

EFFICACY COMPARISON OF BORNEO DAYAK ONION AND GREEN BETEL LEAF DECOCTIONS IN ACCELERATING PERINEAL WOUND HEALING

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ABSTRAK : PERBEDAAN EFEKTIFITAS AIR REBUSAN UMBI BAWANG DAYAK DENGAN DAUN SIRIH HIJAU TERHADAP PENYEMBUHAN LUKA PERINEUM

Latar Belakang: Masa pemulihan organ-organ reproduksi wanita yang mengalami perubahan selama kehamilan dan persalinan. Robekan pada perineum sering terjadi pada semua persalinan pertama. Hal ini mengakibatkan diperlukan perawatan yang intensif untuk mempercepat proses penyembuhan dan mencegah komplikasi infeksi yang dapat diakibatkan karena keterlambatan.

Tujuan: Mengetahui perbedaan efektivitas antara penggunaan air rebusan umbi bawang dayak dengan air rebusan daun sirih hijau terhadap penyembuhan luka perineum pada ibu nifas

Metode: Metode penelitian menggunakan pendekatan kuantitatif. Desain *quasi experimental* dengan menggunakan model nonequivalent control group design. Sampel penelitian adalah 30 responden ibu nifas. Pengumpulan data menggunakan lembar observasi skala REEDA. Uji bivariat menggunakan mann whitney.

Hasil: Berdasarkan analisis data bivariat didapatkan bahwa nilai p-value sebesar 0,045 yang bermakna kurang dari 0,05 sehingga hasil penelitian ini adalah adanya perbedaan perbedaan efektivitas air rebusan umbi bawang dayak dengan daun sirih hijau terhadap penyembuhan luka perineum.

Kesimpulan: Bahwa alternatif lain yang dapat digunakan untuk membantu penyembuhan luka perineum pasca persalinan adalah menggunakan umbi bawang Dayak.

Saran: Diharapkan dapat membantu ibu nifas dalam menggunakan obat herbal dalam merawat luka perineum. Bisa dilakukan penelitian lebih lanjut tentang kombinasi air rebusan umbi bawang dayak yang digabungkan dengan daun sirih hijau.

Kata Kunci : Air Rebusan, Daun Sirih Hijau, Penyembuhan Luka Perineum, Umbi Bawang Dayak

ABSTRACT

Background: The recovery period of female reproductive organs that undergo changes during pregnancy and childbirth. Tears in the perineum often occur in all first deliveries. This results in the need for intensive care to speed up the healing process and prevent infectious complications that can result from delays.

Purpose: To find out the difference in efficacy of Borneo Dayak onion decoction and green betel leaf decoction in promoting perineal wound healing in postpartum women.

Methods: The research method uses a quantitative approach. Quasi-experimental design using a nonequivalent control group design model. The research sample was 30 postpartum mothers. Data collection used the REEDA scale observation sheet. The bivariate test used Mann Whitney.

Results: Based on the bivariate data analysis, it was found that the p-value was 0.045, which is less than 0.05, so the results of this study are that there are differences in the effectiveness of boiled water from Dayak onion bulbs and green betel leaves on healing perineal wounds.

Conclusion: Another alternative that can be used to help heal perineal wounds after childbirth is to use Dayak onion bulbs.

Suggestions; It is expected to help postpartum mothers in using herbal medicine to treat perineal wounds. Further research can be done on the combination of boiled water from Dayak onion bulbs combined with green betel leaves.

Keywords: Boiled Water, Green Betel Leaves, Healing Perineum Wounds, Dayak Onion Bulbs

INTRODUCTION

The postpartum period is a time of recovery for women's reproductive organs, which undergo changes during pregnancy and childbirth, such as perineal tears (Anggraini et al., 2022). These tears are common in first-time mothers but can also occur in subsequent births, necessitating intensive care to accelerate healing and prevent complications like infections caused by delayed healing (Purnani, 2019).

One of the causes of postpartum complications, including puerperal death, is perineal wound infection due to inadequate wound care. This can lead to secondary postpartum bleeding and both local and systemic infections (Sulastris et al., 2022). To prevent perineal wound infections, mothers must actively maintain their hygiene, as postpartum wounds provide an entry point for germs, leading to infections (Bayuana et al., 2023).

According to Indonesia's Maternal Perinatal Death Notification (MPDN) data, maternal mortality rates in 2022 reached 4,005 and increased to 4,129 in 2023. Delayed detection of maternal emergencies is the primary cause of these deaths.

