



(MUDIMA)



The Influence of Channa Striata and Ananas Comosus Floss on Perineal Wound Healing at Aji Batara Agung Dewa Sakti Hospital Samboja

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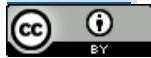
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ABSTRACT

A perineal wound is one of the predisposing factors for puerperal infection. This form of infection varies and is localized, resulting in sepsis and death during the puerperium. One of the risk factors for perineal infection is prolonged perineal wound healing. Channa Striata is one of the fish that contains more nutrients and protein than other types of fish, so consumption of Channa Striata can be used as a type of nutrition to accelerate wound healing. Then in Ananas comosus, you can find a phytochemical content in the form of bromelain, which functions as an anti-inflammatory so that it can prevent wound infection. To determine the effectiveness of Channa Striata and Ananas Comosus shredded on perineal wound healing in postpartum mothers. This research is included in quasi-experimental research with a one-group pretest-posttest design approach. The population is postpartum mothers who experience perineal rupture from either natural injuries or episiotomy wounds at Aji Batara Agung Dewa Sakti Hospital Samboja. The sampling technique uses purposive sampling of as many as 17 people. As a result of the study, this influence exists between Channa Striata and Ananas Comosus Floss in healing perineal wounds (p value = 0.025) with value α = 0.05. Research results show that Channa Striata and Ananas Comosus Floss can help speed up the healing process of perineal wounds. From the research results, Channa Striata and Ananas Comosus shredded can be used as an alternative for perineal wound healing

INTRODUCTION

Childbirth often leads to a miscarriage of the birth pathway. Perineal ulcers are found in about 70% of women who give birth to pervagina. It occurs due to the inability of muscles and pelvic soft tissue during the birth process of the baby (Nuryanti, 2021). According to the World Health Organization (WHO), perineal rupture incidence is very high; the average prevalence in the United States of mothers having grade 1 (24.8%), grade 2 (34%), and grade 3 (6.6%) is at grade 4 or more (2.5%) (Fauziah et al., 2020).

In Indonesia, the incidence of perineal rupture reaches 30% of the cause of bleeding at the time of childbirth. The occurrence of rupture perineum causes bleeding after uterine atonia. (Siti Maisaroh & Yuliwati, 2019). The prevalence of mothers having perineal rupture in Indonesia at the age of 32–39 is around 62%. According to a study, the incidence of perineum rupture has increased in Indonesia by 2 million cases, with about 15% of the impact resulting in the death of the mother. For the number of deaths of mothers in Eastern Kalimantan in 2018, there was an increase of about 110 cases, one of them due to respiratory complications such as puerperium infection on grade 1 laceration. (Fauziah et al., 2020).

One of the risk factors for perineal infection is the healing of long perineum wounds. Healing of perineous seam wounds during rapid respiration is expected to avoid the risk of infection as well as physiological complaints. Healing injuries are caused by some problems, such as bleeding accompanied by changes in signs of vitality, infections such as skin redness, fever, and pain, rupture of seam wounds partially or entirely due to the occurrence of trauma, as well as the protrusion of internal organs to the outside because the wound does not immediately merge well. A good form of perineal wound healing is perprimer healing. The healing is the edges of the wound joined by seams closing faceside, minimal granulated tissue, and invisible scar tissue. (Sebayang & Ritonga, 2021).

The speed of wound healing can be influenced by the nutrients consumed. The nutrition needed to accelerate the healing process of the perineal wound from childbirth is obtained by eating foods that are high in fiber and protein. Channa Striata is one of the fish with more nutritional and protein content than other fish, so the consumption of Channa striata can be used as a type of nutrient that accelerates wound healing. Then the nutrient content contained in the Ananas Comosus can be found to contain phytochemical bromelain, which acts as an anti-inflammatory. (Sebayang & Ritonga, 2021).

Previous research conducted by Sebayang and Ritonga (2021) found six types of effective nutrients that are well consumed to accelerate the healing process of the perineal wound from childbirth. These types of nutrients include capsules of crab fish extract, zinc supplements, eggs, red seed rose juice, lilac, pineapple juice, and honey. Prakoso (2018) research shows that Aloe vera (AV), Ananas comosus (AC), and Sansevieria Masoniana (SM) have potential effects on the healing of infected wounds. The Golezar study (2016) showed the effectiveness of bromelain in Ananas Comosus in episiotomy pain and wound healing. According to Peneltian Rahayu (2016), striatin in Channa Striata is a natural compound that has the potential to accelerate wound healing in conditions such as postoperative and postpartum, as well as increase albumin levels. Research by Burn (2015) showed that daily intake of Channa Striata extract has a beneficial effect on uterine involvement in post-LSCS women (lower segment Caesarean section) and its use to enhance the healing of LSCS post-women's wounds.

