



THE ROLE OF GIVING VIRGIN COCONUT OIL FOR HEALING PERINEUM WOUNDS IN POST-PARTUM MOTHERS

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| ABSTRACT | Keywords |
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| <p>Background: The process of childbirth can cause perineal injuries. Efforts are being made in healing perineal wounds with standard techniques of normal delivery care. The latest developments in wound care such as the provision of Virgin Coconut Oil (VCO) can accelerate the wound healing process.</p> <p>Objective: This study aims to determine the effect of giving Virgin Coconut Oil on perineal wound healing in post partum mothers.</p> <p>Methods: This type of research is a quantitative experiment with a quasi-experimental design. The population was post partum mothers as many as 30 people consisting of an intervention group of 15 people with VCO administration and a control group of 15 people with standard techniques of normal delivery care. Data were obtained using an observation sheet with an observation time of 6 days on wound healing and analyzed using an independent T-test.</p> <p>Results: The results showed that the healing time of perineal wounds with the standard technique of Normal Childbirth Care averaged 8 days. There is an effect of giving VCO on the duration of perineal wound healing with an average speed of healing for 6 days.</p> <p>Conclusion: It was found that there was an effect of giving Virgin Coconut Oil on the healing of perineal wounds in post partum mothers.</p> | <p>Virgin Coconut Oil, Perineum Wound, Post Partum</p> |

INTRODUCTION

Labor is a process that is very susceptible to complications that can endanger the mother, such as bleeding due to uterine atony, retained placenta and perineal tears. Perineal tears occur in almost all first deliveries and not infrequently also in subsequent deliveries (Sigalingging & Sikumbang, 2018).

In Asia there are 50% of women giving birth experience perineal tears. The results of research conducted by the

Bandung Research and Development Center, from 2009-2010 in several provinces in Indonesia, it was found that one in five maternity mothers who experienced a perineal tear died (20%). The prevalence of maternity women who experience perineal tears in Indonesia in the 25-30 year age group is 24% and in 32-39 year old mothers it is 62% (Oktavia & Saragih, 2020).

Perineal tears need attention because they can cause female reproductive organ dysfunction, as a source of bleeding. As a

result of improper care, the condition of the perineum affected by lochia is moist and will support the development of bacteria that can cause infection in the perineum. Infections in the perineum can propagate in the bladder tract or in the birth canal, which results in bladder infections, and infections in the birth canal (Kimorah, Lestari & Astuti, 2018).

Infections in open perineal wounds require effective treatment. There are many methods for healing perineal wounds, starting from the method using the antiseptic drug providonlondin 10%, betadine, or 0.9% NaCl and without antiseptic, namely DTT water, soaking with boiled betel leaf used for washing, giving honey compresses to compresses using Virgin Coconut Oil (Kurniawati & Ulfa, 2015).

Virgin Coconut Oil (VCO) is pure coconut oil made from fresh coconut meat, which is processed at low temperature or without heating, so that the important content in the oil can be maintained. VCO has been researched beneficial for skin health. The content of fatty acids (especially lauric and oleic acids) are skin softening and antimicrobial so that VCO is effective and safe to use as a moisturizer on the skin by increasing skin hydration and accelerating wound healing on the skin (Lubis et al., 2015).

Several previous studies have tested VCO in looking at the response to the perineal wound healing process and the results are very influential, such as the research of Sumiasih, et al, (2016), regarding the effect of VCO in accelerating perineal wound healing, the results obtained were the fastest wound healing speed in the VCO group, where It was concluded that VCO accelerates wound healing macroscopically and its potency is equivalent to 10% povidone iodine microscopically, also supported by Rukmana's research (2018), where the results of the study found that there was an

accelerated process of perineal wound healing in postpartum mothers, namely 5 days after the application of VCO.

The data that the author got through the medical records of the RSAL dr. Soedibjo Sardadi Jayapura in 2020, the normal delivery rate in 2020 reached 579 people, of whom more than 70% experienced lacerations of degree I and 2 and the observations made by the author at the RSAL dr. Soedibjo Sardadi Jayapura, it was found that the healing process of the perineal wound was relatively long when the patient returned to control after one week, where the results of the observation of the stitches were still wet, even though the patient had been educated for wound care with DTT water and had been given antibiotics (Medical Record Data of the RSAL Maternity Room dr. Soedibjo Sardadi Jayapura, 2020).

With so many variations of methods that can help speed up the process of non-pharmacological perineal wound healing, the researchers are interested in proving how the effect of giving Virgin Coconut Oil on perineal wound healing in post partum mothers for the first time has just been done at RSAL dr. Soedibjo Sardadi Jayapura.

