

THE EFFECT OF EATING CORK FISH BISCUITS ON WOUND HEALING TIME *PERINEUM* FOR PUBTER MOTHERS

Sri Heryani^{1*}, *Arifah Septiane Mukti*², *Hani Septiani*³

^{1,2,3} *Department of Midwifery, Faculty of Health Sciences, Universitas Galuh, Indonesia*
STIKES Muhammadiyah Ciamis

*R.E Martadinata Street No.150, Ciamis Regency, West Java, Indonesia*¹

Email Corresponding: ^{1} sri_heryani@unigal.ac.id*

ABSTRACT

Labor often results in a tear in the birth canal. Nearly 90% of births have perineal tears, both with and without episiotomies. There are healing wounds perineal tears that heal quickly, there are those who experience delays. To speed up the healing of perineal wounds, one of them is by consuming foods high in protein. Protein can be obtained from cork fish. Besides being eaten directly, cork fish can also be used as an alternative as a source of protein for biscuit products. The purpose of this study was to determine the effect of consumption of cork fish biscuits on the healing of perineal wounds in postpartum mothers in the Cieurih Community Health Center Working Area in Cipaku District, Ciamis Regency. The experimental method in this study used a type of research design with the posttest-only control group design method with a total sample of 72 postpartum mothers with perineal wounds. Sampling of postpartum mothers with perineal wounds consuming cork fish biscuits was done by consecutive sampling, which was 36 cases and 36 controls. Data analysis was performed by Mann-Whitney statistical test. The results of the study of perineal wound healing in postpartum mothers the average length of healing of the control group was 8.64 days and the average duration of healing, the intervention group was 5.17 days. Thus, cork fish biscuits can accelerate the healing of perineal wounds in postpartum mothers with a difference of 3.47 days. The results of the analysis using Mann-Whitney obtained a p-value of $0,000 \leq 0,05$ can be concluded that there is an influence of consumption of cork fish biscuits to accelerate healing of perineal wounds.

Keywords: Perineum Wound Growth, Cork Fish Biscuits

INTRODUCTION

The birth process often results in injury to the birth canal. The incidence of perineum tears does not only occur in women undergoing their first delivery but does not rule out the possibility of it occurring in subsequent deliveries. The incidence of perineum tears is almost 90%, whether an episiotomy or normal tear is performed.¹

Data from WHO (2014) states that the incidence of perineum tears in mothers giving birth in the world in 2013 was 2.7 million cases, and it is estimated that in 2050 the incidence of perineum tears will reach up to 6.3 million. Perineum tears are also a problem that is quite common in the Asian region, namely around 50% of women giving birth experience perineum tears. Countries *ASEAN* the incidence of births with perineum tears such as Thailand in 2013 was 356/1000, Malaysia 428/1000, and Singapore 592/1000. Perineum tears in Indonesia are 67.2%, an increase from the previous year, namely 60% in 2013. In Indonesia, based on age characteristics, the prevalence of mothers experiencing perineum tears in the 25-30 year age group is 24%, and in mothers aged 32 –39 years by 62%.²

The incidence of perineum tears in all spontaneous births in West Java in 2015 by 68%. Every year the number of incidents continues to increase every year In 2016, the incidence of perineum infections in West Java increased to 71% of all deliveries spontaneous.³

Based data from the Ciamis District Health Service in the Ciamis District Health Profile in 2016, there were 18,203 postpartum mothers who received health services out of a total of 19,456 birth mothers (93.6%). From the Health Service, the number of perineum tears was 5,461 people. Cieurih Community Health Center, Cipaku District, in 2016, 567 postpartum mothers received health services out of a total of 625 birth mothers (84.4%).⁴

Based on abovedata obtained from the Cieurih Community Health Center, Cipaku District, Ciamis Regency, almost every month in the Cieurih Community Health Center Working Area, 125 out of 200 mothers in labor experienced perineum tears.

