



Research Article

The Effect of Warm Water Compress on the Vagina on the Healing of Perinium Wounds in Post Partum Mothers

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A B S T R A C T

Background: Based on data from the World Health Organization (WHO) in 2017, around 830 women died every day due to complications during pregnancy or childbirth. In Indonesia, 75% of women who give birth vaginally experience perineal wounds and some of these wounds have the potential to become infected. In the Tanjung Emas Community Health Center working area, out of 23 post partum mothers, 4 people (27%) experienced slow wound healing. One cause of infection is poor perineal care. The cause of the high infection rate is due to a decrease in the body's resistance in mothers who are susceptible to infection. To reduce the risk of maternal death globally from 216.1 million live births in 2015 to 70 per 100,000 live births in 2030.

Purpose: The purpose of this research is to determine the effect of warm water compresses on the vagina on healing perineal wounds in post-partum mothers.

Methods: The design of this research is a two-group post test only control group design. The population in this study was all postpartum mothers (0-40 days) from December-March 2024 who gave birth in the Tanjung Emas Community Health Center Working Area, namely 23 people. The sampling technique used is a non-probability sample using the sampling technique method in this research using purposive sampling, namely 8 intervention groups and 8 control groups.

Results: The results of this study were that the average wound healing was 5.5 and in the Control Group 6.5 days with a mean difference of 1 day and SD = 0.926. The results of calculations using the Paired T-Test showed p value = 0.039 ($p < 0.05$), which means H_0 is rejected and H_a is accepted, meaning there is a significant influence between the effect of warm water compresses on the vagina on healing perineal wounds.

Conclusion: Further research may be carried out to develop research on other effective methods for healing perineal wounds in pregnant women.

INTRODUCTION

Spontaneous childbirth (eustocia) is a process of expelling the products of conception (fetus and placenta) that are at term, through the birth canal (vaginal), with the mother's own strength or without help ¹. Post partum infections are morbidity and mortality for postpartum mothers ². Post partum infection is an infection which occurs in the genital tract after childbirth ³. In

general, a temperature of 38°C or more occurs between days 2-10 post partum or measured orally at least 4 times a day is referred to as puerperal morbidity. An increase in body temperature that occurs during the post-partum period is considered a post-partum infection if no extragenital cause is found ⁴. During childbirth, injuries to the perineum often occur, either due to spontaneous tears or episiotomies ⁵. Perineal rupture is a laceration or wound that occurs along the birth canal (perineum) as a result of the birth process which can occur intentionally (episiotomy) or unintentionally. Perineal rupture is the fourth cause of bleeding after uterine inversion that occurs in the first birth or in subsequent deliveries ⁶.

Perineal laceration is a wound in the muscular area covered by the skin between the vaginal introitus and anus caused by tears during childbirth. In normal delivery, perineal lacerations can be caused by sudden and rapid expulsion of the head, excessive size of the baby, and maternal tissue that is easily torn. Lacerations can also be caused by difficult forceps births, breech extractions, or pelvic inlet contractions that push the head posteriorly ⁷.

According to the World Health Organization (WHO), almost 90% of normal spontaneous births experience tears in the perineum either with or without an episiotomy during delivery of the fetus, (WHO) also stated that in 2020 throughout the world there will be 2.3 million cases of vaginal lacerations in women giving birth, and 26% of them experienced slow healing of perineal wounds ≥ 7 days after delivery. This figure is calculated to reach 6.3 million in 2050, while 50% of perineal tear incidents in the world occur in Asia ⁸.