METHOD

This type of research is a quasi-experimental design with two groups with control post test design. There are two groups, namely the intervention group will be given treatment in the form of perineal wound care using VCO twice a day in the morning and evening after the post partum mother takes a bath while the control group only gets perineal wound care using normal delivery care standards with a length of treatment of six days. This study was conducted from August to December 2021. The population was spontaneous postpartum mothers who experienced level 1 and 2

perineal rupture as many as 30 respondents. The sample in this study was the total population taken by simple random sampling technique, which was divided into 15 samples for the intervention group and 15 samples for the control group.

Data collection techniques used questionnaires to assess the characteristics of respondents including age, education, parity and occupation. Observation sheet to assess the progress of the perineal wound during treatment. The material that the researchers used to treat perineal wounds using Virgin Coconut Oil from PT Sr12 Herbal Perkasa Bogor, West Java.

Univariate analysis was conducted to determine the characteristics of the distribution of respondents (age, education, paritas, occupation) while bivariate analysis was carried out using independent sample t-test statistical tests.

This research has passed an ethical review and obtained information on ethical feasibility from the Health Research Ethics Commission of the Health Poltekkes of the Ministry of Health Jayapura number 095/KEPK-J/VI/2021.

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Distribution of Respondents Characteristics of Post Partum Mothers

| Characteristic | Intervention Group | | Control Group | |
|----------------------|--------------------|------|---------------|------|
| | f | % | f | % |
| Age | | | | |
| < 20 year | 0 | 0 | 0 | 0 |
| 20-35 year | 6 | 40 | 13 | 86,7 |
| > 35 year | 9 | 60 | 2 | 13,3 |
| Education | | | | |
| Lowest (Elementary) | 5 | 33,3 | 4 | 26,7 |
| Middle (High School) | 4 | 26,7 | 8 | 53,3 |
| High (Graduates) | | | 3 | 20 |

| Occupation | | | | |
|-----------------|----|------|----|------|
| Unemployed | 10 | 66,7 | 8 | 53,3 |
| Employed | 3 | 20 | 4 | 26,7 |
| Civil Servant | 2 | 13,3 | 3 | 20 |
| Paritas | | | | |
| Primigravida | 2 | 13,3 | 1 | 6,7 |
| Multigravida | 13 | 86,7 | 14 | 93,3 |
| Grandemultipara | 0 | 0 | 0 | 0 |
| Total | 15 | 100 | 15 | 100 |

Table 1 showed, there are 30 respondents of *post partum* mother inside the intervention group; most of them are above 35 years old as many as 9 respondents (60%), with secondary education as many as 6 respondents (40%), not working as many as 10 respondents (66.7%) with multigravida parity as many as 13 respondents (86.7%). Meanwhile in the control group, mostly 20-35 years as many as 13 respondents (86.7%), have secondary education as many as 8 respondents (53.3%), not working as many as 8 respondents (53.3%) with multigravida parity as many as 14 respondents (93.3%).

Healing Perineal Wounds Without Giving Virgin Coconut Oil

Table 2. Standard Actions for Normal Childbirth in the Treatment of Perineal Wounds Without Giving Virgin Coconut Oil

| Actions for Normal Childbirth No VCO | Control Group | |
|--------------------------------------|---------------|-----|
| | f | % |
| Healed after \leq 6 days | 3 | 20 |
| Not yet Healed after \leq 6 days | 12 | 80 |
| Total | 15 | 100 |

Table 2 shows that of the 15 respondents post partum mothers who performed standard care for normal delivery without VCO on perineal wound healing within 6 days of observation there were 3 respondents (20%) there was a perineal wound healing process and as many as 12 respondents (80%) the perineal wound

healing process has not yet occurred but heals on days 9 to 12 days.

The Giving of Virgin Coconut Oil in Treating Perineum Wound

Table 3. Healing of Perineal Wounds in Post Partum Mothers Performed by Giving Virgin Coconut Oil

| Action Giving VCO | Intervention Group | |
|------------------------------------|--------------------|------|
| | f | % |
| Healed after \leq 6 days | 11 | 73,3 |
| Not yet Healed after \leq 6 days | 4 | 26,7 |
| Total | 15 | 100 |

Table 3 shows that from 15 respondents post partum mothers in the intervention group who were given VCO on perineal wound healing within 6 days of observation, there were 11 respondents (73.3%) there was a perineal wound healing process and as many as 4 respondents (26.7%) the perineal wound healing process has not occurred but heals on 7 to 8 days.