Based on data from the Banjarmasin City Health Department, the number of postpartum visits in 2020 was 11,164 (83.1%), in 2021 it was 10,886 (89.3%), and in 2022 it was 10,64 (87.2%). Meanwhile, the maternal mortality rate (MMR) in 2020 was 101 per 100,000 live births, in 2021 it was 100 per 100,000 live births, and in 2022 it was 128 per 100,000 live births. The highest cause of maternal death, at 36%, was postpartum hemorrhage.

Infections in perineal wounds caused by episiotomy and perineal tears can occur if the wounds are not properly treated. Untreated wounds can become a breeding ground for bacteria, leading to infections, fever, redness, pus, and wound dehiscence. In severe cases, it can cause a foul odor from the vagina.

Traditional treatments using safe, quick, and effective natural ingredients for healing perineal wounds include green betel leaf. Betel leaf contains essential oils, alkaloids, flavonoids, tannins, and saponins. Traditionally, betel leaf is boiled and used as a sitz bath to treat candidiasis and prevent wound infections.

Another traditional treatment is Borneo Dayak onion, which has benefits for female reproductive organs. This traditional remedy has been used for generations by people in Kalimantan. Postpartum reproductive health care, especially perineal wound healing, is crucial. Borneo Dayak onion contains phytochemicals such as alkaloids, glycosides,

flavonoids, phenolics, and steroids. The boiled onion is used to treat wounds, promoting healing and reducing the unpleasant smell of blood.

A preliminary study in a community health center in Banjarmasin found that 50% of postpartum women lacked adequate perineal wound care. The urgency of this research lies in the fact that inadequate perineal care can lead to wound infections, which can affect both the mother's and baby's health. If a postpartum mother is unwell and requires hospitalization, her ability to breastfeed and provide adequate care for her baby will be compromised. Therefore, alternative methods that facilitate postpartum women in caring for their perineal wounds are needed.

Based on the background above, the research problem is: What is the difference in the effectiveness of Borneo Dayak onion decoction and green betel leaf decoction in healing perineal wounds?

RESEARCH METHODS

This study will be conducted at an Independent Midwife Practic. A quantitative approach will be employed using a quasi-experimental design with a nonequivalent control group design. Both the intervention and control groups will undergo a pretest before the treatment to assess their baseline conditions. Post-treatment, both groups will undergo a posttest to evaluate their conditions after the intervention.

The population in this study consists of postpartum women who delivered vaginally and had perineal sutures. The sample consists of 30 postpartum women who delivered vaginally and had perineal sutures, divided into two groups: an intervention group of 15 respondents who received Borneo Dayak onion decoction and a control group of 15 respondents who received green betel leaf decoction. The Borneo Dayak onion decoction was administered once a day for perineal cleansing. The green betel leaf decoction was also administered once a day for perineal cleansing, prepared by boiling 4-5 betel leaves in 500-600 ml of water for 10-15 minutes. Purposive sampling was used, considering specific objectives.

Inclusion criteria:

- Willingness to participate and follow the study protocol.
- Presence of a sutured perineal wound following vaginal delivery.
- No allergy to betel leaves.
- Enrollment starting from the first postpartum day.

Exclusion criteria:

- a. Allergy to Borneo Dayak onion decoction.
- b. Allergy to green betel leaf decoction.
- c. Use of other therapies or herbal remedies for wound care.

Data collection was performed using an observation sheet for perineal wound healing using the REEDA scale, which assesses five components: Redness, Edema, Ecchymosis, Discharge, and Approximation. REEDA scale measurement was

conducted twice, namely on day 1 postpartum and day 7 postpartum. Intervention was conducted once a day in the morning or afternoon or evening by wiping. This intervention was conducted for 7 days.

RESEARCH RESULT

Univariate analysis

Based on the table above, the dominant category of wound healing in both the intervention and control groups is wound healing. less wound Good with percentage more or The same with 80%.

Table 1
Distribution of respondents based on perineal wound healing in the intervention group and control group (pretest)

Pretest	f (intervention)	%	f (control)	%
Healing wound Good	0	0	0	0
Healing wound not enough Good	12	80	13	86.6
Healing wound bad	3	20	2	13.4

Table 2
Distribution of respondents based on perineal wound healing in the intervention group and control group (posttest)

Posttest	f (intervention)	%	f (control)	%
Healing wound Good	15	100	14	93.3
Healing wound not enough Good	0	0	1	6.7
Healing wound bad	0	0	0	0

Based on the table above, after being given the decoction, the intervention group achieved 100% good wound healing, and the control group achieved 93.3% healing. wound well , with 6.7% still not enough Good .

