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The Effect Of Red Betel Infusion Perineal Care OnThe Healing Time Of Grade II Perineal Wounds After Delivery

Emi Br Barus
Pendidikan Profesi Bidan, Institut Kesehatan Sumatera Utara, Jl. Jamin Ginting, Medan Tuntungan, Indonesia

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ABSTRACT
Most mothers who give birth experience perineal injuries that can cause postpartum infections. The wound healing process is a series of body events that respond to damage to skin integrity through specific stages that overlap. The wound healing phase is divided into four three, namely the inflammatory phase, the proliferation or epithelialization phase, and finally the maturation or remodeling phase. After the three stages are passed, the healing process will occur and the wound tissue will heal as before. The speed or slowness of wound healing time varies for each postpartum mother because it is influenced by other factors that affect. Red betel infusion is known as one of the perineal wound care therapies that is easy to do, cheap, and safe to do, this technique also has an effect on healing perineal wounds and also contains high anti-infection. The study used the Quasy Experiment method with a Nonequivalent Pretest-Posttest Control Group Design research design. Sampling used a non-probability sampling technique with an accidental sampling approach, a sample of 38 was divided into two groups, namely the group given red betel infusion perineal care and the group not given red betel infusion perineal care. Researchers conducted daily wound development assessments on two groups until the wounds healed or for approximately 10 days using the Redness, Edema, Ecchymosis, Discharge, Approximation (REEDA) perineum scale observation sheet. Based on the results of the Mann Whitney test, a p-value of 0.001 was obtained, meaning there was a difference in the administration of red betel leaf infusion perineal care on the healing time of postpartum perineal wounds between the group given red betel leaf infusion and the group not given red betel leaf infusion.

Corresponding Author:
Emi Br Barus
Pendidikan Profesi Bidan, Institut Kesehatan Sumatera Utara Jl. Setiabudi, Kel. Tanjung Sari Medan
emibarus@gmail.com

INTRODUCTION

Postpartum infection ranks fourth as a cause of maternal death in Indonesia after bleeding, hypertension in pregnancy (HDK), and circulatory system disorders. Based on data from the Indonesian Health Profile in 2020, the Maternal Mortality Rate (MMR) in Indonesia showed an increase of 9.6% compared to 2019, which was 4,221 maternal deaths. The maternal mortality rate caused by postpartum infection was 216 cases out of 4,627 maternal deaths in Indonesia. Postpartum infection is an infection that occurs in and through the genital tract after delivery. One of the symptoms of postpartum infection is

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puerperal morbidity. Puerperal morbidity is an increase in body temperature to 38 ° C or more for 2 days in the first 10 days after delivery, except on the first day and the temperature is measured 4 times a day orally (Prasetya, 2016). There are various factors that cause postpartum infections, including metritis, parametritis, septicemia and pyema, as well as infections of the perineal wound (Inayatul Milah, 2021).

Perineal wounds or injuries to the birth canal are one of the media for the development of germs that can increase the risk of infection in suture wounds which can spread to the urinary tract or the birth canal. Postpartum perineal wounds can be caused by episiotomy and can also occur naturally during the labor process. Around 60%-85% of women who undergo vaginal delivery will experience perineal wounds that require stitches. In 2015, there were 2.7 million cases of perineal wounds in mothers in labor, where this figure is estimated to reach 6.3 millioncases of perineal wounds in 2050 (Triyani et al., 2021).

The wound healing process is a series of body events that respond to damage to skin integrity through specific overlapping stages. The wound healing phase is divided into four three, namely the inflammatory phase, the proliferation or epithelialization phase, and finally the maturation or remodeling phase. After the three stages of the phase are passed, the healing process will occur and the wound tissue will heal as before. The speed or slowness of the wound healing time varies for each postpartum mother because it is influenced by other influencing factors (Nurhayati et al., 2023)

Factors that affect wound healing time include age, parity, education, type of wound, nutritional status, knowledge, early mobilization, and wound care (Siagian et al., 2021) .The method of perineal wound care is the most dominant factor related to the healing process of perineal suture wounds to reduce pain, discomfort, maintain cleanliness, prevent infection, and accelerate healing (Sebayang & Ritonga, 2021). Poor perineal wound care, the condition of the perineum affected by lochia becomes more moist, will greatly support the growth of bacteria that can cause infection in the perineum (Damarini et al., 2013). Things that need to be considered are preventing contamination with the rectum, handling wound tissue gently, cleaning blood that is a source of infection and odor (Simamora et al., 2024). Perineal wound care can be done with 3 therapy techniques, namely therapy using antiseptics (pharmacology), without antiseptics and traditional methods (non-pharmacology/complementary) (Kurniarum, 2015). Based on data from WHO quoted by (Damarini, 2013), 80% of health practitioners in developing countries prefer complementary medicine over chemical medicine, including midwives, in providing obstetric services. The implementation of complementary obstetric services in Indonesia is not only carried out by the private/independent sector, but also the government (Health Centers and Hospitals (Natalia & Khozinaturrohmah, 2020).

Several studies have shown that red betel leaf extract is known to contain chemicals that have antiseptic and antibacterial effects. According to research by (Rostika et al., 2020), red betel leaf extract is better than green betel leaves. Red betel plants contain chemical compounds such as flavonoids, alkaloids, saponins, tannins, and essential oils which have antiseptic, antioxidant and fungicidal, antifungal properties (Oktaviani et al., 2019).

