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Inflammatory Phase Perineal Wound Healing in Postpartum Mothers: Effects of Boiled Eggs and Snakehead Fish Administration

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Abstract

The infection can cause the death of 1 in 10 mothers undergoing the postpartum period. This is partly due to the wound that occurs in the perineum, where the wound does not dry easily, so it is at risk of increasing the incidence of infection. The aim of the study was to analyze the differences in the effectiveness of giving boiled eggs and snakehead fish to the healing of perineal wounds in the inflammatory phase in postpartum mothers. This type of quantitative research with a quasi-experimental non-equivalent group design. Sampling used a purposive sampling technique with the criteria of postpartum mothers on the first day who experienced second-degree perineal injuries, aged 20-35 years, had good personal hygiene and did not experience complications. The number of samples was 30 people, divided into two groups, which are group 1 with the administering of 2 boiled eggs (100g) and group 2 with the administering snakehead fish (50g), the administration time was 5 days. Analysis test using Wilcoxon and Mann Whitney. The results of the Wilcoxon test ρ value 0.000, so that there is an effect of giving boiled eggs and snakehead fish on the process of healing perineal wounds in the inflammatory phase with an average duration of 4 days and the Mann Whitney test with ρ value 0.417 where there is no difference in effectiveness between the two. Boiled eggs and snakehead fish are both effective for consumption to help the healing process of the inflammatory phase of the perineal wound.

Keywords: *Boiled Eggs; Inflammatory Phase; Perineal Wounds; Postpartum Mother; Snakehead Fish*

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Introduction

Many problems can occur during the postpartum period so it has an impact on increasing maternal morbidity and mortality (MMR) in developing countries which is an important indicator to describe the health and nutritional status of mothers, environmental health, and the level of health services (Sambas, 2012). The World Health Organization (WHO) in 2019 described that MMR caused by complications of pregnancy and childbirth is still very high, namely 810 women die every day worldwide. According to the World Bank (2017), Indonesia is a developing country with a very high incidence of MMR, namely 177 in 100,000 live births.

The South Kalimantan Provincial Health Office (2021) describes that over the past 4 years the MMR has tended to fluctuate, as evidenced by data in 2017 the MMR reached 104 per 100,000 live births, this figure increased in 2018 to 122 per 100,000 live births and decreased in 2019 namely 92 per 100,000 live births, then in 2020 it tends to increase again, namely 135 per 100,000 live births but is still below the national rate (negative indicator).

Data also show that 50% of maternal mortality occurs within 24 hours after giving birth, so nursing services must be carried out in a quality manner at this time to meet all the care needs of mothers and babies and to reduce various problems during the postpartum period including bleeding and infection (Sulistyawati, 2015). The postpartum period will begin after the 3rd stage ends and the involution of the reproductive organs occurs within 6 weeks or 42 days. The longest postpartum period in women is generally 40 days, starting from childbirth or before giving birth (accompanied by signs of birth) (Wahyuningsih, 2018).

The incidence of infection during the postpartum period in Indonesia is still the etiology of maternal death (Dewi, 2019). Indonesian Ministry of Health (2021) described 216 cases of infection that caused death in mothers. One of the predisposing factors for postpartum infection is perineal wound. Perineal wounds are lacerations of the birth canal that occur due to spontaneous rupture or episiotomy during childbirth, where this area is difficult to dry and if it does not heal quickly and is not kept clean it can become a problem for postpartum mothers and can turn pathological (Dewi, 2019; Walyani & Purwoastuti, 2015).

The global prevalence of cases above 2015 is 2.7 million cases, whereby 2050 it is estimated that this number will increase to 6.3 million, of which 50% will occur in Asia (Syamsiah & Malinda, 2018). According to the Ministry of Health in Safitri (2021), the incidence of perineal rupture in Indonesia in 2017 was experienced by 75% of women giving birth vaginally, it was found that out of a total of 1951 mothers who gave birth spontaneously vaginally, 57% of mothers got perineal stitches, namely 28% due to episiotomy and 29% due to spontaneous tears where 5% of them are infected.