Effect of Giving Virgin Coconut Oil on Perineal Wound Healing

Table 4. Analysis of Independent Statistical Test Sample T-test Effect of Giving Virgin Coconut Oil on Healing of Perineal Wounds in Post Partum Mothers

| Control Group | Mean | Std. Deviation | P Value |
|-------------------------------------|--------|----------------|---------|
| Healing Perineum Wound Intervention | 5.7273 | .46710 | 0,000 |
| | 7.5000 | .57735 | |

The results of the independent t test statistical test at a significance value of 95% ($\alpha = 0.05$) obtained a p-value of 0.000 or $p < (0.05)$, thus there is an effect of giving

Virgin Coconut Oil (VCO) on perineal wound healing in mothers post partum conducted at RSAL dr. Soedibjo Sardadi Jayapura.

DISCUSSION

Based on the research, it was found that postpartum mothers who only used perineal wound care with standard techniques of normal delivery care were found to have more wounds healed on day 9 to day 12, or in the slow category.

This is in line with the findings of Dianawati (2015), which found that the management of perineal wounds was in accordance with the standard of care for normal delivery by giving Amoxillin 500 mg 3x1 drug therapy, Mefenamic Acid 500 mg 3x1 and as many as 30% experienced rapid perineal wound healing (6 days), normal wound healing (6-7 days) was 63.3% and slow wound healing (> 7 days) was 6.7%.

Delayed wound healing is caused by several factors, including inadequate perineal care, the nutrients consumed do not contain high protein, the type of suture material, mobilization, etc., to accelerate the healing of perineal wounds, good knowledge of the mother is needed about proper care. If the mother's knowledge is lacking, especially about hygiene issues, the wound healing will take a long time.

The results of the study found that the knowledge of post partum mothers in perineal wound care was still lacking, this can be seen from the characteristics of the respondents, in the intervention group most of them had secondary education 40% and in the control group 53.3%. This is in accordance with Green's theory (1980), that sociodemographic factors in this case education have a major influence on health behavior, especially if the respondent has a low education it will hinder one's attitude towards the new values introduced.

In addition, based on the results of interviews with several respondents said that there is still lack of information from health workers about how to properly care for perineal wounds, this can result in the condition of the perineum affected by lochea becoming moist so that it greatly supports the proliferation of bacteria that can cause perineal infections. Infection not only inhibits the wound healing process but can also cause damage to the supporting tissue cells so that it will increase the size of the wound itself, both length and depth of the wound.

So it should be a concern for the hospital to provide more information about perineal wound care to increase the knowledge of post partum mothers so that the perineal wound can heal quickly.

Age factor is also one of the factors that can affect the healing of perineal wounds, where based on the results of the study, most postpartum mothers were in the age range >35 years in the 60% intervention group and 13.3% in the control group. This is supported by research by Rohmin, et al, (2017), who said there was a significant relationship between maternal age and the duration of perineal wound healing in postpartum mothers. The results of the analysis obtained $OR = 6.0$, this indicates that mothers who have a non-risk age have a tendency of 6 times with good perineal wound healing time.

Perineal wound healing occurs faster at a young age than in the elderly. Because the function of tissue union in the skin of post partum mothers who are not of reproductive age has decreased due to age factors. Perineal wound care can be done by cleaning the vulva after each defecation and urination, changing pads as often as possible. In addition, post-partum mothers must be supported by nutritious and appropriate food portions that cause the mother to be healthy and fit so that the

perineal wound can heal in time (Purwani, 2019).

The perineal wound healing period is fast, namely wound healing until granulation tissue forms at least within 5-6 days, while perineal wound healing is slow to heal more than 7 days with the wound still moist which will greatly support the proliferation of bacteria that cause infection in the perineum.

Based on the results of the study in the intervention group that was given VCO on perineal wound healing within 6 days of observation there were 11 respondents (73.3%) there was a perineal wound healing process and as many as 4 respondents (26.7%) the perineal wound healing process had not yet healed but healed. on day 7 to day 8.

This is in line with research conducted by Rukmana, et al, (2018), in postpartum mothers who were given Virgin Coconut Oil after the application of Virgin Coconut Oil, there was an acceleration of perineal wound healing that occurred on day 5 with a reeda score of 0, namely the condition of dry perineal wounds. This is also supported by the results of Jaya's research (2014), that the speed of wound healing in the VCO group was obtained, namely on the 7th day the size of the wound became 0.78 cm with a *P value of 0.05*.

