



## THE EFFECT OF LOCAL ANESTHESIA ON HEALING TIME PERINEUM WOUNDS ON NIFAS' MOTHER AT PMB NUNUNG TANGERANG

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### Abstract

Background: WHO in 2020, stated that maternal deaths during pregnancy, childbirth and postpartum were 295,000 worldwide. Africa, Sub-Saharan and South Asia account for about 86%. Meanwhile, the maternal mortality rate in Indonesia in 2020 is 230 per 100,000 live births. One of the causes of maternal death is bleeding and infection. Suturing perineal tears with anesthesia is one of the maternal care programs, which aims to reduce the pain experienced by mothers during the suturing process of birth canal wounds. Giving anesthesia can also cause damage to the immune system which results in a decrease in body resistance so that there will be a lengthening of wound healing 2-3 days than without anesthesia. Research Objective: Knowing the administration of local anesthesia on the healing duration of perineal wounds in puerperal mothers. Research Method: *Quasi-experiment* with *post-test group design*. The samples in this study were all postpartum mothers who experienced perineal injuries at PMB Nunung in November-December 2023 as many as 40 people. The sampling technique uses *the total sampling* technique. Results of the study: The frequency distribution of long healing of perineal wounds in the majority intervention group was slow and in the majority control group was fast. The effect of local anesthesia on the healing time of perineal wounds in puerperal mothers (p. value 0.000). Conclusion and Suggestion: The effect of local anesthesia on the healing time of perineal wounds in puerperal mothers. It is expected that midwives provide counseling to postpartum mothers to properly care for perineal wounds and eat nutritious foods to accelerate the healing of perineal wounds.

**Keywords:** Local Anesthesia, Perineal Wound Healing Duration

### Introduction

Postpartum infection is the second leading cause of maternal death in Indonesia after hemorrhage. The maternal mortality rate has not changed much since ancient times until now. *The World Health Organization* (WHO) in 2020, stated that maternal deaths during pregnancy, childbirth and postpartum were 295,000 women worldwide. Africa, Sub-Saharan and South Asia account for about 86% of all maternal deaths worldwide (WHO, 2020).

The Maternal Mortality Rate (MMR) in Indonesia in 2020 is 230 per 100,000 live births. The direct cause of maternal death by 90% is complications that occur at the time of delivery and after delivery. The causes of maternal death were bleeding (30.0%), hypertension (27.1%), infection (7.3%), old partus (1.8%), abortion (1.6%) and others (40.8%) (Ministry of Health, 2021)

Perineal pain as a manifestation of the suturing scar felt by the patient due to perineal rupture at the time of discharge. Perineal tears occur in almost all vaginal deliveries, whether it is an intentional tear with an episiotomy or spontaneous tearing as a result of labor, there are perineal tears that need suturing measures, some are unnecessary. From the perineal suture earlier, it must cause pain. (Chapman, V, 2018).

Suturing perineal tears with anesthesia is one of the maternal care programs, which aims to reduce the pain experienced by mothers during the suturing process of birth canal wounds. Perineal suturing is an effort to improve the function of the reproductive organs of mothers who experience rupture during childbirth. Quite a number of factors affect perineal wound healing including early mobilization, vulvar hygiene, wound area, age, vascularity, stressors and nutrition. The wound is said to heal if within 1 week the condition of the wound is dry, closed and there are no signs of infection (Mochtar, 2018).

However, the provision of anesthesia can also cause damage to the immune system which results in a decrease in body resistance so that there will be a lengthening of wound healing 2-3 days than without anesthesia (Saifuddin, A, 2017).

The healing phase is ideally a wound healing process in restoring the original tissue, if not possible then scar tissue will form. The use of the right materials in the treatment of perineal wounds is the right technique, because if the use of inappropriate materials can cause wounds to heal or long healing and cause infection. Perineal suture wound healing is characterized by the absence of infections such as heat (heat), rubor (redness), tumor (swelling), dolor (pain) and onela function (disruption of function). Normal healing of suture wounds will occur on the fifth to seventh day and can also be faster within 5 days which is characterized by dry wounds, the absence of redness, swelling, fused tissues and no pain when sitting and walking (Uliyah, 2018).

Based on an initial survey conducted at PMB Nunung in September 2023, out of 10 maternity mothers, all of them had perineal tears, and of those 10 people, 5 people received anesthesia and 5 people did not get anesthesia. Of the 5 people who received perineal wound healing anesthesia > 7 days while the other 5 people who did not get perineal wound healing anesthesia < 7 days. From the data above, researchers are interested in conducting a study entitled "The Effect of Local Anesthesia on the Healing Duration of Perineal Wounds in Postpartum Mothers at PMB Nunung Tangerang for the November-December 2023 Period".

## Research Methods

*Quasi-experimental with posttest group design.* The samples in this study were all postpartum mothers who experienced perineal injuries at PMB Nunung in November-December 2023 as many as 30 people. The sampling technique uses *purposive sampling technique*. Data analysis using *independent simple test*.

## Research Results

**Table 1. Frequency Distribution of Perineal Wound Healing Duration in the Intervention Group and Control Group at PMB Nunung Tangerang**

No	Perineal Wound Healing	Ex. Intervention		Bald. Control	
		Frequency	%	Frequency	%
1.	Fast	2	10.0	15	75.0
2.	Slow	18	90.0	5	25.0
<b>Total</b>		<b>20</b>	<b>100.0</b>	<b>20</b>	<b>100,0</b>

Based on the table, it can be seen that in the intervention group (local anesthesia) most of the perimeun wound healing in the slow category was 18 people (90.0%), and respondents with fast perineal wound healing were 2 people (10.0%). In the control group, most respondents with rapid

perineal wound healing were 15 people (75.0%) and respondents with long perineal wound healing in the slow category were 5 people (25.0%).

