The Relationship Between Infant Birth and Perineal Rupter in Normal Delivery in Juwita Clinic

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Abstract

The number of perineal rupture cases continues to increase each year. Birth weight is a risk factor that increases the incidence of perineal injury. The bigger the baby born the risk of perineal rupture. The coverage rate for participants for mothers who gave birth at the Juwita Midwife Clinic in 2022 recorded 14 participants, 9 women who had normal births experienced tears in the birth canal. The purpose of this study was to determine the relationship between birth weight and perineal rupture in normal delivery at the Juwita Midwife Clinic in 2022. This research is an analytical study with a cross-sectional research design. This research was conducted at the Juwita Midwife Clinic, Hamparan Perak, Deli Serdang Regency, North Sumatra Province. The time of the study was in May-July 2022. The population in the study was all maternity patients at the Juwita Midwife Clinic who gave birth in May-July 2022 as many as 55 normal birth mothers. The sampling technique used in this research is non-probability sampling with total sampling technique. The number of samples in this research was 55 people. Collecting data in this study used a questionnaire in the form of a check list sheet. Univariate analysis with descriptive, while bivariate analysis with Chi-Square test. The results of the research were that mothers experienced perineal rupture by giving birth to normal baby weight ≤4000 grams, namely 17 mothers (30,9%) of whom gave birth with babies weighing more than 4000 grams, namely 18 mothers (32,8%). There is a relationship between birth weight and perineal rupture at the Juwita midwife clinic, Hamparan Perak District, Deli Serdang Regency (p-value=0,040). It is recommended that health workers can increase their vigilance in providing birth assistance so that perineal rupture does not occur.

Keyword: Maternity, Newborn Weight, Perineal Rupture

INTRODUCTION

Childbirth is a process of expelling products of conception (fetus and urine) that can live outside the uterus through the birth canal or other means (Dian et al., 2019). Childbirth is the process of opening and thinning the cervix so that the fetus can descend into the birth canal. Normal labor and delivery is the process of expulsion of the fetus that occurs in full-term pregnancy (37-42 weeks) with uterine contractions in the mother. Scientific process The birth of the baby and placenta from the uterus through a process that begins with uterine contractions that cause cervical dilatation or dilation of the cervix (Irawati et al., 2019).

Perineal perineal rupture is a condition of tearing of the female genital organs which generally occurs during childbirth. The perineum is the area between the opening of the vagina

and anus. Perineal rupture can occur suddenly or iatrogenic. This is due to the episiotomy and delivery with the help of instruments (Misrina et al., 2022).

According to WHO (World Health Organization) data, there were 2,7 million cases of perineal rupture in the delivery process and it is estimated that by 2020 this will increase to 6,3 million cases (Pemiliana et al., 2019). In America the incidence of perineal rupture occurs as much as 40% of the 2,6 million deliveries. From perineal rupture data worldwide, 50% are cases that occur in Asia (Subroto et al., 2022). The incidence of perineal rupture in women giving birth in the world in 2020 was 2,7 million cases, where this figure is expected to reach 6,3 million in 2020. On the Asian continent alone 50% of birth mothers experience perineal rupture.

In Indonesia, data on Perineal Rupture is the same as the number of cases in Asia, which is as much as 50%. In South Sulawesi, from the data from the Indonesian Health Demographic Survey, perineal ruptures increased to 138 (BKKBN, 2017). In 2019 maternal deaths in Indonesia were 4.221 cases, most maternal deaths were caused by bleeding as many as 1.280 cases (Kemenkes RI, 2019). In 2017 it was known that in Indonesia Perineal Rupture was experienced by 75% of women who gave birth vaginally, it was found that out of a total of 1.951 women who gave birth spontaneously vaginally, 57% of mothers got perineal stitches, namely 28% due to episiotomy and 29% due to spontaneous tears (Kemenkes RI, 2018).