The most important need to be met by a postpartum mother with a perineal injury is good nutrition for the immune system and wound healing because there are some nutrients that are very needed to support the body's immune systems as well as play an important role in wound recovery. (Nuryanti, 2021).

Aji Batara Agung Dewa Sakti Hospital Samboja is a TIPE C hospital and the second hospital owned by the government of the district of Kutai

Kartanegara. Based on the preliminary study at RSUD Aji Batara Agung Dewa Sakti Samboja, in September, 28 mothers suffered perineal rupture, 25 in November, and 26 in December.

Based on these backgrounds, the author is interested in researching “The Influence of Channa Striata and Ananas Comosus Floss on Perineal Wound Healing at Aji Batara Agung Dewa Sakti Hospital Samboja”.

METHODS

This research is part of quasi-experimental research, with one group pretest-posttest design approach.

Table 1. Characteristics of Respondents at ABADI Samboja Regional Hospital 2023

(n=17)

No	Karakteristik Responden	Jumlah (N)	Persentase (%)
1	Usia		
	< 25 Tahun	9	52.9
	25 – 35 Tahun	5	29.4
	> 35 Tahun	3	17.6
2	Status Paritas		
	< 3	12	70.6
	3 – 4	4	23.5
	> 4	1	5.9
3	Pendidikan Terakhir		
	SD	2	11.8
	SMP	2	11.8
	SMA	13	76.5

Sumber: Software komputer

Based on the above table obtained information, of the 17 respondents used for the research, at the age of 25 years, the result was that respondents with an age < 25 years had 9 respondents with a presentation of 52.9%; respondents from 25–35 years had 5 respondents with a presentation of 29.4%; and respondents of an age > 35 years had 3 respondents with a presentation of 17.6%. At parity, the result is that the respondents in category <3 have as many as 12 respondents with a presentation of 70.6%, the

The population of this study was a postpartum mother with a perineal injury in Aji Batara Agung Dewa Sakti Hospital Samboja in the months of February–April 2023, which totaled 117 people. Sampling is done by purposive sampling. As for the sample calculation using Federer's formula, 17 people were obtained. The free variables taken are Channa Striata and Ananas Comosus. The bound variable taken is perineal wound healing. Bivariate analysis of the Wilcoxon test.

RESULTS AND DISCUSSION

1. Respondent Characteristics

respondents in categories 3–4 have as many 4 respondents with a presentation of 23.5%, and the respondents in category > 4 have as many as 1 respondent with a presentation of 5.9%. At the educational level, it was obtained that the result of the respondents with elementary school was as many as 2 responses with presentation 11.8%, the responders with junior high school had as many responses with presentation 11.8%, and the replies with senior high school were as many as 13 respondents with presentation 76.5%

2. Perineal Injury Before Channa Striata and Ananas Comosus

Table 2. Perineal Injury Before Channa Striata and Ananas Comosus

Distribusi statistik keadaan luka perineum sebelum pemberian abon *Channa Striata* dan *Ananas Comosus* di RSUD ABADI Samboja

Pengukuran	N	Mean	Median	SD	Min-Max	95%CI
Keadaan luka (Pre test)	17	0	0	0,000	0-0	0-0

Sumber: Software komputer

Based on the descriptive statistical results in the table above, the information obtained indicates that the number of observations (n) is 17, where the study variable uses a sample of 17 people. With

details of the value on the variable before obtaining the minimum or minimum value of 0 and the maximum or maximum value of 0, with a mean of 0, and the standard deviation of 0. Median or middle value of 0.

3. Perinel Injury After Channa Striata dan Ananas Comosus

Table 3. Perinel Injury After Channa Striata dan Ananas Comosus

Distribusi statistik keadaan luka perineum setelah pemberian abon *Channa Striata* dan *Ananas Comosus* di RSUD ABADI Samboja

Pengukuran	N	Mean	Median	SD	Min-Max	95%CI
Keadaan luka (Post test)	17	0.29	0	0,470	0-1	0.05-0.54

Sumber: Software komputer

Based on the descriptive statistical results in the table above, the information obtained indicates that the number of observations (n) is 17, where the study variable uses a sample of 17 people. With the detailed value on the variable after obtaining the minimum value or smallest value

of 0 and the maximum value or highest value of 1, with the mean value of 0.29 and the standard deviation of 0.470.

4. Normality Test

The normality test used is Shapiro-Wilk because the number of samples is less than 50.