Wounds in the suture area can cause discomfort and pain when lying down and getting up because there will be direct pressure on that part. The factor that causes perineal infection is long-wound healing (Supiati & Siti, 2015). Physiologically, the perineal wound will start to improve within 6-7 days postpartum (Aisya & Dali, 2018). The wound is said to be healed if within 6-7 days the condition of the wound is dry, the tissue is fused and does not show signs of inflammation (Hamilton, 2016).

Many factors influence the improvement of the condition of the perineal wound, including early mobilization, vulva hygiene, wound size, age, education, knowledge, economy, stressors, and also nutrition. The types of nutrients that are really needed for the healing process include protein, iron, zinc, and vitamins A and vitamin C because they are important elements in structural processes such as collagen synthesis and strengthening revitalization (Intiyaswati, 2020; Walyani & Purwoastuti, 2015).

Protein is a nutrient that is very important for the body because apart from being a source of energy, protein functions as a building substance that functions to form new tissues as well as maintains existing tissues. High protein consumption is an act of accelerating perineal wound healing to avoid infection (Warsito et al., 2015).

One type of food that contains a lot of protein is eggs. Supiati (2015) describes eggs containing a lot of protein, which this food is also easy to get, familiar for consumption by the community for a long time and has high economic value. Eggs commonly consumed by Indonesian people are broiler chicken egg (domestic chicken eggs) and duck eggs. Chicken eggs are consumed more by people, especially people in Banjarmasin because they are cheaper than duck eggs and easy to obtain. Sunarsih, Rosmiyati, Mariza, A., & Kristina, N. (2022) describes that whole eggs have more than

90% calcium and iron. One egg contains 6 grams of quality protein and 9 essential amino acids which are good for facilitating healing and inhibiting or even avoiding malnutrition.

According to Azizah (2018), one of the causes of postpartum mothers experiencing a slowdown in wound healing is the lack of habit of consuming egg whites. In her research, it was found that the consumption of egg whites affected the wound-healing process where the healing time was relatively fast. In line with Azizah, Aisya & Dali (2018) also described that postpartum mothers who ate egg white experienced faster perineal wound healing.

In addition, Dewi (2019) stated that giving boiled chicken eggs to post partum mothers showed a significant effect on accelerating the healing time of perineal wounds. This can be one of the health promotion efforts to accelerate wound healing and prevent infection. Another study conducted by Santy (2020) also described that post partum mothers who consumed boiled egg whites experienced an accelerated wound healing time when compared to post partum mothers who did not consume boiled eggs.

Apart from eggs, snakehead fish is also rich in protein. The protein content contained in snakehead fish meat is 70% and 21% albumin, besides that, it also contains complete amino acids such as the micronutrients zinc, selenium, iron, allicin, allyl sulfide and furostanol glycosides where micronutrients function to increase endurance (David, 2019).

Nugraheni & Kurniarum (2016) described that the familiar snakehead fish is consumed and is proven to increase the duration of wound healing time, especially post-operative wounds, burns, or wounds after childbirth. This is due to the nutritional components of snakehead fish, namely protein and albumin which are quite high. Fajri (2018) added that snakehead fish can increase serum albumin which is needed for the formation of new cells in the body undergoing post surgery.

Purwanti (2019) revealed that consumption of snakehead fish extract can help speed up tissue repair time. This is due to the albumin and mineral content which is quite high in these fish. The description above is in line with Purba (2020) where the consumption of snakehead fish extract is very effective in accelerating wound repair. Post partum mothers who underwent cesarean section during labor after being given snakehead fish extract showed an accelerated healing time for postoperative stitches when

compared to the group who did not receive snakehead fish. Aldesta (2020), also stated that the results of the treatment given to postpartum women with perineal rupture showed that consuming snakehead fish regularly with the right amount could help accelerate the formation of new tissue in the perineal organs.