Wound healing for each individual is different depending on the individual himself. Because many factors influence wound healing. The impact of delays in healing perineum wounds is the occurrence of infections, complications of bladder infections and infections of the birth canal. Postpartum infections that can occur as a result of complications from perineum wounds include metritis, endometritis, even pelvic abscess and postpartum maternal death. Delays in handling cases of complications will result in death due to the mother's weak physical condition.⁵

There are many ways to speed up the healing of perineum wounds, one of which is through improving nutrition by consuming foods high in calories and high in protein. Common sources of protein are meat, milk, bread, cereals, eggs, fish, nuts, and seeds.⁶The main factor that influences wound healing is protein intake because it is needed during the tissue replacement process. Animal protein can be obtained from cork fish. Cork fish is often recommended to mothers who have undergone labor.⁷

The use of cork fish is still limited, so efforts are needed to diversify processed fishery products. Cork fish biscuits can be categorized as functional biscuits because the contents of the biscuits are rich in protein and other nutrients. Cork fish biscuits can be a potential food source of protein for postpartum mothers who experience perineum wounds to speed up wound healing.

Research on perineum wound healing conducted by Purwaningsih, E., Lasiyem, & Mawarti, D showed that 27 (79.4%) postpartum mothers with perineum suture wounds consumed animal protein foods, 26 (76.5%) postpartum mothers with suture wounds perineum wound healing is good.⁹Research on healing incisional wounds with cork fish in ointment with cork fish extract concentrations of 6%, 8% and 10%. This research shows that the 10% concentration provides better results than the three selected concentrations.¹⁰

Other research results show that the ointment phase of cork fish extract oil (*Channa striata*) has the effectiveness of healing open acute stage II wounds in male Wistar rats compared to negative controls. The cork fish extract oil phase ointment that provides the best wound healing effectiveness is an ointment with a concentration of 20% (AUC value of 865.683% day and healing power of 97.157%).¹¹

Furthermore, research conducted by Setyowati showed that postpartum mothers with perineum wounds before consuming cork fish were all (100%) bad (wet wounds, perineum closing, pain) namely 16 people, after consuming cork fish the majority were (56.3%) moderate (wet wound, perineum closed, no signs of infection) namely 9 people, almost half (31.2%) bad (wet wound, perineum closed, no signs of infection) namely 5 people and 2 people (12.5%) good (dry wound, perineum closed, no signs of infection).¹²

Other research shows the average length of the surgical wound healing process *caesarean section* in postpartum mothers who consumed cork fish extract, it was 8 days. Average length of healing process for surgical wounds *caesarean section* in postpartum mothers who consumed binahong leaf extract, namely 12 days. The average length of the surgical wound healing process *caesarean section* in postpartum mothers in the control group, namely 16 days. There is a difference in the effectiveness of cork fish extract and binahong leaves on the healing time of surgical wounds *caesarean section* in postpartum mothers.¹³

The results of a preliminary study conducted by researchers in the Cieurih Community Health Center Working Area, Cipaku District, Ciamis Regency on 20 postpartum mothers who experienced perineum wounds. 16 mothers had dietary restrictions, namely abstaining from eating fish and mothers did not understand the nutrition needed without certain dietary restrictions which could speed up the process. perineum wound healing process.

This research was conducted with the aim of analyzing the effect of eating cork fish biscuits on accelerating perineum wound healing in postpartum women in the Cieurih Community Health Center Working Area, Cipaku District, Ciamis Regency in 2018.

METHODOLOGY

This research uses quantitative research with experimental studies. The experimental method in this research uses a type of research design with methods *posttest–only control group design* with the number for this study being 36 cases and 36 controls. How to take samples *random sampling*. The independent variable, namely consumption of cork fish biscuits, the dependent variable, namely the length of healing of perineum wounds and confounding variables, namely age, education, occupation, BMI. The instrument used to measure wound healing uses an observation sheet. Wound assessment can be described as fast: good wounds on days 4-8 and slow: good wounds on days 7-10. In the intervention group, mothers had to consume 20 grams of cork fish biscuits every day, while in the control group they were given health education about the importance of protein requirements in the process of healing perineum wounds in postpartum mothers. Data processing through step *sediting*, coding, *tabulating*. Data analysis includes univariate analysis using percentages and tests *Mann–Whitney* to measure the effect of consuming cork fish biscuits on accelerating perineum wound healing in postpartum women.