**Table 2** The Effect of Local Anesthesia on Perineal Wound Healing Duration in Mothers Nifas at PMB Nunung Tangerang

Group Type	Perineal Wound Healing		Mean	SD	P Value
	Category	F			
Intervention group	Fast	2	8.90	1.210	<b>0,000</b>
	Slow	18			
Control group	Fast	15	6.80	1.056	
	Slow	5			

Based on the table above, the average duration of perineal wound healing in the intervention group (local anesthesia) was 8.90 and the standard deviation was 1.210. In the control group, the average duration of perineal wound healing was 6.80 and the standard deviation was 1.056. The results of the statistical test obtained a *p-value* of 0.000 ( $p < 0.05$ ), which means that there is a significant difference between the average duration of healing of perineal wounds in the intervention group and the control group. Based on the data above, it can be concluded that there is an effect of local anesthesia on the duration of healing of perineal wounds in puerperal mothers, because there is a significant difference in the average value between the intervention group and the control group with an average difference in value of 2.10.

## Discussion

### Distribution of Perineal Wound Healing Frequency in the Intervention Group and Control Group

From the results of the study, it can be seen that in the intervention group (local anesthesia) most of the perimeun wound healing in the slow category was 18 people (90.0%), and respondents with fast perineal wound healing as many as 2 people (10.0%). In the control group, most respondents with rapid perineal wound healing were 15 people (75.0%) and respondents with long perineal wound healing in the slow category were 5 people (25.0%).

Perineal wounds are wounds in the perineum due to tears in the birth canal either due to rupture or episiotomy at the time of fetal delivery. Perineal lesions are injuries to the urogenital diaphragm and levator ani musculos, which occur during normal labor or delivery with tools can occur without injury to the perineal skin or in the vagina so that it is not visible from the outside, so that it can weaken the hip floor and easily occur genitalia prolapse. Perineal wound healing is the beginning of improving perineal wounds with the formation of new tissues covering the perineal wound within 6-7 days (Rukiyah, 2018).

The results of this study are in line with the results of research by Angelia Rovina Septya (2018) who said that the average length of healing of perineal wounds in respondents who were given anesthesia before suturing experienced wound healing  $> 7$  days and respondents who were not given anesthesia experienced wound healing  $< 7$  days.

In the opinion of researchers, from the results of research that has been conducted at PMB Nunung Tangerang, it can be seen that in the intervention group the duration of perineal wound healing is around 6-11 days and most of them fall into the slow category of 90%, while in the control group the duration of perineal healing is around 5-9 days and most of them fall into the fast category of 75%. So it can be concluded that between the intervention group and the control group had differences in perineal wound healing between 1-2 days. From the results of this study we can know that the administration of local anesthesia slows down the healing of perineal wounds in puerperal

mothers. In addition, there are still many factors that can affect the healing of perineal wounds, each respondent has their own factors so that the wound healing process is different. In the intervention group, based on the results of the study, it is known that the administration of local anesthesia can have an adverse effect on perineal wound healing because it inhibits the healing process of perineal wounds.

### **The Effect of Local Anesthesia on the Healing Duration of Perineal Wounds in Postpartum Mothers**

From the results of the study, the average duration of healing of perineal wounds in the intervention group (local anesthesia) was 8.90 and a standard deviation of 1.210. In the control group, the average duration of perineal wound healing was 6.80 and the standard deviation was 1.056. The results of the statistical test obtained a *p-value of 0.000* ( $p < 0.05$ ), which means that there is a significant difference between the average duration of healing of perineal wounds in the intervention group and the control group. *Based on the data above*, it can be concluded that there is an effect of local anesthesia on the duration of healing of perineal wounds in puerperal mothers, because there is a significant difference in the average value between the intervention group and the control group with an average difference in value of 2.10.

Anesthesia is a measure to relieve pain during surgery and various other procedures that cause pain, in this case fear needs to be eliminated to create optimal conditions for surgery. Anesthesia is a treatment for numbness, both pain, fear, and discomfort (Mangku, 2018)

The results of this study are in line with the results of research research Angelia Rovina Septya (2018) which said that the results of statistical tests were obtained  $P = 0.013$  and the results of the analysis stated  $0.013 < 0.05$  so that it can be concluded, there is a difference in the duration of wound healing between respondents who received anesthesia before perineal suturing and respondents who did not get anesthesia.

According to the researchers' assumptions, from the results of research conducted by PMB Nunung Tangerang, there was a difference in the average value of perineal wound healing with an average difference between 1-2 days where the use of anesthesia caused excessive vasoconstriction of blood vessels so that the early stages of the wound healing phase became inhibited. Basically, when the skin is injured it will cause bleeding and the body tries to stop it through shrinking the ends of blood vessels, isolating the wound area so that dilation does not occur and avoiding germs and bacteria that can infect the wound, after that there is a process of fluid absorption before finally the body tries to string fibrin threads to carry out the wound healing process. Respondents given anesthesia, in general, lidocaine anesthesia given contains endorphins which also cause vasoconstriction in blood vessels, resulting in slow absorption of anesthetic fluid so that there is a buildup of fluid that is somewhat shiny and bubbled. This of course affects the further wound healing process, while respondents who are not given anesthesia experience wound healing in accordance with the theory so that there is a difference in wound healing between the two.

### **Conclusion**

The frequency distribution of long perineal wound healing in the majority intervention group was slow and in the majority control group was fast. The effect of local anesthesia on the healing time of perineal wounds in puerperal mothers (p. value *0.000*).

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