Purnani (2019), stated the results of his research that there was a difference in the length of the healing process of perineal rupture in patients who were given intervention in the form of egg whites and snakehead fish extract, where post partum mothers who consumed egg whites experienced faster wound healing when compared to mothers who consumed snakehead fish extract. Some of the research results above illustrate that consumption of egg white and snakehead fish extract can help speed up the healing time of perineal lacerations, but further studies are needed regarding the intervention of giving egg whites and snakehead fish extract to wound healing, where previous research only provided part only whites from boiled eggs and snakehead fish extract in processed forms packaged in capsules that are sold freely, and do not specify the stages of wound healing being assessed.

In this study the interventions were in the form of egg whites and their yolks and processed fresh snakehead fish and then evaluated the effect of these two interventions on the wound healing process, which was specified at the inflammatory stage. Sunarsih, Rosmiyati, Mariza, A., & Kristina, N. (2022) explained that egg whites contain 88% water, then the rest consists of carbohydrates, protein and fat while egg yolks contain nutrients including carbohydrates, fats, water and protein which are more diverse such as lipovitellins as much as 36%, livetenis 38%, phosvitin 8% and low density lipoprotein 17% which are very useful for accelerating the process of cell and tissue growth. Egg whites and yolks as well as snakehead fish are types of food that can be consumed in accordance with the recommended Nutrition Adequacy Rate (RDA) for people who have perineum injuries or tears.

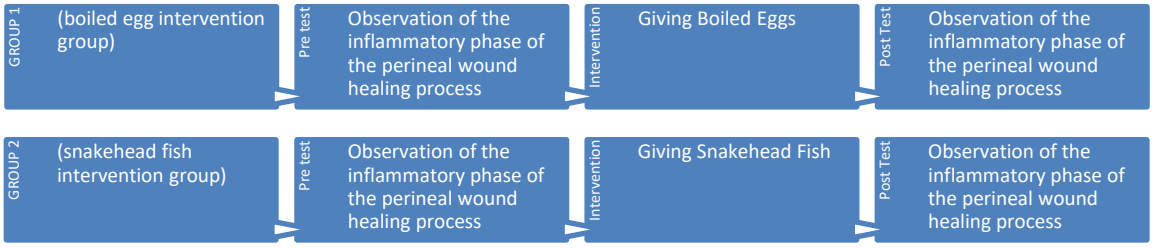
Based on data obtained from the Banjarmasin Islamic Hospital from March to June 2022, it was found that 163 postpartum mothers had normal deliveries. A preliminary study conducted in March at the Banjarmasin Islamic Hospital on 10 postpartum mothers who experienced perineal injuries using the interview method showed that 80% of postpartum mothers did not know how to make their perineal wounds

heal quickly as before and did not know eggs or fish can affect wound healing after delivery.

This study aims to analyze the differences in the effectiveness of giving boiled eggs and snakehead fish on the healing of perineal wounds in the inflammatory phase in postpartum mothers.

Method

The design used was pre-experimental with a quasi-experimental non-equivalent group, namely observing before and after being given the intervention.



Scheme 1. Concept Framework

The research was conducted in the VK Maternity Room at X Hospital Banjarmasin for the period March-June 2022. The sample in this study was 30 postpartum mothers who experienced second-degree perineal injuries. The number of samples was divided into 2 groups, which are 15 postpartum mothers in intervention group 1 by giving boiled eggs and 15 other people included in intervention group 2 by giving snakehead fish. These 2 groups are comparable because the characteristics of all the samples taken have been equated. The sampling technique used purposive sampling with inclusion criteria, namely first day postpartum mothers with second-degree perineal injuries who were willing to become participants, did not suffer from diseases (coagulation, immune system disorders, chronic diseases such as diabetes mellitus, tuberculosis and malignancy), normal cholesterol levels, good personal hygiene, aged between 20-35 years, able to communicate cooperatively, able to eat orally, has no history of egg and snakehead fish allergies, has no complications during the postpartum period and does not abstain from food during the puerperium. While the exclusion criteria from the sample

were postpartum mothers who left/moved house, could not be reached and were asked to leave the research process