Table 4. Normality Test

Variabel	Sig.	Keputusan
Pretest	-	Tidak Normal
Posttest	0.000	Tidak Normal

Sumber: software komputer

Based on the above table, we obtained information that the pretest and posttest have Sig values < 0.05 , which means the data is not

distributed normally. So to find out the effects of Channa Striata and Ananas Comosus on perineal wound healing using Wilcoxon tests.

5. Bivariate Analysis

Table 5. Bivariate Analysis

Hasil	Mean \pm SD	Selisih Mean	Sig.
Pretest	0 \pm 0.000		
Posttest	0.29 \pm 0.470	-0.29	0.025

Sumber: Software computer

Based on the above table, information is obtained that the average pretest is 0 with a standard deviation value of 0, whereas the average posttest is 0.29 with a default deviation of 0.470. The average deviation is -0.29; the value is negative, thus information is received that there is an increase in the mean pretest to posttest. In addition, the posttest obtained a sig. value of $0.025 < 0.05$, thus it can be concluded that the average pretest and the posttest are different. Since the Sig value is < 0.05 , H_0 is rejected and H_1 is accepted, which means there is an influence of the Channa Striata and Ananas Comosus affiliates on the healing of perineal wounds.

1. Responden Characteristics

a. Mother's Age

Based on the results of the study, the average age of respondents with perineal rupture was less than 25 years. A good age in wound healing is a healthy reproductive life (20–35 tahun). In a healthy reproductive age, the likelihood of complications is very small because the skin tissue joint is still functioning normally. The body will experience changes as you age, such as vascular changes that interfere with blood circulation to the wound area and disrupt blood clotting factors in the coagulation phase. The inflammatory response slows down, thus

causing a delay in the proliferation phase and a decrease in the rate of cell repair, and the collagen tissue produced in the maturity phase is less soft and less elastic, thereby slowing wound healing.

This is in line with the research carried out by Yanti (2019), which is that basically age can influence the process of childbirth, so it can be said that at the age of < 20 years and > 35 years, it is not recommended to give birth on the grounds of avoiding the occurrence of complications such as perineal rupture, where at age < 20 the female reproductive organs are not completely complete.

The researchers assume that the mother's age is one of the factors that influences the healing of the perineal wound. At the reproductive age (25–35 years), the skin is more elastic, the connective tissue is stronger, and the skin's resistance to wounds is better. By the age of 35, the elasticity of collagen is reduced, as are the fat deposits, so the healing process is slower.

b. Parity

Based on the results of the study, an average parity of respondents < 3 was obtained. The parity is the number of fetuses weighing more than or equal to 500 grams that have ever been born alive or dead; the parity of 2–3 is the safest parity reviewed after

the death of the mother. This is in line with a study conducted by Yanti (2019), which found that primipara mothers have a high risk of developing perineal rupture due to, among other things, the flexibility of the birth pathway or the elasticity of the perineum, which is twisted and irregular.

Assuming researchers have a parity of one, a high parity (more than three) is a risk parity. The first is related to the lack of experience and knowledge of mothers in the care of pregnancy and childbirth.

c. Level of Education

According to Koentjoroningrat quoted by Yanti (2019), the higher education a person has, the easier it is to receive information, so the more knowledge they have, and the opposite is true when less education hinders the development of a person's attitude towards the new values introduced. The results of this study show that the highest number of maternal mothers in Samboja are in senior high school. This is because the majority of respondents are rural people who tend to have a better working mind and make more money than those who pursue a senior high school career and tend to spend a lot of money on the cost of education. So many people, after graduating from senior high school, choose to work and then get married. This contradicts the results of a study conducted by Siti Nurjanah (2017), which indicated that of 40 respondents, the analysis test using Pearson chi-square obtained a p value $\geq 0,005$ ($p = 0,369$). So it can be concluded that there is no significant relationship between the level of education and a mother's behavior in the prevention of perineal wound infection.

Assuming that the level of education does not significantly influence the healing of perineal wounds, it is because the behavior of the mother in performing perineum wound care is not based on the educational level alone; the mother can obtain information from anywhere, including when doing ANC routinely and from social media.

d. Perineal Injury before Channa Striata and Ananas Comosus

Before administering Channa Striata and Ananas Comosus, the perineal wound on the

postpartum mother was measured or pre-tested. An assessment or measurement of the extent of the injury to choose the appropriate intervention in restoring the integrity of the skin and provide information about how long it takes in the wound healing process. Of the 17 respondents there, all had a grade 2 perineal rupture and no signs of infection on the wound.