Based on the health profile of North Sumatra in 2018, it was reported that the maternal mortality rate was 185/100,000 live births. Based on the Regency/City profile, the Maternal Mortality Rate in North Sumatra is 185/100.000 live births. Based on district/city health profile reports, the number of deaths in the last 3 years has decreased, namely starting in 2016 there were 239 deaths, down to 205 deaths in 2017 and down again to 185 deaths in 2018. If the number of maternal deaths is converted to the maternal mortality rate, the number Maternal Mortality in North Sumatra is 62,87 per 100.000 live births (Dinkes Sumut, 2018).

Factors that cause perineal rupture are maternal factors, fetal factors, vaginal delivery factors and birth attendant factors. One of the fetal factors is the weight of the new born baby (Prawitasari et al., 2015). One of the fetal factors that cause perineal rupture is birth weight. Birth weight of more than 4000 grams can increase the risk of perineal rupture. This is caused because the perineum is not strong enough to hold the stretch of the baby's head with a large baby's weight (Hafid, 2022).

Based on research Elis et al., (2019) states that there is a relationship between birth weight and the incidence of perineal rupture in normal delivery in primigravidas, a significant

(p) value is obtained, namely 0.001 with a p value <0.05. Study Russiska et al., (2021) obtained a p-value = 0.009, that there is a relationship between the baby's birth weight and perineal rupture.

Based on the results of the researcher's initial survey that the coverage rate for participants in childbirth obtained at the Juwita Midwife Clinic in 2022, it was recorded that 14 participants encountered 9 normal birth mothers experiencing tears in the birth canal, so the authors were interested in conducting research with the title "Relationship of Baby Birth Weight with Perineal Rupture in Normal Childbirth at the Juwita Midwife Clinic in 2022.

METHODS

This research is an analytical research with a cross-sectional research design. The purpose of this study is to identify the relationship between newborn weight and perineal rupture in normal delivery at the Juwita Clinic in 2022.

This research was conducted at the Juwita Midwife Clinic, Hamparan Perak, Deli Serdang Regency, North Sumatra Province. The time of the study was in May-July 2022. The population in the study was all maternity patients at the Juwita Midwife Clinic who gave birth in May - July 2022 as many as 55 normal birth mothers.

The sample is part of the number and characteristics possessed by the population. The sampling technique used in this study is to use non-probability sampling with total sampling technique, namely the sampling technique according to the population (Sugiyono, 2019). In this study, the number of samples that became the research was as many as 55 people.

Collecting data in this study used a questionnaire in the form of a check list sheet that had been designed by the researcher. Analysis of the data in this study with univariate analysis and bivariate analysis. Univariate analysis with descriptive aims to explain or describe the characteristics of each research variable. While the bivariate analysis with the Chi-Square test at a significance level of 95% ($\alpha = 0.05$) where the value of $p < 0.05$ which means the alternative hypothesis is accepted. Data analysis was performed using the Statistical Package for Social Science (SPSS) version 22 program.

RESULTS

Univariate analysis

Data analysis was used to obtain frequency distribution data for each variable, which included the independent variable (birth weight) and the dependent variable (perineal rupture in normal delivery). The characteristics of the respondents in this study can be seen in Table 1. Below:

Table 1. Distribution of Respondents' Characteristics by Age at the Juwita Clinic

Variable	Frequency	%
Age		
≤ 20 years	21	38,2
20 years	34	61,8
Total	**55**	**100**
Education		
Elementary Education (Elementary School and Junior High School)	19	34,5
Further Education (High School and College)	36	65,5
Total	**55**	**100**
Parity		
≤2	26	47,3
>2	29	52,7
Total	**55**	**100**

Based on Table 1. The results showed that the frequency distribution of respondents based on the age of the majority of respondents aged> 20 years was 34 people (61,8%) and the minority of respondents ≤20 years were 21 people (38,2%). Education of the majority of respondents with advanced education (high school and university) as many as 36 people (65,5%) and a minority of respondents with basic education (elementary school and junior high school) as many as 19 people (34.5%). And based on parity, the majority >2 were 29 people (52,7%) and the minority ≤2 were 26 people (47,3%).