The instrument used was an observation sheet to assess signs of tissue repair in the inflammatory phase of the perineum. The observation sheet was made by researchers based on the signs of the inflammatory phase of the wound healing process, namely local erythema and heat (the wound area becomes red and feels warm), discomfort (pain), throbbing, edema, and swelling (Dartiwen et al., 2020; Wijaya, 2018). In addition, Standard Operating Procedures (SOP) were also prepared regarding the processing and administration of boiled eggs and snakehead fish and used a 24-hour food recall sheet to determine the food consumed by postpartum mothers during the study.

The data normality test was carried out to find out whether the data is normally distributed or not. In this study, the sample used was less than 50 people, so the normality test used was the Shapiro-Wilk, and the results obtained were a ρ value of 0.000. It can be concluded that the data is not normally distributed. After the normality test was carried out, an analytical test was carried out using Wilcoxon to determine the effect of each intervention with the stipulation that if $\alpha < 0.05$ then giving boiled eggs and snakehead fish had an effect on perineal wound healing in the inflammatory phase with a CI of 95% and Mann Whitney to analyze differences in the effectiveness with provisions if $\alpha < 0.05$ then there is the difference in the effectiveness of the 2 treatments given with a 95% CI. Both analysis tests were carried out using the IBM SPSS version 25.0 application.

Ethical approval was given by the Research Ethics Committee of FKIK Muhammadiyah University Banjarmasin before the research was started. Ethical approval of this research with No.018/UMB/KE/II/2022. In addition, informed consent was also obtained from all participants before starting data collection. Researchers maintain privacy, protect anonymity, maintain confidentiality and assure participants that all data collected will be kept confidential and their anonymity will be guaranteed.

Giving treatment to intervention group 1 with boiled eggs, before being given therapy a pre-test was carried out using the observation sheet that had been prepared, after that the treatment was given the consumption of boiled eggs as much as 2 eggs (100g)/day given from the first day to the 5th-day postpartum, then on day 6, a post-test was carried out to reassess signs of wound healing. Furthermore, in group 2, a pre-test was also carried

out first, followed by the act of giving 50g of snakehead fish which was processed by boiling for 5 days and then a post-test was carried out on the 6th day. The duration of time for each group at each meeting is 15-20 minutes.

Result and Discussion

Table 1. Characteristics of Postpartum Mothers by Age, Parity, Education Level and Occupation (N=30)

Characteristics	Frequency (F)	Percentage (%)
Age		
20-25 years	9	30.0
26-30 years	14	46.7
31-35 years	7	23.3
Mother Parity		
Primipara	17	56.7
Multipara	13	43.3
Mother's Education		
Elementary School	2	6.7
Junior/Senior School	16	53.3
College	12	40.0
Mother's Occupation		
Housewife	23	76.7
Private sector worker	6	20.0
Civil servant	1	3.3

Table 1. shows that out of 30 postpartum mothers 14 people (46.7%) aged 26-30, 17 people (56.7%) were at primipara parity, 16 people (53.3%) had Junior/Senior School level and 23 people (76.7%) were housewife.

Table 2. The healing process of the perineal wound in the inflammatory phase before and after administering boiled egg and snakehead fish to postpartum mothers (N=30)

Category	Signs of Inflammatory Phase Perineal Wound Healing Process								Sig.
	There were some signs of healing		Wound healing process does not match with the duration of time		Signs of wound healing match with the duration of time		Total		
	F	%	F	%	F	%	F	%	
Boiled Egg Group Pre-Test	15	100	0	0	0	0	15	100	0.000
Post-Test Boiled Egg Group	0	0	3	20	12	80	15	100	
Pre-Test Snakehead Fish Group	15	100	0	0	0	0	15	100	0.000
Post-Test Snakehead Fish Group	0	0	5	33.3	10	66.7	15	100	

Perineal Wound Healing Before and After Boiled Egg Intervention

The results of the study describe that the consumption of boiled eggs is very helpful in repairing and healing perineal tissue that is injured in the first stage or inflammation due to the birth process.

