



Factors influencing the occurrence of perineal rupture at BPM Mesrida Simarmata, AmKeb

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ABSTRACT

Perineal rupture is an injury to the perineum that is caused by natural tissue damage due to pressure on the fetal head or shoulders during delivery. To determine the factors that influence the incidence of perineal rupture in mothers giving birth at BPM Mesrida Simarmata, Am Keb in 2022. This type of research is quantitative descriptive with a retrospective approach. The population of this study was pregnant women who experienced perineal rupture in 2022. The total population was 30 people and with a total sampling technique. The instrument uses a checklist and the data analysis technique uses analysis. The majority of respondents had grade 2 perineal rupture. The mother's age was 20-35 years as many as 27 people (90%), the majority of parity were multiparous as many as 18 people (60%). BBL 2500-3500 grams was 26 people (67%) and pregnancy interval > 2 years was 16 (53%). The majority of respondents are in normal condition, it is necessary to investigate things that cause perineal rupture, such as pushing techniques and efforts to make the perineum elastic. The parity of multiparous respondents needs to be researched with the variable history of previous perineal rupture.

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1. Introduction

The maternal mortality rate (MMR) is an important indicator in assessing the level of public health in a country. In 2015, the World Health Organization (WHO) estimated that around the world every year more than 585,000 mothers died due to complications from pregnancy and childbirth. The main causes of maternal death include bleeding, hypertension, infection, and other comorbidities suffered by the mother before pregnancy (WHO, 2015). According to data from the 2017 ASEAN Millennium Development Goals (MDGs), it shows that in 2015 maternal mortality in Indonesia still reached 305/100,000 live births. This figure is three times higher than Indonesia's MDGs target, namely 102/100,000 live births. This figure places Indonesia as the country with the second highest death rate in Southeast Asia. Laos is in first place with a mortality rate of 357/100,000 live births. When compared with nearby countries, namely Singapore and Malaysia, the number of maternal deaths in Indonesia is still very large. In 2015, Singapore had a maternal mortality rate of 7/100,000, and Malaysia at 24/100,000 live births (Kemenkes RI, 2019). The death rate in Indonesia is still high. The causes of high MMR in Indonesia are bleeding, hypertension, infection and other causes (Natasha & Niara, 2022). Meanwhile, the causes of bleeding are uterine atony, perineal rupture, and placental remains (Achadi, 2019) So it is

necessary to detect this complication early so that the maternal mortality rate does not increase (Solihah et al., 2021). One of the causes of infection can be perineal rupture infection, so this really needs attention (Rohmin et al., 2015). Good healing of the perineum can be done using pharmacological and non-pharmacological therapy. From pharmacology, there are many good ways from nutritious food (Rahmawati & Triatmaja, 2015), light (Girsang et al., 2019), natural ingredients such as drinking water boiled with red ginger (Simarmata & Simanjuntak, 2020) and drinking water boiled with binahong leaves (Gusnimar et al., 2021).

Its function is to increase cell proliferation, accelerate the inflammatory period so that rapid remodeling of the perineal muscles (Aryaeian & Tavakkoli, 2015). Perineal rupture is an injury to the birth canal that occurs during the birth of a baby, whether using tools or not using tools (Santoso et al., 2019). Perineal rupture occurs in almost all first births and not infrequently also in subsequent births. Perineal rupture is divided into four degrees, namely degrees I to degree IV. Ruptures are usually mild but sometimes extensive and dangerous wounds can occur, causing profuse bleeding. The incidence of bleeding due to perineal rupture is around 4-5. Post partum hemorrhage is an important problem because it is related to maternal health and can cause death. Perineal rupture that is not treated can cause infection and can result in imperfect healing such as scarring or imperfect shape (Rohmin et al., 2015).

Factors that can cause perineal rupture include: Maternal factors: parity, mode of delivery, and birth spacing; Fetal factors: baby's birth weight, presentation, hydrocephalus, shoulder dystocia; Childbirth factors: vacuum extraction, forceps extraction, embryotomy, precipitate delivery; and birth assistance factors (Waris et al., 2022). There are 2.7 million cases of perineal rupture in mothers giving birth, where this figure is expected to reach 6.3 million in 2050 (Mariana & Wati, 2022). In Africa, there is a 5.7% incidence of rupture in normal childbirth (Bah et al., 2019). At the Medan Haji Hospital, the majority of grade I perineal wounds occur, there are factors that influence the occurrence of perineal rupture, namely age, parity and BBL (Nurmaliza & Lubis, 2018). Previous research has many factors that influence the occurrence of perineal rupture, but this research specifically looks at the factors of age, parity, BBL and gestational age in the occurrence of perineal rupture

This research contributes to the development of science, namely to find factors that influence the occurrence of perineal rupture. This is very useful for mothers giving birth to prevent further perineal rupture and provide information to BPM Mesrida Simarmata about the occurrence of perineal wounds in order to increase their respective competencies in preventing perineal rupture.