RESULTS AND DISCUSSION

This research was conducted on 72 respondents, with 36 respondents in each group and during the research no respondents experienced dropouts. Univariate analysis was carried out to determine the frequency distribution of respondent characteristics. The following are the results of univariate analysis based on the characteristics of age, education, employment, BMI and anemia, namely as follows:

Table 1 Frequency Distribution of Subject Characteristics based on Age, Education, Occupation, BMI and Hb of Postpartum Mothers in the Cieurih Community Health Center Work Area, Cipaku District, Ciamis Regency

Characteris	Group		<i>p</i> - Value
	Contro l n=36	Interven tion=36	
Age			
< 20 years	0	0	
20 – 35 years	22	23	0.80*
> 35 years	14	13	
Education			
Based	9	7	
Intermediate	23	23	0.43*

Hight	4	6	
Work			
Working	8	9	0.78*
Not Working	28	27	
IMT			
Which < 18,5	11	9	
Normal 18,5–			0,92*
25	19	24	
<i>Whitney > 25</i>	6	3	

Based on table 1 above, it shows that the age of postpartum mothers with the highest frequency is in the 20-35 year category. The highest frequency of postpartum mothers' education is the middle category. The highest frequency of postpartum mothers' employment is in the non-working category and the highest frequency of postpartum mothers' BMI is the normal category (BMI 18.5–25). Test analysis results *Mann Whitney* obtained p value > 0.05, it is known that there were no significant characteristics of respondents in both the control group and the intervention group or there were no significant differences in the characteristics of postpartum mothers with perineum wounds.

Table 2. Frequency Distribution of Perineum Wound Healing Time in the Cieu Community Health Center Working Arearih Cipaku District, Ciamis Regency

Time	Category	Control		Intervention		P-Value
		n	%	n	%	
Days to 3	Good	0	0	0	0	0.00
	Medium	10	27,8	25	69,4	
	Bad	26	72,2	11	30,6	
Days to 5	Good	0	0	27	75	0.00
	Medium	25	69,4	9	25	
	Bad	11	30,6	0	0	
Days to 7	Good	8	22,2	32	88,9	0.00
	Medium	23	63,9	4	11,1	
	Bad	5	13,9	0	0	
Days to 9	Good	31	86,1	36	100	0.02
	Medium	5	6,9	0	0	
	Bad	0	0	0	0	

In table 2, it can be seen that on day 3 the healing of perineum wounds for the control group was mostly in the poor category (72.2%) while the intervention group was mostly in the moderate category (69.4%). On day 5, perineum wound healing for the control group was mostly in the moderate category (69.4%) while the intervention group was mostly in the good category (75%). On day 7, perineum wound healing for the control group was mostly in the moderate category (63.9%) while the intervention group was mostly in the good category (88.9%). Day 9 Perineum wound healing for the control group was mostly in the good category (86.1%) while the intervention group was mostly in the good category (100%).

Table 3. Table of Effect of Perineum Wound Healing Time for Postpartum Mothers in the Intervention Group and Control

Wound Healing Time (Days)	Group		P-Value
	Control (n=36)	intervention (n=36)	
Wound Post			
Mean (SD)	8,64 (0,99)	5,17 (1.34)	0.00*

* Test *Mann Whitney*

In table 3, the healing time for perineum wounds for the control group can be seen with a mean value of $(8.64) \pm SD (0.99)$, while for the intervention group the mean value is $(5.17) \pm SD (1.34)$. Test results *Mann-Whitney* obtained *p value* of $0.00 < 0.05$, which means that there is a significant difference in the acceleration of healing of perineum wounds between the control group and the intervention group.