A perineal wound is a tear in the perineum which is between the vaginal and anal openings, where the tear can occur spontaneously (rupture) or intentionally through an episiotomy. Perineal wounds can be described as a part of the body tissue that is missing or damaged. Damage to body tissues will be followed by a healing process where the process is divided into 3 stages, namely the inflammatory, proliferation, and maturation phases (Fatimah & Lestari, 2019; Tungadi, 2019).

The inflammatory phase lasts from the start of the injury to about five days. This phase takes place in two stages, namely hemostasis and phagocytosis. Rupture of blood

vessels will cause bleeding so that the body will perform vasoconstriction or narrowing of blood vessels that are severed to stop bleeding and hemostatic reactions. Hemostasis occurs when platelets stick together and leave the blood vessels together to form a fibrin matrix to prevent the entry of infectious organisms (Fatimah & Lestari, 2019; Tungadi, 2019).

On the other hand, when an inflammatory response occurs, connective tissue mast cells produce serotonin and histamine which increase capillary permeability causing fluid exudation, and pollination of inflammatory cells by local vasodilatation resulting in edema and swelling. Clinical signs of an inflammatory response can be seen from a reddish color due to dilated blood capillaries, high or warm temperature, pain, and swelling (Tungadi, 2019).

The next phase is the proliferative phase where at this stage cell growth occurs rapidly. The formation of new blood vessels because the ground substance and collagen help to close the wound. Epithelial cells develop into capillaries and provide nutrition for new tissue and help distribute collagen so that the wound closes in 6-7 days. New blood vessels will form around the wound where ground substance and collagen are formed to seal the wound. Epithelial cells develop into capillaries and help provide a source of nutrition for the regenerating tissue. The evaluation criteria were dry wounds, fused perineum, and no signs of inflammation. Then there will be a maturation phase that lasts a month to several years (Purwaningsih & Andriani, 2022).

One of the stages of tissue wound healing is influenced by nutrition. Postpartum mothers who are undergoing a recovery period after giving birth will experience an increase in nutritional needs, which will also affect the healing of the wounds they experience.

Mothers in the postpartum period experience an increase in nutritional needs, so this must be accompanied by a balanced diet, namely by fulfilling sufficient nutritional content such as carbohydrates, protein, fat, vitamins, and minerals. Protein is one of the keys to wound repair. Increasing protein in the mother by giving boiled eggs will further help the mother in the process of healing her wounds. This is because protein is useful for helping the process of tissue turnover as well as a building substance for cells that have been damaged.

Foods with high protein content are eggs. Eggs are side dishes high in animal protein that are cheap, easy to get, economical, and nutritional. Boiled eggs have a high protein content where is in 100g chicken eggs contain an energy of 162kcal with 12.8g protein, 11.5g fat, 54g calcium, 180g phosphorus and vitamin A which is 900SI. This shows that boiled eggs have a variety of mineral and vitamin contents and are a good food ingredient to help wound healing.

In line with Santika's research (2020) which describes that giving boiled eggs affects the average length of time for wound healing. The results of this study were also supported by Harahap (2021) who described that 22 respondents and 11 people who were given boiled eggs experienced a fast wound healing process, which was around less than 1 week.

Reinforced by Sunarsih (2022) who described that there was an effect of boiled egg treatment on the average recovery time for perineal wounds where an important aspect in this stage was food intake, especially protein.

Various ingredients in boiled eggs help the wound healing process, especially because of their high protein content. Thus, giving boiled eggs to postpartum mothers with perineal wounds causes an increase in the perineal wound healing process for the better.