One of the recommendations as a natural processed oil is VCO. Virgin Coconut Oil is pure coconut oil where the largest content in this oil is lauric acid. These acids are included in saturated fatty acids. VCO will react with skin bacteria to form free fatty acids such as those contained in sebum. Sebum itself consists of medium chain fatty acids such as those in VCO so that it protects the skin from the dangers of pathogenic microorganisms (Nair, S.D, 2018).

The benefits and efficacy of VCO products when applied to scratches and wounds, VCO can form a thin layer that

protects wounds from bacteria and viruses so as to speed up the healing process and no side effects have been found in the use of VCO (Romauli, et al, 2020).

VCO therapy in this study was carried out by post partum mothers directly, namely by applying VCO to sterile gauze and attaching it to the perineal wound which was carried out twice a day in the morning and evening after the mother took a bath with a length of treatment for six days. Researchers made observations on the third day of respondents who performed perineal wound care using normal delivery care standards plus VCO, where there was a difference, namely the wound looked clean, describing the results of the wound starting to dry, but the rupture had not yet experienced union, while the control group respondents found the wound was still looks wet and the rupture has not experienced union.

The results of the observations on the fifth day found that the wound looked dry, the rupture had coalesced, the rupture had started to close and on the sixth day a proliferation stage had occurred. In the proliferative phase, fibroblasts migrate to the wound area and stimulate collagen synthesis. This situation is followed by 3 processes that take place sequentially in the form of epithelialization, wound contraction and collagen formation, epithelization covering the wound surface and contraction closing the distance between the wounds (Ma'rifah & Yeni, 2015).

From the results of unstructured interviews with several research respondents in the intervention group about their experiences, impressions and responses when giving VCO to the wound area after bathing, they stated that VCO attached to the perineal wound area was easily absorbed and not sticky on the skin so that generally respondents felt the benefits and based on observations During the research, it can be seen that there is a significant difference in

the time or duration of the wound healing process between the treated object and the untreated object.

The results of the independent t test statistical test at a significance value of 95% ($p = 0.05$) obtained a *p-value* of 0.000 or $p < (0.05)$, thus there is an effect of giving Virgin Coconut Oil (VCO) on perineal wound healing in mothers post partum conducted at RSAL dr. Soedibjo Sardadi Jayapura.

This is supported by research conducted by Fatimah, et al (2021), it was found that there was an effect of giving VCO to accelerate the perineal wound healing process in post partum mothers with *p value* = $0.004 < = 0.05$, with the mean value using VCO = 1.166 and the mean value that does not use VCO = 2.00, is also supported by research by Bhawana (2015), regarding the effect of Virgin Coconut Oil in accelerating wound healing.

Negative NaCl 0.9%. The results showed that the fastest wound healing speed was in the VCO group, where VCO accelerated macroscopic wound healing and the potential was equivalent to 10% Povidone Iodine Microscopically.

It can be concluded that the healing of perineal wounds treated according to APN standards plus VCO was faster than those treated according to APN standards alone. Where in the theory of Sutanto, et al (2017), the content contained in VCO has properties as an antiseptic, anti-infective and can reduce pain and provide comfort, besides that VCO can maintain wound skin moisture because of its high lauric acid content (48-53%). thus supporting the wound healing process. Moisture on the injured skin is necessary for the epithelial cells to migrate and spread. The advantage of keeping the wound moist is that it will increase the re-epithelialization process to be 2-5 times faster, increase collagen synthesis and reduce fluid loss on the wound surface.

Based on the results of this study, the efforts that can be made by midwives are to provide alternative non-pharmacological treatments to postpartum mothers who experience perineal injuries using Virgin Coconut Oil and provide counseling or counseling to mothers on how to do the treatment, and to be effective it must be done every day, for at least 5 days.

CONCLUSIONS

From the results of the study, it was found that there was an effect of giving Virgin Coconut Oil on the healing of perineal wounds in post partum mothers where the *p-value* was *0.000 or $p < (0.05)$* , so it can be said that VCO has the efficacy of accelerating perineal wound healing compared to wound healing according to standards Normal Childbirth Care.

The results of this study may be a positive input for RSAL dr. Soedibjo Sardadi Jayapura especially in modifying the obstetric Standard Operating Procedure (SOP) related to perineal wound healing in post partum mothers using VCO.

For patients with perineal wounds, to be able to perform the treatment using VCO which has proven useful in accelerating wound healing according to the results of this study.

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