

CORRELATION OF PERINEAL RUPTURE WITH WOMEN'S QUALITY OF LIFE POST-VAGINAL DELIVERY

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Abstract

Background: Perineal rupture are the second cause of postpartum hemorrhage that can occur in almost every vaginal delivery. According to WHO (2011), almost 90% of vaginal deliveries experience perineal tears, with or without an episiotomy. This situation contributes to the emergence of complaints of pelvic floor dysfunction in the future, resulting in a decrease in the quality of life both emotionally and physically in women. To assess, classify, and treat pelvic floor dysfunction, the Pelvic Floor Distress Inventory Index-20 can be used. This study aims to determine the relationship between perineal rupture and women's quality of life after vaginal delivery based on the Pelvic Floor Distress Inventory-20 (PFDI-20) score. This study was comparative cross sectional. The study was conducted at the Network Hospital of Obstetrics & Gynecology Residency Program, Medical Faculty of Andalas University, started from August 2020 until the number of samples is met. The sample of this study was 96 post-vaginal women who were selected by consecutive sampling, ie 48 respondents with vaginal delivery with perineal rupture and 48 respondents without perineal rupture. Quality of life was measured through interviews with the PFDI-20 questionnaire and perineal rupture were grouped from medical record data. Data were analyzed using chi-square test. The average age of the research respondents was 29.34 ± 5.91 years with the youngest age being 18 years. Most of the respondents were multiparaous (70.%) with the highest degree of perineal rupture was grade 2. Most of the respondents (70.8%) felt that their quality of life was disturbed. Statistically, there was a significant relationship between perineal rupture and women's quality of life after vaginal delivery ($p < 0.05$). In Conclusion, there was a significant relationship.

Keywords: life quality; perineal rupture; vaginal delivery

Introduction

Approximately 70% of women who undergo vaginal delivery will experience a perineal rupture (Statistik, 2012). Perineal rupture are the second leading cause of

postpartum hemorrhage (Wijayanti, 2019). Perineal rupture are also the most common complication of childbirth. One of the problems that occur in women after childbirth that is often found is perineal pain (Fonti, Giordano, