



The use of basil leaf materials to perineal wound healing in post partum mothers (case study in the work area of muna district health service)

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ABSTRAK

Background

Maternal events that have perineal rupture in Indonesia in the age group 25-30 years are 24%, and at the age of 32-39 years are 62%. The incidence of perineal rupture is high, from a total of 1951 vaginal births, 57% experienced perineal rupture. The impact of the occurrence of perineal rupture is infection. One preventive effort is to reduce the incidence of infection in postpartum mothers by treating vulva. While Povidon Iodine used has side effects caused by irritation, toxic reactions from Iodine will cause irritation. The use of Iodine could change skin pigmentation into dark red. Herbal medicines commonly used in the society are plants that produce secondary metabolites. One of the plants that has flavonoids is basil leaves.

Objective

To analyze the effect of basil leaf extract spray as an antiseptic on the postpartum maternal perineal wound healing process.

Methods

Quasi Experiment with pre and post test design group control design. Accurate design time with the control group (control time series design), the inspection is carried out for 7 days. The total sample of 34 people was divided into 2 groups (17 control groups and 17 intervention groups).

Results

The results of the analysis of spraying basil leaf extract on REEDA healing perineal wounds had a significant difference obtained p value = 0,000.

Conclusions and Recommendations

The administration of basil leaf extract spray affects to the healing of post partum maternal perineal wounds. It is expected that further research can examine the factors that can influence the process of perineal wound healing.

Keywords: Basil Leaf, Healing Perineal Wounds, Post Partum Mothers.

INTRODUCTION

Maternal events that experience perineal rupture in Indonesia at the age group 25-30 years are 24%, and at the age of 32-39 years are 62%. This is reinforced by the results of a study from the Research and Development Center (Puslitbang) Bandung, which carried out research from 2009-2010 in several provinces in Indonesia, which found that one of five women who experience perineal rupture will die with a proportion of 21.74% [1].

The incidence of perineal rupture is high, from a total of 1951 vaginal births, 57% experienced perineal rupture, 28% episiotomy and 29% due to tears. The impact of the occurrence of perineal rupture in the mother like infection of perineal rupture. Another impact of perineal rupture for postpartum mothers is discomfort and pain. Of course this case disturb the mother's activities in taking care of herself and her baby. There is evidence of changes in quality of life experienced by mothers during the puerperium. Regularly a series of psychological and physical features such as physical limitations, weakness and pain. Although these symptoms are often considered as temporary or non-permanent, this is very closely related to the quality of life for postpartum mothers. The effect of the perineal wound after labor can cause the postpartum mother to feel uncomfortable especially in the perineal area as a result of ruptured perineal suture injuries [2].

During the midwifery period caring is more directed at prevention (prevention) towards the infection, because at the end of the second day postpartum germs can make contamination, but not all women experience infection due to the presence of leukocyte defense layers and relatively non-virulent germs and sufferers have immunity to infection. One preventive effort is to reduce the incidence of infection in postpartum mothers by treating vulva [2].

Indonesia is known as one of the seven countries with the greatest biodiversity and has the potential to develop herbal medicines in the health sector. Herbal medicines commonly used in the society are plants, which produce secondary metabolites. One of the secondary metabolites in plants is flavonoids, vitamin C, beta-carotene, bilirubin, and albumin. Flavonoid compounds

found in plants have natural antioxidant activities that can capture free radical molecules or as natural antioxidants. One of the plants that has flavonoids is basil leaves [3].

Maryati stated that the basil leaf oil (*Ocimum basilicum* L.) has antibacterial activity towards the *Staphylococcus aureus* and *Escherichia coli* at a minimum concentration of 0.5 and 0.25% v / v [4].

Based on the theory above, the inconvenience of perineal wounds and the occurrence of infection is increasing in perineal wounds experienced by postpartum mothers in order to innovation needs to be done so the postpartum maternal welfare can be maximized, the researcher is interested in conducting a study entitled *The Use of Basil Leaf Materials to Heal Perineal Wounds in Post Partum Mothers (Case Study in the Work Area of Muna District Health Service)*

Study Objectives

To analyze the effect of basil leaf extract spray as an antiseptic on the postpartum maternal perineal wound healing process.

Methods

Quasi Experiment with pre and post test design group control design. Accurate design time with the control group (control time series design), the inspection is carried out for 7 days. The total sample of 34 people was divided into 2 groups (17 control groups and 17 intervention groups). The first group is basil leaf extract spray and the second group is control. Which met the inclusion and the exclusion criteria. The sampling method used was purposive sampling and the statistical test used by Friedman, Wilcoxon, Mann-Whitney.

Data Analysis

The collected data was then analyzed using Univariate and bivariate analysis techniques. Univariate analysis to calculate the mean and standard deviation value intersection the characteristic of responden. Bivariate analysis is used to determine the differences between research variables. The data are abnormally distributed so that is used non parametric test. To test on the postpartum maternal perineal wound healing process used by Friedman, Wilcoxon, Mann-Whitney.