Perineal Tissue Wound Healing Process Before and After Snakehead Fish Intervention

This study proves that snakehead fish eaten regularly for five days can help repair body tissues that experience injury during parturition, such as the perineum. Nutrition is needed in the wound healing process, which is obtained from foods rich in protein/albumin such as snakehead fish.

Snakehead fish is a freshwater fish that is known to have a source of nutrition with high protein and albumin when compared to other types of fish. Snakehead fish is known to have a higher protein content than other food ingredients such as eggs, chicken, and beef. This causes snakehead fish to be widely used by the community for wound-healing processes (Asnie et al., 2021).

Snakehead fish contains complete albumin and protein when compared to other types of fish. Albumin is a protein in plasma that functions in the formation of new cell tissue. Albumin is a type of protein in human plasma which dissolves in water and precipitates in heating and is the protein with the highest concentration in blood plasma. The amount of albumin is half of the total body protein, which is 7.2-9g/dl. One of the functions of albumin is as a negative acute phase inflammatory protein so that albumin has an impact on the repair stage of damaged tissue (Asnie et al., 2021; Wahyuni et al., 2013).

Blood plasma contains proteins in the form of albumin, globulin, and fibrinogen. When an inflammatory process occurs, the amount of albumin in the blood plasma will decrease. Albumin is useful for the process of cell regeneration and repair as well as an agent that forms bonds between cells. Albumin also helps in giving signals to the body's immunity if there is damage to cells. Therefore, albumin has the function to relieve inflammatory symptoms. Decreased albumin levels as a result of the inflammatory process must be restored immediately, one of which is by consuming albumin-containing foods such as snakehead fish.

In addition, the amino acids contained in snakehead fish also function to trigger collagen production which can increase skin strength and elasticity. As well as the presence of other ingredients that function to accelerate wound healing (Asnie et al., 2021).

The above is supported by Karina's research (2016) which explained that the respondents who were divided into two groups with the snakehead fish extract intervention for 10 days obtained an average duration of healing for the intervention group was 7 days while in the control group it was 10 days. This was reinforced by Sari (2020) who argued that the consumption of snakehead fish extract was effective in shortening the wound recovery period in postpartum mothers.

This study is also in line with Fauziah (2020) who described that the intervention group by giving steamed snakehead fish experienced wound healing for 7 days, faster than the control group, namely 7-10 days.

In line with the things above, Wulan (2021) compared the intervention group that received 100 g of steamed snakehead fish every day for 8 days with a control group that

did not receive any intervention, obtaining results where snakehead fish had an effect on repairing perineal tissue, where the fulfillment of needs Protein is useful for the formation of new tissue around the wound.

From some of the theories above it can be stated that the use of snakehead fish in helping wound healing shows real results. At the time the research was conducted, giving snakehead fish could help the wound healing process so that it was in accordance with the duration of time in the stages of wound healing.

Table 3. Analysis of the Effectiveness of Boiled Egg and Snakehead Fish Intervention on Perineal Wound Healing (N=30)

	N	Mean Ranking	Sig.	Z
Boiled eggs	15	16.50	.417	-.812
Snakehead Fish	15	14.50		

The results of the study explained that postpartum mothers who consumed boiled eggs and snakehead fish showed signs of improvement in injured tissue at the inflammatory stage, so the two interventions above wwere equally effective, although there were slight differences in signs of healing that appeared but were not significant.

The content of nutritional value contained in boiled eggs and snakehead fish, very high protein, really helps the process of tissue replacement and repair of body cells that are damaged, such as tears that occur in the birth canal. In addition, this type of food is easy to obtain, commonly consumed by the community, has low economic value and is easy to process into daily food.

The above description is reinforced by Purnani's study (2019), which was conducted on postpartum mothers by administering egg whites and snakehead fish, where consumption of egg whites showed more effective results in terms of accelerating the healing time of injured tissue when compared to snakehead fish.