The researchers assume that the majority of respondents suffered from perineal rupture of the second degree due to factors such as age and parity that caused the occurrence of perineum injuries.

e. Perineal Injury after Channa Striata and Ananas Comosus

Of the 17 respondents given Channa Striata and Ananas Comosus subscribers, 5 respondents showed a slower rate of wound healing based on the REEDA scale, i.e., the wound condition is still not fully unified at scores of 1 to 3 people and 2 to 2 people. Consumption of Channa striata and Ananas Comosus can accelerate wound healing because cranberries are known to have more nutritional and protein content than other fish and a high albumin content. Albumin is a protein in the plasma that functions in the formation of new cell tissue. Therefore, albumin is used to accelerate the recovery of tissue injuries from labor. The pineapple contains bromelain, which acts as an anti-inflammatory agent that can prevent infection in the wound.

The researchers assume that most respondents who suffered from perineal injuries after administering Channa Striata and Ananas Comosus had improved wound healing. This is due to the content of albumin and bromelain contained in the floss.

f. Effects of Channa Striata and Ananas Comosus on Perineal Wound Healing

In this study, the statistical results obtained using the Wilcoxon test showed a significance value of 0.025 less than 5% ($0.025 < 0.05$), so it can be concluded that the accepted hypothesis means there is an adjunct effect of Channa Striata and Ananas Comosus on the healing of perineal wounds in Aji Batara Agung Dewa Sakti Hospital Samboja by 2023.

This is in line with a study conducted by Rahayu (2016), which has achieved significant results in which the administration of Striatin-containing Chana Striata Extract can accelerate wound healing in conditions such as postoperative and postpartum and increase albumin levels.

In a study conducted by Golezar (2016), the results showed a relationship between the administration of Ananas Comous and bromelain content and the post-episiotomy wound condition. Bromelain use in the post-operative phase accelerates wound healing and reduces pain.

Research carried out by Bakar and friends in 2015 showed daily intake of Channa Striatus extract has a beneficial effect on uterine involvement in post-LSCS women and its use to enhance the healing of LSCS post-womens wounds.

Channa Striata and Ananas Comosus are used to heal perineal wounds. Of the 17 respondents who performed the intervention, 12 experienced effective healing. It's seen from the wound healing process that it is not accompanied by infection, which was assessed using the REEDA score.

This is in line with the theory put forward by Rahayu et al. (2016), where the amino acids in Channa Striata are to play an important role in the wound healing process. Glycine, glutamine, and arginine are examples of amino acids in *C. striata* that are important for wound healing. Glycine is one of the primary aminoacids needed for the synthesis of collagen, which is the main protein in connective tissue. Glutamine plays a part in the stages of inflammation and proliferation of wound healing and also serves as a source of energy. In the meantime, arginin is known to stimulate wound recovery by modulating immune functions and affecting endothelial functions.

Giving Ananas Comosus as an abnormal mixture of Channa Striata also contributes to wound healing. This is in line with the theory put forward by Golezar (2016), where the administration of bromelain, a compound derived from the stems and fruits of the Ananas Comosus, has therapeutic benefits such as anti-inflammatory, anti-edematous, pain relief, wound healing, and anticoagulant.

The researchers assume there is an influence of the administration of Channa Striata and Ananas Comosus on the healing of perineal wounds in Aji Batara Agung Dewa Sakti Hospital Samboja. This is due to the fact that the respondents who obtained Channa Strata and Ananas Comosus have good perineum wound healing and no infection because in the contents of shrimp there is albumin to accelerate healing wounds and in the content of pineapple there is bromelain as anti-inflammatory or inflammatory.

CONCLUSION

1. Mothers giving birth at Aji Batara Agung Dewa Sakti Hospital Samboja who experienced perineal rupture based on maternal age had the highest percentage of respondents aged less than 25 years, namely 9 people (52.9%). Mothers giving birth at Aji Batara Agung Dewa Sakti Hospital Samboja who experienced perineal rupture based on maternal parity had the highest percentage of respondents, less than 3, namely 12 people (70.6%). Mothers giving birth at Aji Batara Agung Dewa Sakti Hospital Samboja who experienced perineal rupture, based on the mother's education level, had the highest percentage of respondents in senior high school, namely 13 people (76.5%).
2. The condition of the perineal wound before being given Channa Striata and Ananas Comosus floss was rupture at grade 2.
3. The condition of perineal wounds after being given Channa Striata and Ananas Comosus floss, namely 12 people, experienced effective healing.
4. There is an effect of Channa Striata and Ananas Comosus floss on the healing of perineal wounds in patients at Aji Batara Agung Dewa Sakti Hospital Samboja in 2023.

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