RESULT

Univariat Analysis

Table 1. Frequency Distribution Characteristics of Age, Education, Employment and Parity of Intervention Groups and Control groups

Variabel	Group	
	Interventionn=17	Control n=17
Age*		
<21	5,9%	-
21-25	29,4%	23,5%
>25	64,7%	76,5%
Education *		
SD-SMP	5,9%	23,5%
SMA	58,8%	41,2%
Perguruan Tinggi	35,3%	35,3%
Pendidikan*		
SD-SMP	5,9%	23,5%
SMA	58,8%	41,2%
Perguruan Tinggi	35,3%	35,3%
Work*		
Work	29,4%	35,3%
Does not work	70,6%	64,7%
Paritas*		
Primipara	70,6%	76,5%
Multipara	29,4%	23,5%

Table 1 explains that the age characteristics of respondents in this study are in the range of 20-35 years. In the intervention group, the average age of respondents was grouped into three, namely age <21, 21-25, and > 25 years. The results of the frequency distribution of the intervention group had

an age range <21 years as many as 1 person (5.9%), 21-25 years as many as 5 people (29.4%), > 25 years as many as 11 people (64.7%). While the control group has an age range of 21-25 years as many as 4 people (23.5%), age > 25 as many as 13 people (76.5%)

Bivariate Analysis

Table 2 Results of different REEDA healing tests of perineal wounds in the mother of the Post Partum Intervention and Control Group

Group	Physiological							
	REEDA 1	REEDA 2	REEDA 3	REEDA 4	REEDA 5	REEDA 6	REEDA 7	Asym p. Sig
	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	
Intervention	14,35 ± 0,606	11,53 ± 1,007	9,06 ± 0,899	6,12 ± 1,867	3,06 ± 1,749	0,76 ± 1,147	0,12 ± 0,332	0,000
Control	14,47 ± 0,514	12,88 ± 1,219	11,12 ± 1,453	8,76 ± 1,393	6,29 ± 1,724	3,82 ± 1,811	2,47 ± 1,736	0,000

Table 2 explains that REEDA healing in perineal wounds in post partum mothers on the first

day until the seventh day of the intervention group and the control group. The intervention group had a

difference in REEDA values in significant perineal wounds in the seven observation periods. The Significant results of 0,000 (p .value $< \alpha$) cause H_a to be accepted as the result of the research

hypothesis. The control group got a significant result of 0,000 (p -value $< \alpha$) on the difference in REEDA differences in significant perineal wounds in the seven observation periods.

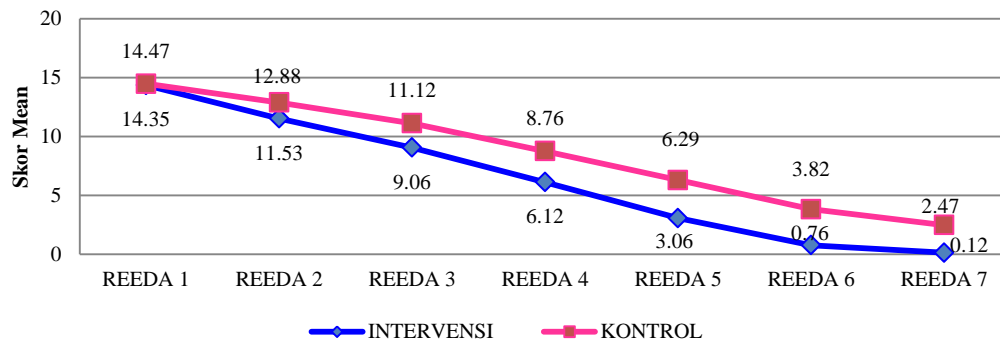


Figure 1 Graph of Advanced Test for REEDA Healing of Perineum Injuries in the Mother of the Post Partum Intervention and Control Group

Based on the graph above shows that on the first day to the seventh day there are differences in the mean value between the intervention group and the control group. It shows that the use of basil leaf extract spray is better than the use of povidone iodine.

DISCUSSION

The treatment of perineal wounds using a spray of basil leaf extract is better. Extra spray of basil leaves has a lot of bioactive substances, including flavonoids, saponins, tannins, eugenols, vitamins, zinc, and beta-carotene which may help speed up the healing process of perineal wounds. Basil leaf extract spray is very appropriate to be used as an alternative antiseptic in postpartum maternal perineal wound care.

The content of flavonoids, tannins, saponins can help the wound healing process because its function as an anti-inflammatory, anti-bleeding, antioxidant and antimicrobial agent that can affect the wound connection process⁵. The antibacterial mechanism of eugenol is related to interactions on cell membranes, this causes a change in the permeability of the cell wall and results in potassium ion leakage [6].

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Ideally the wound healing process requires nutrition as a basis for cell formation. For example, vitamin A is needed to help the process of epithelial or wound closure and synthesis of collagen, vitamin B complex as a cofactor in enzyme systems that regulate the metabolism of proteins, carbohydrates, and fats, besides vitamin C also functions in fibroblast formation, and prevents infection, as well as forming blood capillaries, and vitamin K which helps the synthesis of prothrombin and functions as a blood clotting agent⁷. Vitamin C in basil leaves can increase resistance to infection, maintain mucous membranes and accelerate the process of wound healing [6].

CONCLUSIONS

The administration of basil leaf extract spray affects the healing of postpartum maternal perineal wounds.

Recommendation Future

It is expected that further research can examine the factors that can influence the process of perineal wound healing.

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