In 2020 in Indonesia, 75% of mothers who gave birth vaginally experienced perineal tears/perineal rupture, it was found from the total 3,830,209 spontaneous vaginal births, 57% of mothers received perineal sutures, namely 28% due to episiotomy and 29% due to spontaneous tearing ⁹. In West Sumatra, in 2018 there were 111 maternal deaths, which decreased in 2020, namely 107 cases. The details of maternal deaths consist of 30 deaths of pregnant women, 25 deaths of postpartum women, and 52 postpartum deaths. In 2018, it can be seen from data from the West Sumatra health service up to September 2020. Maternal death cases decreased to 88 cases. The districts/cities contributing to the highest maternal mortality rate are West Pasaman Regency and Padang City ¹⁰. In the Tanjung Emas Community Health Center working area, the number of visits by pregnant women from November to December 2023 reached 23 normal deliveries, of which 17 people experienced second degree lacerations (73%) Wound healing was <7 days and 4 people experienced wound healing >7 days ¹¹.

Perineal tears in all deliveries usually occur in the midline and can expand if the fetal head is born too quickly. Research conducted by Anggraini in 2015 stated that both spontaneous and artificial perineal tears can be prevented by doing perineal massage. The impact of improper perineal care can result in the condition of the perineum being affected by lochia and moisture which will really support the growth of bacteria which can cause infections in the perineum ¹².

The emergence of infection in the perineum can spread to the urinary tract or birth canal which can result in complications of bladder and birth canal infections ¹³. Improper perineal care can cause postpartum infections (Manuaba, 2009). This is supported by the fact that the perineal wound area affected by lochea is a moist area, so it will really support the growth of bacteria. Infections resulting from poor care can cause complications such as; bladder infections and birth canal infections ¹⁴.

This is proven by research conducted by Romi, S. on Tintasia, et al, 2015 which stated that infections were found in episiotomy wounds in 3 people (7.1%) out of 42 samples (100%) after episiotomy surgery. Approximately 70% of women with vaginal birth experience trauma to the perineum due to perineal tears or episiotomy requiring suture repair. Just like other surgical incisions, episiotomy can also cause some type of discomfort for most postpartum mothers. Late treatment of complications can cause postpartum maternal death considering that the mother's condition is still weak ¹⁵.

Considering this, the role of midwives is needed in improving the quality of midwifery care provided to post partum mothers who experience perineal rupture, most of whom have problems healing wounds in the form of infection. So midwives need to provide effective and efficient interventions in handling these complaints. It is hoped that innovation in providing midwifery care will provide benefits for both patients and the Community Health Center. According to Nayab 2016, compresses

with warm water have the physiology of increasing tissue temperature which will stimulate vasodilation and increase tissue blood flow, which is thought to promote healing by increasing the supply of nutrients and oxygen to the injury site ¹⁶.

In accordance with the results of a preliminary study conducted in the Tanjung Emas Community Health Center Work Area in 2020, the number of mothers who gave birth was 121 people and mothers who experienced perineal rupture were 34 people (28%), in 2021 data was obtained for 117 women who gave birth and who experienced perineal rupture. 31 people (26%), and in 2022 there will be as many mothers giving birth 133 people and 41 people (30%) experienced perineal rupture. Meanwhile, in 2023 the number of births will be 193 mothers and 80 (41%) will experience perineal rupture. When interviews were conducted with several postpartum mothers, they said they experienced perineal tears with an average of grade 2 and in this case the mothers said they had a history of births with perineal ruptures as well. The mother's lack of understanding about pushing can cause uterine rupture or a high-risk pregnancy that is not paid attention to during ANC examinations ¹⁰.

METHOD

This research was conducted to analyze the effect of warm water compresses on healing perineal wounds of post-partum mothers in the Tanjung Emas Community Health Center Work Area. The research method used is a type of quantitative research, namely quasi-experimental design with a two-group post test only control group design. The population in this study was all postpartum mothers (0-40 days) from December-March 2024 who gave birth in the Tanjung Emas Community Health Center Working Area, namely 23 people. The sampling technique used was a non-probability sample using the sampling technique method in this research using purposive sampling, namely 8 intervention groups and 8 control groups. This research aims to determine the effect of an action on the experimental group that received the intervention. The data analysis used was the Paired T-Test

