

REALLY TRADITIONAL MEDICINE ALOE VERA CAN HEAL PERINEUM TREATMENT IN POST PARTUM?

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ABSTRACT

Perineal wound healing is one of the physiological adjustment processes experienced, can run quickly.¹The incidence of perineal rupture in Indonesia was 67.2%, in Lampung Province, one death caused by an outbreak was 9 cases.^{2,3}To determine the order of traditional aloe vera treatment in perineal wound healing in post partum. This study uses a quasi-experimental form of experiment. The number of samples is 34 people, the sampling technique used is quota collection. The results show that the healest wound healing period for respondents who used aloe vera gel extract was the 3rd day, the longest wound healing period was the 6th day. Based on the schedule, it is known that $p = 0,000$, it can be seen that the value of $p < \alpha (0.05)$, it can be concluded that the aloe vera gel extract is memorable for healing perineal wounds.

Keywords: Aloe Vera, Perineum Treatment

I. INTRODUCTION

Perineal injury is a wound in the area between the vagina and anus. Healing wounds perineum of the process of adaptation of physiology are experienced, and didnt all wound healing of the perineum on maternal postpartum runs with fast, depending on the cleanliness and maintenance. Care perineum done to restore health in general and maintain the cleanliness of the wounds of the perineum after childbirth. If left without treatment and are not dealt with properly can lead to the occurrence of pain, dyspareunia, incontinence of urine, incontinence Alvi, infection and even death.¹ International data show that about 5-10% of postpartum mothers experience perineal trauma. *The Royal College of Obstetricians and Gynecologists (RCOG)*.⁴ say that births in the United Kingdom 80% occur in the perineal period. In Indonesia k ematian mothers due to pregnancy occurs after childbirth, 50% of deaths during childbirth, and nearly 90% in the labor many are experiencing perineal tears, either with or without episiotomy.⁵The results of the study from the Center for Research and Development (R & D Center) Bandung, which perform research of year 2009 to 2010 in several Provinces in Indonesia found that one out of five mothers maternity who suffered a ruptured perineum will die world with percent (21.74%). In Asia, perineal rupture is also a problem that is quite a lot in society, 50% of the incidence of perineal rupture in the world occurs in Asia.⁶ Regency of Central Lampung itself from Month January s/d in March of 2019 there were 78 mothers giving birth to normal, 56 of them suffered a tear of the perineum (71.8%).

In general wound incision or spontaneous requires a time of about 6 to 7 days. Nursing wounds perineum improper strongly support the proliferation of bacteria, resulting in the condition of the affected perineum lokheabe moist, thus causing an infection of the perineum. The occurrence of infection can inhibit wound healing process, terjadinya damage to the cell network support, so it will increase the size of the wound itself, both its length and depth of the wound. Factors causing the occurrence of infection at the time of parturition among others, the power resistant body that is less, care postpartum were less good, less nutrition or malnutrition, anemia, hygiene were less good, and fatigue.⁷

Process complex in the healing of wounds through phases of inflammation, proliferation, and maturation/maturity. Cytokines, growth factors, cellular elements and blood are the result of the process of healing perineal wounds. Healing and treatment of injuries of the perineum can be supplied by conventional or with therapy complementary. Drug traditional in a practice that is known as a drug traditionally include herbs, Ayurveda, Siddha, Unani, Aloe vera, betel and drugs more.²The way of perineal treatment is the most dominant factor related to the healing of perineal wounds.⁸Research other conducted say that the cleanliness of the well has

a chance to recover the wound 27.741 times more better, when compared with mothers postpartum that cleanliness is less good, so cleanliness is a factor major in healing wounds perineum.⁹ Based on the research that is carried out by Eghdampour at al with the title of the study *The Impact of Aloe vera and Calendula on perineal healing after episiotomy in Primiparous Women: A Randomized Clinical Trial* say that maternal postpartum in a group experiment used aloe vera and Calendula Ointment every 8 hours and the group control receives care routine that is performed by home sick for the treatment of episiotomy for 5 days.¹⁰