2. Methods

This research is a quantitative descriptive study with a retrospective approach carried out at BPM Mesrida Simarmata, AmKeb in 2022. The population in this study were all 30 mothers who experienced perineal rupture using a total sampling technique. Types of secondary data from medical records of PMB Mesrida Simarmata, AmKeb using a checklist sheet instrument with univariate data analysis (Dahlan, 2015). All respondents were classified based on the percentage of occurrence of rupture degree, the condition of the respondent such as age, parity, BBL, pregnancy interval and analyzed

3. Results and Discussion

3.1 Results

From the research results, it was found that the degree of injury in the rupture incident at BPM Mesrida Simarmata, Amkeb in 2022 is shown in table 1 and table 2

Table 1
Frequency distribution of wound degrees of perineal rupture in maternity women
at PMB Mesrida Simarmata in 2022

Perineal Rupture	Frequency	Persentase (%)
Degree I	4	13.5
Degree II	22	73
Degree III	4	13.5
Total	30	100

Based on table 4.1, the results of the research that has been carried out show that the majority of perineal rupture incidents occurred in degree II, namely 22 people (73%)

Table 2
Factors that influence the occurrence of perineal rupture in women giving birth at PMB
Mesrida Simarmata, AmKeb in 2022

Perineal Rupture	Frequency	Percentase (%)
Age		
<20 years	1	3
20-35 years	27	90
>35 years	2	7
Total	30	100
Parity		
Primigravida	12	40
Multigravida	18	60
Total	30	100
Birth Weigh		
2500-3500 gram	26	87
>3500 gram	4	13
Total	30	100
Pregnancy Spacing		
< 2 years	14	47
>2 years	16	53
Total	30	100

Based on table 2, the results of the research that has been carried out show that the majority of perineal rupture incidents, based on age, occurred at the age of 20-35 years, 27 people (90%), based on parity, the majority occurred in multigravidas, 18 people (60%), based on the baby's birth weight. (BBL) the majority occurred 2500-3500 grams as many as 26 people (87%), based on the pregnancy distance the majority occurred over 2 years as many as 16 people (53%)

3.2 Analysis

a. Based on table 1, the results of the research that has been carried out show that the majority of perineal rupture events occurred in grade II, namely 22 people (73%). The results of this study do not match the results of Nurmaliza's 2018 research that the majority occurred in grade I injuries (Nurmaliza & Lubis, 2018) (Muliati, 2018). Perineal wounds can occur due to the expulsion of the baby's head during the birth process (Álvarez-González et al., 2021). In this study, the majority of spontaneous births occurred with perineal injuries. According to research, the majority of perineal tears occur at grade 2. Many factors cause tears in the birth canal, such as maternal age, parity, that there is a relationship between parity and the incidence of perineal rupture (Jayanti et al., 2023), BBL and distance from previous delivery. b. Based on table 2 in this study, the majority of mothers who experienced perineal wounds were 20-35 years old, 27 people (90%). From this it can be seen that the majority of mothers who give birth at the Mesrida Simarmata clinic, AmKeb are mostly at a healthy reproductive age, namely 20-35 years. Even though the respondents are of healthy reproductive age, they are not free from perineal rupture because there are many things that can trigger perineal rupture, such as stiff perineal muscles, wrong pushing techniques or giving birth too quickly. There were 1 respondents < 20 years old (3%), this supports the occurrence of perineal rupture because the reproductive muscles in women < 20 years old are still too fragile because they are not yet mature so they can easily tear, especially in the perineum. There were 2 respondents aged > 35 years (7%), this supports the occurrence of perineal rupture because the uterine muscles have experienced a decline in their elasticity so they tear easily. The results of this study are in accordance with the results of Merianna's 2022 research in Jambi that there is a relationship between age and the incidence of perineal rupture (Mariana & Wati, 2022). The majority of respondents were multiparous, 18 people (60%). This shows that the majority of respondents

have already given birth. In previous parturitions that have already experienced childbirth and have undergone an episiotomy, there is a tendency for perineal rupture to occur again.

In this study, there were also 12 primiparous people who strongly supported the incidence of perineal rupture. The results of this study are in line with the results of research by Jayanti et al. in 2023 that there is an influence of parity on the occurrence of perineal rupture (Jayanti et al., 2023). Of the BBL, the majority is 2500-3500 grams. This means that even though the BBL is normal it will still put pressure on the perineum plus other factors such as inappropriate or too fast pushing techniques or a stiff perineal texture. There were 4 respondents (13%) who had a birth weight of >3500 grams. This really supports the occurrence of perineal rupture because in a normal BBL of 2500 grams -3500 grams, the baby's head is already exerting pressure on the perineum, especially if the BBL exceeds normal, it will put even more pressure on the perineum, thus triggering perineal rupture (Rahmawati & Triatmaja, 2015). The majority of birth intervals were > 2 years, 16 people (53%). This means that reproductive organs that have not been stretched for a long time will tear easily because the muscles have never been stretched either from pregnancy exercises or other actions. This can trigger perineal rupture. There were 14 respondents (47%) with birth intervals < 2 years. This also triggers perineal rupture because births with a history of perineal rupture for less than 2 years will make it easier for perineal tears to occur. Because wound healing is not perfect, the wound will heal after 2 years and the muscle texture and strength will return to normal. Researchers assume that even though all respondents are of healthy reproductive age, namely 20-35 years and a normal BBL of 2500-3500 grams, they need good pushing techniques during the pushing process to prevent uterine rupture, and it is necessary for health workers to also pay attention to the elastic aspect of the perineum, namely by doing perineal massage or exercises to relax the pelvic muscles, especially the perineum.

4. Conclusion

Factors that influence perineal rupture in BPM Mesrida Simarmata, AmKeb are the majority of multiparity respondents who support that a history of perineal rupture will result in another perineal rupture. Maternal age, parity, BBL and pregnancy interval are normal but perineal rupture still occurs because there are many factors that can cause perineal rupture such as pushing techniques and perineal elasticity. The limitation of this research is that it only examines 4 variables, it is recommended that further research will examine other, broader factors in causing perineal wounds. The contribution of this research is to provide information to BPM Mesrida Simarmata, AmKeb in particular and to health workers in general about the factors that cause perineal rupture to occur in normal and good conditions so that respondents will be better prepared for the days ahead

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