Table 3
Analysis of the differences in effectiveness of boiled water of Dayak onion bulbs and green betel leaves on healing perineal wounds

	REEDA
Mann-Whitney U	64,000
Wilcoxon W	184,000
Z	-2.236
Asymp . Sig. (2-tailed)	.025
Exact Sig. [2*(1-tailed Sig.)]	.045

Based on bivariate data analysis, it was found that the p-value was 0.045, which is less than 0.05, so the results of this study indicate that there are differences in the effectiveness of boiled water from Dayak onion bulbs and green betel leaves on healing perineal wounds.

DISCUSSION

Perineal wounds are a state of disconnection of body tissue continuity that can cause disruption of body function, thus disrupting daily activities because trauma can cause wounds on the skin. The impact that occurs if wound healing is hampered such as pain and fear of moving, so that it can cause many problems including uterine subinvolution, irregular lochia discharge, and postpartum bleeding (Hasanah & Friscila, 2023; Karlina et al., 2023).

Almost every vaginal delivery process causes perineal injury. Injuries to the perineal area caused during delivery require proper care so that the wound heals quickly (Yuliaswati & Kamidah, 2018). Healing of perineal wounds during the postpartum period takes an average of 7-10 days. This time is considered quite long because microorganisms can multiply within 48 hours (2 days), coupled with the condition of the perineum during the postpartum period which is always moist due to lochia so that it can cause infection (Anggraini et al., 2022; Nurhalimah et al., 2024).

Perineal care is an effort to prevent infection in women who have just given birth by maintaining

cleanliness between the anus and the external genitalia in order to fulfill the need for comfort. Perineal wound care is one way to prevent postpartum infections. Treatment is carried out using antiseptic and non-antiseptic techniques. In addition, some people use a simple technique to treat perineal wounds by wiping with boiled betel leaves which aims to eliminate the fishy smell and to accelerate the healing of perineal wounds (Rusana et al., 2024).

Dayak Onion Bulbs (*Eleutherine palmifolia*) and Green Betel Leaves (*Piper betle*) are medicinal plants rich in chemical compounds that are useful for wound healing. Dayak onion bulbs are known to have various bioactive compounds that function as anti-inflammatories, anti-bacteria, and antioxidants. This content makes Dayak onion bulbs effective for wound healing by reducing inflammation, inhibiting bacterial growth, and accelerating the regeneration of damaged skin cells. The ability of Dayak onion bulbs to inhibit bacterial growth is shown by research by Puspawati (2013) which states that ethanol extract of Dayak onion bulbs is able to inhibit microbes that live on the skin well, such as *Staphylococcus aureus* and *Trichophyton rubrum*. In addition to being related to microbes, Dayak onion extract has an effect on reducing total cholesterol and LDL cholesterol levels (Jannah et al., 2018; Puspawati et al., 2013).

Green betel leaves have long been used as a traditional medicine to treat wounds because of their antiseptic and anti-inflammatory content. Comparison of chemical content between Dayak onion bulbs and green betel leaves. Betel leaves have been believed by every community in Indonesia to have very good properties for health. So that people have used this plant as a family medicinal plant. Because it is believed that betel leaves can cure various health problems, especially for wound care and especially perineal wounds. Based on several studies using ethanol extract on red betel leaves, red betel leaves contain phytochemical compounds, namely essential oils, which are useful as effective antiseptics (Dasril Samura & Azrianti, 2021)

In several studies, wound care with herbs such as betel leaves is more effective than betadine for healing perineal wounds in postpartum mothers (Harini, 2019). The speed of healing perineal wounds in postpartum mothers without herbal intervention found that the average wound healing time was 7.60 days slower than the intervention group given betel leaf water (Anggeriani & Lamdayani, 2018).

Both plants have strong potential in wound healing, but with slightly different approaches. Dayak onion bulbs tend to be more effective in tissue regeneration and have strong anti-inflammatory

activity, and tend to be richer in antimicrobial compounds. While green betel leaves focus more on preventing infection thanks to their high phenol and essential oil content. The combination of the two can provide a better synergistic effect in the wound healing process.

CONCLUSION

Another alternative that can be used to help heal perineal wounds after childbirth is to use Dayak onion bulbs.

SUGGESTION

It is expected to help postpartum mothers in using herbal medicine to treat perineal wounds. Further research can be done on the combination of boiled water from Dayak onion bulbs combined with green betel leaves.

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