Contrary to Purnani (2019), Zuiatna (2021) in her research found that the average value of tissue discontinuity repair after sectio caesarea surgery in the group with snakehead fish intervention was higher than in the group with eggs, so it can be concluded that there was a significant difference between giving snakehead fish and boiled eggs for the recovery of areas that were cut off due to surgery.

Based on the studies above, it can be said that boiled eggs and snakehead fish, when eaten regularly, have a positive impact on the recovery process of injured cells and tissues. If you look at the number of doses of 100g of boiled eggs and 100g of snakehead fish, the amount of protein is very different. Boiled eggs contain a protein content of 12.8, less when compared to snakehead fish protein, which is 25.5 g.

The large difference in the amount of protein content causes differences in results in several studies. Several studies included providing interventions without paying attention to differences in the number of protein levels, while in this study the intervention was carried out by adjusting the protein content contained in the two types of food, where the action given to the boiled egg group was 2 eggs which could be equivalent to 12. 8g of protein and in the snakehead fish group that is as much as 50g or the equivalent of 12.75g of protein. This is done to reduce bias in research.

The amount of protein administration that has been equalized between the two sample groups, of course, cannot guarantee that all levels of other nutrients are the same, for example, the amount of albumin which also has an important function in the repair and formation of new body cells. Boiled eggs have more albumin than the albumin contained in snakehead fish. Chicken egg white every 100g contains an average of 10.5g of protein of which 95% is albumin, namely 9.83g, while albumin in snakehead fish only reaches 6.224g/100g.

Apart from that, eggs have a more diverse and higher nutritional content than snakehead fish, such as the number of calories (162kcal/100g boiled egg and 74kcal/100g snakehead fish), vitamin A (900SI/100g boiled egg and 150SI/100g snakehead fish). From the two types of food above it is clear that there are many differences in the amount of nutrient content even though the protein content has been equated. This of course can be one of the factors that cause a difference in the impact on the healing process.

The first stage of the wound healing process is inflammation. This phase will start from the wound, which is characterized by local erythema and heat, discomfort or feeling of pain, throbbing, edema, and swelling. One of the signs above, namely pain is a subjective and personal experience that is influenced by various factors such as physical, physiological, biochemical, and ethnic factors. Because pain is a subjective feeling, everyone will respond to pain by showing a different response. This causes pain tolerance

between individuals to be different too. This can affect the measurement of signs of the inflammatory phase of the healing process and will be at risk of getting biased results.

Stages of healing and repair of injuries that occur in tissues can also be influenced by the quality and quantity of other foods consumed daily by postpartum mothers. Based on one of the instruments used in this study, namely food recall, it was found that most of the postpartum mothers who were sampled had varied eating patterns. In addition to being given interventions according to procedures, postpartum mothers also consume other nutritious foods, where the type of food consumed, namely snakehead fish or boiled eggs, is also consumed even though it is not included in the intervention group. Mother also consumes meat, chicken, tempeh, and tofu which are known to have a lot of protein which is quite high. This increasingly affects protein levels in the body so that it helps more and more in the process of recovering cells and tissues that have suffered injuries obtained during the delivery process.

Conclusion

Based on the data obtained from the research results, it can be concluded that there is no difference in effectiveness between giving boiled eggs and snakehead fish for the healing process of the perineal wound in the inflammatory phase, so as suggestion, for mothers who are in the postpartum period who experience perineal tears during childbirth, it is highly recommended to consume boiled eggs or snakehead fish because these 2 types of food are very rich in protein and albumin content and have proven effective in helping the perineal wound healing process. However, there is limitation of the study need to be recognised, including observation of the process and signs of wound healing was only carried out on the first and sixth days, postpartum mothers also consumed other types of high-protein foods, one of the signs observed in this study was pain where the pain is very subjective so bias in the results can occur.

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Conflict of Interests

There is no conflict of interest in this research.

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