Based on the results of a 10-day study on the effect of eating cork fish biscuits on the healing time of perineum wounds in postpartum women in the Cieurih Community Health Center Working Area, Cipaku District, Ciamis Regency, the test results can be concluded that there is an effect of eating cork fish biscuits on the healing time of perineum wounds in postpartum women.

Giving cork fish biscuits to the intervention group was intended to speed up the healing of perineum wounds, because cork fish biscuits main content is quite high in protein. Respondents in the intervention group who received cork fish biscuits were able to realize the importance of eating cork fish biscuits which contain high protein as an alternative treatment that accelerates the healing of perineum wounds. This protein is needed when inflammation occurs, where the amount of albumin protein levels in blood plasma will decrease. So the decreasing amount of albumin protein levels must be restored immediately, because albumin protein has various functions that can relieve inflammatory symptoms in healing perineum wounds.

The healing time for wounds in the group given treatment was relatively faster, namely on day 5 the wounds had improved. Meanwhile, the control group experienced improvement in wounds, namely on day 9. Healing of perineum wounds can be delayed, if the wound does not become infected then wound healing occurs in 9-10 days. Wound healing is categorized as slow if the wound improves in more than 9-10 days and an infection occurs in the wound.

In line with the results of the research conducted Daisa, Andrie, and Taurina who showed that the oil phase of cork fish extract ointment (*Channa striata*) has the effectiveness of healing stage II acute wounds compared to negative controls.¹¹ Another study showed that the results of data analysis using *Mann-Whitney* obtained a sig result of $0.00 < 0.05$ with the average healing time for the experimental group being 7 days, while the average healing time for the control group was 10 days, so it can be concluded that there is an effect of cork fish extract on healing of perineum wounds in post-partum mothers with a difference of 3.2 days.¹⁴ It can be assumed that the cork fish extract in the ointment and cork fish biscuits that the researchers made can accelerate the healing of perineum wounds. The healing time for perineum wounds for the control group averaged 8.64 days for perineum wound healing, while for the intervention group the average healing time for perineum wounds was 5.17 days. Thus, cork

fish biscuits can accelerate the healing of perineum wounds in postpartum mothers by a difference of 3.47 days.

According to Suprayitno, cork fish is believed to help speed up wound healing. The content of cork fish is essential amino acids and high levels of albumin protein. Patients after surgery if recommended to consume it can increase serum protein levels in the blood. The function of albumin in blood plasma is as a binder and transport substance, especially minerals and proteins, so that albumin accelerates the delivery of protein substances in the formation of new tissue in injured parts of the body.¹⁵ According to Firlianty, et al., when compared with other fish, the quality of protein from cork fish is very good protein for helping heal wounds. Cork fish has essential proteins needed by cells for growth and membrane repair. The quality of the protein contained in cork fish can be determined from the type and amount of amino acids. Utilization of cork fish This is because it has a fairly high protein content of around 25.2 grams per 100 grams cork fish, as well as having amino acids and fats that can help in healing various kinds of wounds, whether burns, broken bones or wounds after surgery and increase body endurance.¹⁶

Research conducted by Asfar, et al., found that after fresh cork fish was made into flour or concentrate, namely by reducing the water content, the fish protein was obtained at 64.12–76.13%, with the highest albumin content at 20.8%. total protein.¹⁷ Fresh cork fish made into flour or concentrate can be used as an ingredient for making cork fish biscuits. Cork fish biscuits can be an option as an additional food for postpartum mothers especially those who suffer from perineum tears because biscuits contain high protein, and are very practical in serving.

CONCLUSION

The conclusion of this research is that based on the results of the analysis and discussion that have been presented, it can be concluded that there is an effect of eating cork fish biscuits on accelerating the healing of perineum wounds.

Saeen for Service Institutions suggested that health workers can use cork fish biscuits as an alternative in providing food to postpartum mothers. Respondents are expected to change their mindset regarding belief in the myth of abstaining from eating animal protein after giving birth, because eating animal protein can speed up the healing of perineum wounds.

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