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Decoction is a liquid preparation made into a simple drug with water at a temperature of 100°C. The time required to make a decoction ranges from 45-60 minutes calculated from the time the water boils. The method used uses heat from direct fire, not from a water bath like infusion. Meanwhile, infusion is a liquid preparation made by extracting herbal drugs using water at a temperature of 90°C for 15 minutes. The infusion method can dissolve flavonoid compounds, alkaloids, tannins, and essential oils found in red betel leaves. The infusion method was chosen because it is more applicable and economical in society compared to other extracts and is more effective when compared to the boiled form (Dasril Samura & Azrianti, 2021). In addition to providing a fast healing effect and containing high anti-infection, this red betel infusion therapy is safe to do because it is herbal, cheap to get, and easy to do. The method of use is easy, namely red betel infusion is applied or dabbed on the perineal wound every time after cleaning (Sukmawati et al., 2021). Research on the use of red betel leaf herbs as an antiseptic for perineal wounds was conducted by (Primadina et al., 2019) which stated that the use of red betel leaf infusion with a concentration of 25% on the perineal wound area can accelerate wound healing, with an average healing time of 4-5 days (Primadina et al., 2019). This is reinforced by Sholiha's research (2019), from 31 respondents who used red betel leaf infusion with the same concentration as Damarini et al. (2013), in healing their perineal wounds, 21 people (67.7%) had good healing of their perineal wounds with an average healing time of 6 days (Yani et al., 2023)

METHODS

The study used the Quasy Experiment method with a Nonequivalent Pretest-Posttest Control Group Design research design. Sampling used a non-probability sampling approach technique with Accidental Sampling, a sample of 38 postpartum mothers with Grade II Perineal Wounds at the Medan City Maternity Clinic, divided into two groups, namely the group given perineal care infusion of red sirih and the group not given perineal care infusion of red sirih. Researchers conducted daily wound development assessments in the two groups until the wounds healed or for approximately 10 days using the Redness, Edema,Ecchymosis, Discharge, Approximation (REEDA) perineum scale observation sheet.

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RESULTS AND DISCUSSION

Univariate Analysis

Table 1. Frequency Distribution of Healing Time of Class II Postpartum Perineal Wounds with Perineal Care Red Sirih Infusion in Both Groups

Perineal Wound Healing Time	N	Mean	Median	Std..Deviasi	Min-Maks
Intervention Group	16	5,50	5,00	1,033	4-8
Control Group	16	6,82	7,00	0,951	5-8

*) Primary data sources

Based on table 1, the healing time for perineal wounds in the intervention group

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obtained an average result of 5.50 days with a minimum value of 4 days and a maximum of 8 days and a standard deviation of 1.033. The healing time for perineal wounds in the control group obtained an average result of 6.82 days with a minimum value of 5 days and a maximum of 8 days and a standard deviation of 0.951.

Bivariate Analysis

Table 2. The Effect of Perineal Care Care Red Betel Leaf Infusion on Perineal Wound Healing Time between Intervention Group and Control Group

Perineal Wound Healing Time	N	Mean	Median	Min-Maks	Std.Deviasi	P Value
Intervention Group	16	5,50	5,00	4-8	1,033	
Control Group	16	6,82	7,00	5-8	0,951	0.001

Based on table 2 of the statistical test results of the Mann Whitney Test, on the wound healing time variable, the statistical test results show that there is a significant difference in the wound healing time between the intervention group and the control group with a p value of 0.001 <0.05. This shows that there is an effect of perineal care infusion of red sirih on the healing time of perineal wounds.

CONCLUSION

Based on the analysis results in table 2, a significant value was obtained with a p value of 0.001 <0.05 and a median difference of 2 days. This shows that there is a difference in the healing time of grade II perineal wounds between respondents who were given red sirih infusion perineal care and those who were not given red sirih infusion perineal care. Therefore, it can be concluded that there is an effect of red sirih infusion perineal care on the healing time of postpartum perineal wounds. Wound healing is the process of replacing and repairing damaged tissue function. Wound healing is the length of time for the skin to recover due to damage or disintegration of skin tissue. Healing of wounds in the birth canal without infection will heal in 7-10 days (Nurhayati et al., 2023). Red sirih (Piper crocatum Ruiz & Pav.) is a popular plant as a potential medicinal plant that can treat various types of diseases and can heal wounds. As a wound medicine, red betel contains several phytochemical contents including flavonoids, alkaloids, tannins, essential oils, carvacrol, eugenol, saponins, and polyphenols. Flavonoids and alkaloids can interfere with the function of microorganisms which results in damage or death of microorganism cells. In addition, flavonoids and alkaloids also have the ability to accelerate wound healing. Tannins and essential oils function as antibacterials. In addition, tannins can increase wound closure, as well as increase the formation of blood vessels and fibroblasts. Carvacrol can be a disinfectant and antifungal so that it functions as an antibiotic drug. Eugenol is antiseptic, antimicrobial, and supports the reepithelialization process which will affect the acceleration of wound healing. Eugenol also produces analgesic or pain-relieving activity. And Polyphenols are antioxidant compounds that help collagen production in the skin (Yani et al., 2023. Based on the results of the Mann Whitney test, the p-value was 0.001, so there was a difference in the administration of red betel leaf infusion perineal care

on the healing time of postpartum perineal wounds between the group given red betel leaf infusion and the group not given red betel leaf infusion. The administration of red betel leaf infusion perineal care had a significant effect on the healing time of postpartum perineal wounds compared to usingconventional medicine.

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