RESULT DAN DISCUSSION

Univariate Analysis

Univariate analysis was carried out to describe the characteristics of each research variable. In this study, univariate analysis was carried out to describe the average effect of warm water compresses on the vagina on the healing of perineal wounds in post-partum mothers in the Tanjung Emas Community Health Center area, Tanah Datar Regency in 2024 which will be presented in the form of a mean, standard deviation, minimum and maximum table. From the measurement results, the following observation results were obtained:

Respondent Characteristics

Frequency Distribution of Respondents based on Age, Education and Occupation in the Tanjung Emas Community Health Center Work Area

Karakteristik	Intervensi		Kontrol	
	Jumlah	%	Jumlah	%
Usia:				
<35	7	88%	6	75%
>35	1	12%	2	25%
Paritas:				
Primi (1-2)	3	38%	6	75%
Multi (≥3)	5	62%	2	25%
Jenis Luka:				
Normal	7	88%	6	75%
Episiotomi	1	12%	2	25%

Based on the table, it shows that for the intervention group, the majority of mothers aged <35 years amounted to 7 people (88%) while the minority aged >35 years amounted to 1 person (12%), for the control group the majority

of mothers aged <35 years amounted to 6 people (75%) while minorities aged >35 years amounted to 2 people (25%) while for the parity intervention group the majority were Multipara parity totaling 5 people (62%) the Primipara minority amounted to 3 people (38%) for the parity control group the majority Primipara numbered 6 people (75%) the minority Multipara numbered 2 people (25%) while for Wound Types in the Intervention group Normal Wounds numbered 7 people (88%) and a minority of Episiotomy Wounds numbered 1 person (12%) for Types of Wounds in the control group the majority of normal wounds numbered 6 people (75%) and episiotomy wounds amounted to 2 people (25%).

Average Healing of Perineal Wounds in Warm Water Compresses in the Intervention Group

n	Mean	Std.Deviation	Min-Max
8	5.5	0.756	5-7

Based on the table, it shows that the average perineal wound healing in the intervention group is 5.5 with a standard deviation of 0.756 with the fastest wound healing being 5 days, and the longest being 7 days.

Bivariate Analysis

Based on Table 5.4, the results of the Shapiro-Wilk data normality test show that warm water compresses on healing perineal wounds are normally distributed with a significant value of >0.05 so that the statistical test is used is the Independent T-Test. To see the effect of warm water compresses on the vagina on the healing of perineal wounds in post partum mothers in the Tanjung Emas Community Health Center area, Tanah Datar Regency in 2024

The Effect of Warm Water Compresses on the Vagina on Healing Perineal Wounds in Post Partum Mothers

Kelompok	N	Mean	Mean Different	Std. Deviation	P-value
Intervensi	8	5.5	1	0.926	0,034
Kontrol	8	6.5			

Based on the table, it shows that the average effect of warm water compresses on the vagina on the healing of perineal wounds in post-partum mothers in the experimental group is 5 days and in the control group 6 days with a mean difference of 1 day and SD = 0.926. The calculation results using the Paired T-Test were obtained. p value = 0.034 ($p < 0.05$), which means there is a significant difference between the scores of the experimental group and the control group. This can be seen from the time difference of 1 day. So it can be concluded that there is an effect of warm water compresses on the vagina on the healing of perineal wounds in post partum mothers in the Tanjung Emas Community Health Center work area in 2024.

Average Wound Healing in Postpartum Women in the Intervention Group and Control Group

According to the researchers' assumption that the healing of perineal wounds in respondents who were given warm compresses was faster than in respondents who were not given them, this increases tissue temperature which will stimulate vasodilation and increase tissue blood flow, which is thought to promote healing by increasing the supply of nutrients and oxygen to the injury site. 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.

Based on the research results, the average perineal wound healing in the control group was 6.5 with a standard deviation of 0.926 with the fastest wound healing being 5 days, and the longest being 8 days.