The results of the study by Avizhgan et al., On the effect of healing of wounds of the perineum of the gel aloe vera to treat pressure ulcers showed that it takes time to reduce the redness, inflammation, the time that is needed to close the wound which is significant when using the gel aloe vera . Research by Tafazolie et al., Conducted to compare the effects of Aloe vera gel and Lanolin ointment on treating nipple fissures, shows that aloe vera gel is more effective than Lanolin ointment in treating fissure nipples. Aloe vera (*family liliaceae*) is of a group of plants flowering, monocots and native North Africa and is one of the species of medicinal importance which is used to treat many diseases of times previously. Has healing, anti- inflammatory, analgesic, anti-viral, anti-bacterial, anti- fungal, laxative, anti- itching and moisturizing properties. Aloe vera including collagen increases tissue granules and is effective in wound healing due to its anti- inflammatory properties . The effect of anti-inflammatory that is caused due to the content of acid salicylate which inhibits the formation of Bradykinin, Histamine and oxidation of acid arachidonic that inhibits the synthesis of prostaglandins.¹¹

Research on aloe vera on the acceleration of perineal injury has been done. Study research that has been done is look at the wound tearing of the wound that was made or in episiotomy and only see from primiparas. There are also studies of aloe vera which are made in the form of creams. Research of this, injuries perineum that will be seen is wound rips are spontaneous and because of injuries episiotomy and see from all of the characteristics, both primiparous and multiparous. In the future, the research will be continued by making aloe vera gel extract and betel leaf, and then it will be made in a compress hypafic form. Traditional medicine from plants can be used for wound management in certain conditions. An increase in the cost of health care, especially in wound management, would be economical to use traditional medicine to treat wounds. However, the test clinical randomized the great need to provide evidence that more concrete that supports the use of drugs traditionally in the management of wounds. Research on wound healing of the perineum has been done, but this study will develop wound healing by administration of drugs tradisiona by using Aloe vera (aleo), researchers interested in conducting research "Really Medicine Traditional Aloe Vera Can Heal tear perineum On Mother's Ruling"

II. METHOD

The design of the study were used in research this is *Quasi experiment* with approaches *Pre test- Post test group design*. The population in this study were all postpartum mothers in midwives independent practice in the City of Metro in January to May 2019 totaling 245 people. In the study this, the researchers used a formula sample of comparative numerical no pairs, with formula as follows¹²:

$$n_1 = n_2 = 2 \left(\frac{[z_\alpha + z_\beta] s}{x_1 - x_2} \right)^2$$

Description :

n_1 : Number of group subjects 1

n_2 : Number of group subjects 2

z_α : Standard value of alpha, type I error rate of 5%, $\alpha = 0.05$

the confidence level is 95%, so $z_\alpha = 1.96$

z_β : Default value of beta, type II error rate of 10%, $\beta = 0.1$

power 90%, so $z_\beta = 1.28$

S : Combined standard intersection , the value is sourced from the literature

$x_1 - x_2$: Minimum mean differences that are considered meaningful between groupsone and group two

Results of the calculations obtained 33.3 then the result is rounded into 34, which means the number of samples that are used in research this is numbered 34 people each group. 34 people for group intervention and 34 people for group control, so that the number of samples of research this is 68 people. Mechanical samples were used was *quota sampling* (samples already provided ratios).

Considerations were made by researchers in the selection of the sample is to determine the criteria, where the criteria for the selection consists of criteria for inclusion and exclusion.

Inclusion criteria

- a) Mother childbirth in the midwife independent practice Metro City area
- b) Capital puerperal which suffered rips the birth either because of an episiotomy or rupture spontaneously
- c) Mothers who are willing to be intervened
- d) Do not use the means or drugs other to accelerate wound healing of the perineum

Criteria for exclusion

- a) Postpartum mothers who are experiencing retention of drug allergies
- b) Capital puerperal with risks such as infection and postpartum haemorrhagic
- c) Capital puerperal with disorders of depression and disorders psychiatric
- d) Postpartum mother intended

III. RESULTS

1.1 Characteristics of Respondents

Table 1. Characteristics of Respondents in the Independent Practice of Metro City Regional Midwives