Distribution of Frequency of Birth Weight and Perineal Rupture at the Juwita Clinic can be seen in Table 2. Below :

Table 2. Frequency Distribution of Birth Weight and Perineal Rupture at Juwita Clinic

Variable	Frequency	%
Baby Birth Weight		
≤ 4000 gram	24	43,6
> 4000 gram	31	56,4
Total	**55**	**100**
Perineal Rupture		
Rupture	35	63,6
Not Ruptured	20	36,4
Total	**55**	**100**

Based on the results of the research in Table 2. above, it can be seen that of the 55 mothers who gave birth at the Juwita Clinic in May - July 2022, most of the babies born had birth weights >4000 grams, namely 31 people (56,4%). And a smaller number of babies who were born had a birth weight of ≤4000 grams, namely 24 people (43,6%). And there were 35 mothers (63,6%) who experienced perineal rupture and 20 mothers (36,4%) did not experience perineal rupture.

Bivariate Analysis

After obtaining distribution data on the independent variable and the dependent variable, then testing the hypothesis using bivariate analysis was carried out. This analysis was conducted to determine the relationship between the two variables and the closeness of the relationship between the two variables. This bivariate analysis was tested using the Chi-squere formula (χ^2). The results of hypothesis testing can be seen in Table 3 below:

Table 3. The Relationship between Birth Weight and Perineal Rupture in Normal Juwita Labor

Baby's Weight	Incident Rupture Perineum				Total	%	p-value
	Rupture		Not Ruptured				
	n	%	n	%			
≤ 4000 gram	17	30,9	7	12,7	24	43,6	0,040
> 4000 gram	18	32,8	13	23,6	31	56,4	
Total	**35**	**63,7**	**20**	**36,3**	**55**	**100**	

Based on Table 3, it can be seen that the majority of deliveries at the Juwita clinic are known to have ruptured the perineum by giving birth to babies with normal weight ≤ 4000 grams, namely 17 mothers (30,9%) of whom gave birth with babies weighing more than 4000 grams, namely 18 Mother (32,8%). Based on the Chi-Square statistical test, results were obtained where the p-value was 0,040 (<0.05), so that H_1 was accepted, H_0 was rejected, meaning that there is a relationship between birth weight and perineal rupture at the Juwita midwife clinic, Hamparan Perak District, Deli Serdang Regency.

DISCUSSION

Based on the results of the study, it was known that most of the deliveries at the Juwita clinic were known to have ruptured the perineum by giving birth to babies with normal weight ≤ 4000 grams, namely 17 mothers (30,9%) of whom gave birth with babies weighing more than 4000 grams, namely 18 mothers (32,8%). Based on the Chi Square statistical test, results were obtained where the p value was 0,040 (<0.05), so H_1 accepted H_0 means that there is a relationship between birth weight and perineal rupture at the Juwita midwife clinic.

Based on existing theory, the weight of the baby born to the mother can affect the occurrence of perineal rupture, the occurrence of perineal rupture, especially in babies born weighing more than 4000 grams. This happens because the bigger the baby born will increase the risk of perineal rupture (Mochtar, 2011). Where these results have conformity with the theory which states that fetal weight can result in perineal rupture, because of the risk of vaginal delivery trauma such as shoulder dystocia and soft tissue damage to the mother. Estimation of fetal weight depends on clinical examination or ultrasound. During pregnancy should measure the estimated weight of the fetus (Fatimah et al., 2019).

The results of this study have similarities with research conducted by Pohan (2018) there is a significant relationship between the baby's birth weight and perineal rupture with a P value (0.000) less than p = 0.05. In line with Research Wijayanti (2019), that there is a relationship between the birth weight of the baby and the incidence of perineal rupture (p-value = 0.021), where the greater the birth weight of the baby, the higher the rate of perineal rupture in the mother.