This is in accordance with the opinion of Oxorn 2010 which states that heat or warm therapy can increase blood flow to the injured part of the body, increase the delivery of leukocytes and antibiotics to the injured area, increase muscle relaxation and reduce pain due to spasm or stiffness, increase blood flow, provides a local feeling of warmth, increases the movement of waste substances and nutrients ¹⁷.

This is in line with research by Marini et al 2019 where what was carried out on post partum mothers had an effect on significant improvements in perineal wound healing (spontaneous and episiotomy) as the average score for episiotomy wound healing decreased from 8.26 ± 2.03 to 2.70 ± 0.65 in the experimental group had greater changes in the mean scores of episiotomy pain and wound healing on days 1, 2, and 3 post-intervention ¹⁸.

The results of Rini Hariati's research entitled The Relationship between Knowledge and Attitudes of Postpartum Mothers regarding Perineal Wound Care at the Rossita Pekanbaru Maternity Home (2017) obtained 50 respondents, showing that respondents with less knowledge performed perineal wound care as much as 15 people (65.2%), while respondents with good knowledge of treating perineal wounds were 22 people (81.5%) ¹⁹.

According to the Researcher's Assumptions According to the researchers, apart from the long healing time for wounds in the control group, it took quite a long time, namely >6 days, on average healing was on the 7th day due to factors including the mother's lack of knowledge. The mother's knowledge about postpartum care greatly determines the length of healing of perineal wounds. If the mother's knowledge is lacking, especially regarding hygiene issues, wound healing will take a long time. This supports the mother's ability to provide infrastructure for perineal care, for example the mother's ability to provide warm compresses.

The Effect of Warm Water Compresses on the Vagina on Healing Perineal Wounds in Post Partum Mothers

This research is in line with Novia Magdalena Sitorus' research in 2018 regarding the relationship between the behavior of postpartum mothers regarding perineal care and the length of wound healing at the Independent Practice Midwife Pera Simalingkar B Medan, with a total of 32 respondents. Based on analysis using the chi-square statistical test, it is known that the p-value for the knowledge variable is 0.028, so the p-value is smaller than 0.05. Meanwhile, for the attitude variable, the p-value is known to be 0.044, so the p-value is smaller than 0.05. Meanwhile, for the Action variable, a p-value of 0.046 was obtained, so the p-value was smaller than 0.05. So it can be concluded that there is a significant relationship between postpartum mothers' behavior regarding perineal care and the length of wound healing ²⁰.

Based on the researchers' assumptions, care is closely related to perineal wound healing because the better the wound care provided, the faster the wound healing will be. Treatment of perineal wounds in postpartum mothers cannot be separated from the role of health workers in providing methods and care regarding the correct care of perineal wounds. Postpartum mothers who previously did not know how to properly care for the perineum became aware of the existence of health workers who provided information and evaluations about maternal care and how to care for perineal wounds to all postpartum mothers who experienced perineal wounds. After the health worker tells them the correct way to care for perineal wounds, postpartum mothers then carry out according to the recommendations given by researchers so that wound healing will be more normal, some even faster and will avoid prolonged wound healing, let alone infection.

CONCLUSION

Based on the results of research on the effect of warm water compresses on the vagina on the healing of perineal wounds in post-partum mothers, it was concluded that there was an influence of the influence of warm water compresses on the vagina on the healing of maternal perineal wounds. This was shown from the results of statistical tests using the T-Test, it was concluded that:

1. The average healing rate for perineal wounds in the experimental group among postpartum mothers in the Tanjung Emas Community Health Center Working Area, Tanah Datar Regency was 5.5
2. The average healing rate of perineal wounds in the control group among postpartum mothers in the Tanjung Emas Community Health Center Working Area, Tanah Datar Regency was 6.5
3. The effect of warm water compresses on the vagina on the healing of perineal wounds in post-partum mothers with a p-value of $0.034 < 0.05$

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