No	Characteristics of Respondents	Control group		Intervention group	
		n	%	n	%
1	Age				
	<20 years old or > 35 years old	3	8.8%	1	2.9%
	20-35 years old	31	91.2%	33	97.1%
	Total	34	100%	34	100%
2	Profession				
	Trade	1	2.9%	0	0%
	IRT	31	91.2%	33	97.1%
	Employee	0	0%	1	2.9%
	Farmer	1	2.9%	0	0%
	entrepreneur	1	2.9%	0	0%
	Total	34	100%	34	100%
3	Parity				
	Primipara	14	41.2%	16	47.1%
	Multipara	20	58.8%	18	52.9%
	Total	34	100%	34	100%
4	Type of wound				
	Spontaneous Rupture	21	61.8%	30	88.2%
	Episiotomy	13	38.2%	4	11.8%
	Total	34	100%	34	100%

Based on the table 1, it can be seen that 68 respondents who suffered perineal injury, obtained the most respondents were aged 20-35 years in the frankincense oil group of 31 (91.2%) and in the aloe vera extract group as many as 33 people (97.1%). The most work in the frankincense oil group was IRT by 31 (91.2%), as well as in the aloe vera gel extract group by 33 people (97.1%). The highest parity in the frankincense oil group was multipara (58.8%), and in the aloe vera gel extract group as many as 18 people (52.9%). The type of injury experienced by respondents in the frankincense oil group was spontaneous rupture of 21 people (61.8%), whereas in the aloe vera gel extract group as many as 30 people (88.2%).

2.1 Average Duration of Perineal Wound Healing by Perineum Type of Wound

The following is a table of the average length of perineal wound healing based on the type of wound in post partum mothers in a midwife independent practice in the Metro city area:

Table 2. Average Duration of Perineal Wound Healing by Perineum Type of Wound

No	Type of wound	n	The mean	Elementary school
1	Spontaneous rupture	7	2.27	.860
2	Episiotomy	27	4.82	1.883

Based on the table 2 above, the results show that the average healing of perineal wounds in the type of spontaneous rupture wound is 2.27 or 4 days, as well as the type of episiotomy wound, which is day 4.82 or day 4.

3.1 Average duration of wound healing by using Aloe Vera

Respondents who use aloe vera extract have different rates of healing time. Here is a table of the average length of healing of perineal wounds using aloe vera in post partum mothers in the Independent Practice of Metro City Regional Midwives.

Table 3. Average Duration of Perineal Wound Healing Using Aloe Vera Gel

No	Variable		The mean	Elementary school
	Old wound healing	Wound healing with Aloe Vera Gel Extract		
1	Day 1	0		
2	Day 2	0		
3	Day 3	4		
4	Day 4	10		
5	Day 5	14	4.59	.957
6	Day 6	6		
7	7th day	0		
8	Day> 7	0		
	Total	34		

Based on the table 3, it can be seen that, the fastest wound healing time for respondents who use aloe vera gel extract is the 3rd day, the longest wound healing time is the 6th day. Most wound healing is day 5. While the average length of wound healing perineum of respondents who use aloe vera is 4.59 or healed day 5.

4.1 Effectiveness of Aloe Vera on the Duration of Perineal Wound Healing

The results of the *Mann Whitney* test on the effectiveness of aloe vera on the duration of healing of the perineal wound, to obtain the following results:

Table 4. Effectiveness Extract Aloe Vera to old perineal wound healing

	Intervention	n	<i>Mann Whitney</i>	
			Z	p value
Old Healing	Control	34	-3,498	0,000
	Intervention			

Based on the table 4, it is known that $p = 0,000$, it can be seen that the value of $p < \alpha$ (0.05), it is concluded that effective aloe vera is given to accelerate the healing of perineal wounds.

IV. DISCUSSION

The results of a study conducted in the independent practice of midwives in the Metro City area about the effectiveness of traditional *aloe vera extract gel* on the acceleration of perineal wound healing in postpartum mothers.

1.1 Average Duration of Perineal Wound Healing by Perineum Type of Wound

Based on the results of research conducted on 68 post partums in the midwife independent practice Metro City area obtained the fastest perineal wound healing time on the 3rd day, the longest perineal wound healing on the 6th day and the most wound healing on the 4th day. The average results the duration of healing of perineal wounds based on the type of spontaneous ruptured perineal wound is 4.27 or 4 days, the results are not much different from the episiotomy perineal wound ie day 3,82 or day 4. Physiologically perineal wounds will begin to improve within 6 to 7 days post partum. In general there are 2 factors that influence perineal wound healing including internal factors and external factors. Internal factors include nutrition, personal hygiene, maternal condition, heredity, age, hemorrhage, hypovolemia, local edema factors, nutritional deficits, oxygen deficits, over-activity. While external factors include the environment, tradition, knowledge, social, economy, staff handling, handling of networks and medicines.¹³