The presence of children in the family is highly coveted, because children are the hope of the family. Children have many meanings and functions for the family. Children are highly coveted both in the family of village people and city people (Sitorus et al., 2020). Babies can be born with normal weight because the mother fulfills balanced nutrition during pregnancy and the mother's regularity for routine pregnancy checks at the midwife. Therefore, routine pregnancy checks must be done to monitor the weight gain of pregnant women so that the baby can be born with normal weight. The greater the baby's weight results in the incidence of perineal rupture (Nikmah, 2018).

Prevention of perineal lacerations can be done with perineal massage. Perineal massage is a non-pharmacological therapy by massaging the perineal area just before delivery in the final trimester of pregnancy to improve the state of hormones in the body and stimulate the muscles to become elastic, so that the mother does not have to push too hard (Choirunissa et al., 2019). Perineal massage is an alternative therapy as a preventive effort that can be done so that tears do not occur in the perineum and can relax the pelvic floor muscles. Another benefit of perineal massage is helping the mother push the baby out easily (Hestianingrum et al., 2015).

Primigravid mothers who give birth to babies weighing 2500-4000 grams have a higher risk of perineal rupture compared to babies with birth weight <2500 grams. Rigid maternal perineal factors, fetal heads that quickly pass through the pelvic floor, and wrong way of pressing also increase the risk of perineal rupture. Normal delivery can result in cases of

perineal rupture in primiparous and multiparous women. The mucous membrane and skin of the perineum in a primiparous woman are prone to rupture which can cause vaginal bleeding (Wiknjosastro, 2005). Perineal rupture is caused by a large baby's birth weight. The greater the birth weight of the baby will increase the risk of perineal rupture, because the perineum is not strong enough to withstand the stretch of the baby's head with a large baby weight, so that in the process of giving birth to a baby with a large birth weight, perineal rupture often occurs (Varney, 2008).

One effort that can be done by officers to prevent perineal rupture is to carry out delivery management in accordance with normal delivery care standards (58 steps of Normal Childbirth Care) to control the birth of the head, shoulders, arms and legs and will give time for the skin to stretch so that reduce the chance of perineal rupture (Insani et al., 2020).

Based on the results obtained in this study, the authors assume that the baby's birth weight is related to the level of Perineal Rupture because if the fetus is large and the fetal head is large it will affect perineal stretching which can increase perineal injury. In addition, education and age of respondents are also associated with perineal rupture. If the knowledge of pregnant women is lacking about problems that can occur during childbirth such as perineal rupture, they will be more at risk of experiencing perineal rupture. To prevent the occurrence of perineal rupture including providing motivation for mothers to do pregnancy exercise to increase the elasticity of the mother's perineum as well as counseling related to the right pressing position during delivery so that the incidence of perineal rupture can be avoided. Birth attendants also play an important role in the delivery process to reduce the rate of perineal rupture by holding the back of the baby's head so that the head remains in a flexible position when it comes out gradually and carefully can reduce excessive stretching (tears) in the vagina and perineum.

CONCLUSIONS

Based on the results of research on the relationship between birth weight and perineal rupture in normal delivery at the Juwita Clinic, Hamparan Perak, Deli Serdang Regency in 2022, it can be concluded that the majority of mothers who gave birth gave birth to babies with more birth weight (4000 grams), namely 31 people. (56,4%) and most of them experienced perineal rupture, there were 35 mothers (63,6%). There is a significant relationship between birth weight and perineal rupture with a p value of 0,040 (<0,05).

It is recommended that health workers can increase their vigilance in carrying out delivery assistance so that perineal rupture does not occur. And it was suggested to the respondents to add insight, especially for mothers in labor who are expected to comply with the midwife's recommendations so that they can anticipate the occurrence of Perineal Rupture.

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