wounds was faster using boiled binahong leaves compared to using boiled betel leaves, where healing of perineal wounds using boiled water from binahong leaves took 6.33 days, while the average recovery time for perineal tears with betel leaf boiled water treatment was 8.27 days. The results of this research are also supported by the research results of Antri Ariani (2022), who said that after evaluation from survey data, binahong leaves were more effective for drying perineal wounds because mothers who used boiled binahong water had completely dry perineal suture wounds within 4 days, whereas Mothers who used boiled water from betel leaves had completely dry perineal suture wounds within 7 days.

In the researcher's opinion, from the results of research conducted at TPMB Darmauli, it was found that in the intervention group, namely giving boiled betel leaves, the healing time for perineal wounds was around 5-9 days, while in the group with decoction of binahong leaves, healing of perineal wounds took around 3-7 days. So it can be concluded that giving betel leaf decoction and the binahong leaf decoction group had a difference in healing perineal wounds by 2 days. From the results of this research, we can see that giving boiled binahong leaves is faster than boiling betel leaves. Apart from that, there are many factors that can influence perineal wound healing more quickly, each respondent has their own factors so that the wound healing process is different for each respondent. In the intervention group with binahong leaf decoction, based on the results of the research it was found that giving binahong leaf decoction could have a good effect on healing perineal wounds because binahong leaves contain several phytochemical contents, namely flavonoids, oleanolic acid, protein, saponins and ascorbic acid which are useful as wound medicine.

Comparison of Giving Decoction of Betel Leaves and Binahong Leaves on Healing Perineal Wounds

From the research results, it was found that the average perineal wound healing in the betel leaf decoction group was 7.13 days and the standard deviation was 1.356. In the binahong leaf group, the average perineal wound healing was 5 days and the standard deviation was 1.195. The statistical test results obtained a p-value of 0.000 ($p < 0.05$), which means there is a significant difference between the average perineal wound healing in the betel leaf group and the binahong leaf group. Based on the data above, it can be concluded that giving binahong leaves is more effective in speeding up the healing of perineal wounds compared to betel leaf decoction, because there is a significant difference in the average value between the betel leaf group and the binahong leaf group, in other words giving binahong leaves is more effective in speeding up the healing process. healing of the perineum compared to betel leaf decoction.

The results of this study are in line with the theory that treatment for perineal wounds can be carried out using pharmacological and non-pharmacological methods. Pharmacologically, namely by giving antiseptic drugs. Antiseptic or antibiotic treatment for the treatment of perineal wounds currently tends to be avoided. Some antibiotics should be avoided during lactation, as they are very significant and risky. This is the reason why midwives advise postpartum mothers to use betel leaves as a medicine that accelerates the healing of perineal wounds (Elisabet, 2018).

Perineal wound care is one way to prevent postpartum infections. Treatment is carried out using antiseptic and non-antiseptic techniques. Apart from that, some people use a simple technique to treat perineal wounds by washing with boiled betel leaves which aims to eliminate the fishy smell and speed up the healing of perineal wounds. The use of boiled betel leaves has been known for a long time and has been passed down from generation to generation because it is believed to be an antiseptic. Betel leaves are very popular among people. Apart from their many benefits, betel leaves are also easy to obtain, affordable and have minimal side effects unlike using chemical drugs. Betel leaf is a plant that is often used as traditional medicine. There are various ingredients, including premature ejaculation, eradicating *Candida albicans* fungus, and the leaves contain eugenol which can relieve pain in wounds. Meanwhile, the carvacrol content is useful for vaginal discharge and preventing infection. Because carvacrol is a disinfectant and antifungal, it contains arecoline which is useful for improving thinking and central nervous power, increasing peristaltic movements. By increasing peristaltic movements, blood circulation in the body becomes smoother so that the oxygen content also increases, this is very helpful in the wound healing process. The chemical content of essential oils in betel leaves is useful as an antiseptic and body odor remover such as kadinen, kavikol, cineol, eugenol, carvanol and tannic substances (Widya Arif, 2020).

Binahong leaves contain saponins, alkaloids and polyphenols. Saponin functions as a cleanser and stimulates the formation of collagen I, which is a protein that plays a role in the wound healing process. As a wound medicine, binahong contains several chemical ingredients, namely flavonoids, oleanolic acid, protein, saponins and ascorbic acid. The ascorbic acid content in this plant is important for activating the prolyl hydroxylation enzyme which supports the hydroxylation stage in collagen formation, so that it can speed up the wound healing process (Susetya. 2017).

The results of this research are in line with the research results of Fuji Yulianti Herliman (2020) which stated that the statistical test results obtained a value of $p = 0.000$, which means there is a difference in the effectiveness of boiled water from binahong leaves and boiled water from betel leaves on the recovery of perineal tears in postpartum women. The results of this research are also supported by the research results of Rika Astria Rishel (2021), who said that the results of statistical tests using the Mann-Whitney Test with a p value of < 0.05 concluded that decoction of binahong leaves affected the healing process of perineal wounds. The results of this research can be concluded

that there is an influence of binahong leaf decoction on the healing process of perineal wounds in post partum mothers.

According to the researchers' assumptions in this study, the intervention used to heal perineal wounds was using boiled water from betel leaves and binahong leaves. From the research results, it was found that healing perineal wounds using boiled water from betel leaves took 5-9 days to heal, while healing perineal wounds using binahong leaves took 3-7 days to heal perineal wounds. The average difference in healing time for perineal wounds between the betel leaf decoction group and the binahong leaf group was 2 days. From the results of the research above, it can be concluded that boiled water from binahong leaves is more effective in accelerating the healing of perineal wounds compared to boiled betel leaves. The phytochemical content in binahong leaves is flavonoids, oleanolic acid, protein, saponins and ascorbic acid. The ascorbic acid content in binahong leaves is important for activating the prolyl hydroxylation enzyme which supports the hydroxylation stage in collagen formation, so that it can speed up the wound healing process. Apart from that, the antioxidant content in green betel leaves can cure oxidative stress so that it can heal perineal wounds more quickly. However, each respondent has different characteristics so that the healing time for perineal wounds is also different. In the results of this study, binahong leaves were proven to be faster than betel leaves in healing perineal wounds because the chemical content of binahong leaves can speed up the healing process. Healing of perineal wounds is fast because there are several influencing factors such as age, the healthy reproductive age is 20-35 for a woman to become pregnant and give birth, and nutritional factors, nutrition containing protein will increase the body's immune power.

Conclusion

The majority of perineal wound healing in the betel leaf group was normal and the majority in the binahong leaf group was fast. The average healing time for perineal wounds in the betel leaf group was 7.13 days and 5 days in the binahong leaf group. Binahong leaves are faster for healing perineal wounds in postpartum women compared to betel leaves (p. value 0.000).

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