On the characteristics of respondents in this study, the majority of respondents were 20-35 years (94.1%) in the reproductive age. This is according to research Purnanifactors that affect the healing of wounds in addition to the factors of nutrition, the healing of the wound was also influenced by several factors other of which is a factor of age in which maternal postpartum with injuries of the perineum were the age of reproduction (20-35 years) have a mechanism of cell which works more quickly and effectively against wound healing.¹⁴ Whereas at the age of > 35 years the cell mechanism has a slow response so that the time needed for wound healing becomes longer and less effective.

1.2 Average duration of perineal wound healing by using Aloe Vera Extract

The analysis results obtained an average length of perineal wound healing by extracting aloe vera gel against 34 respondents obtained results of 4.59 or 5 days. The results of this study are similar, aloe vera can be used to heal wounds and reduce the effects of inflammation (inflammatory) and providing more lots tissue granulation are ripe who plays accelerate healing of wounds.¹⁵ This is consistent with the theory that Rostitaaloe vera contains anthraquinone which has the effect of eliminating a sense of pain, in the treatment of wounds resistant gel aloe vera is very effective for the treatment of scars wounds, and can stimulate fibroblast to create a network of new, fibroblast which terstimulasi able to make proteoglycan, collagen, and usur elements other to form a network of new.¹⁶ Meat aloe vera contains more than 200 compounds and nutrients naturally differ that are jointly have the efficacy to treat. The existence of compound sterols, anthraquinone, and substance naturally others include polysaccharides in aloe vera works in synergy led to the occurrence of antinflammation. According to research from Biworoet a, aloe vera has enzyme antioxidant and can inhibit mediator of inflammation and as a reliever sense of pain.¹⁷

1.3 Effectiveness Extract Aloe Vera to Old Wound Healing perineum

The results of data analysis using Mann Whitney obtained the value of $Z = -3,498$ and the p value of $0,000 < \alpha$ (0.05) showed a difference in the effectiveness of perineal wound care before and after administration of aloe vera. This is due to s IFAT aloe vera among others as an anti-septic that is cleaner natural and treat the wound with fast, anti puritik busting flavors itch, anesthetic reliever sense pain, antipyretic lowering sense of heat, anti-fungal, anti-viral and anti-bacterial which is derived from the content of saponins and anti-inflammatory that is derived from fat, reducing inflammation and a sense of pain, as well speed up healing and improve the flow of blood to the injured part.¹⁶

Anti-bacterial is usually used for the treatment of infections. Aloe vera extract can be used as an anti-bacterial because of the content of phenol senawa that interacts with proteins in bacteria through non-specific bonds to form a phenol-bacterial complex. Aloe vera is called as the plant anti-bacterial due to extract aloe skin tongue aged contains a substance active that has been identified as saponins, sterols and acemannan that has the ability to inhibit the growth of bacteria staphylococcus aureus and bacteria Escherichia coli.¹⁸

In the year 2015 Sharma et al have been doing the testing activity of antibacterial aloe vera and the results obtained aloe vera is known effective against streptococcusmutans and lactobacillus casei.¹⁹ Aloe vera also tested along with ocimum sanctum for the activity of its antibacterial properties, the result both work in a synergistic effective against the bacteria streptococcusmutans and lactobacilluscasei. Based on the research is anthraquinone and saponins found leaves of aloe vera is this that responsibility towards the activity of antibacterial in direct and polysaccharides have activity antibacterial is not directly which would stimulate the phagocytic leukocyte sit for

destroying bacteria, for aloe vera such as flavonoids, saponins, tannins, and anthraquinone is what can make it much faster to heal the wounds of the perineum.^{20,21}

V. CONCLUSIONS

Results of research on the effectiveness of traditional medicine aloe vera to long maternal perineal wound healing post partum in Independent Practice Midwife Metro City area to 68 respond en concluded that the average length of wound healing of the perineum were given drugs traditional aloe vera that is y aitu 4.59 or recovered on day 5. Suggestions in this study is expected that aloe vera can be used as a traditional alternative treatment for healing a perineum wounds in post partum mothers because the method is cheap, safe, no side effects, and easy to do.

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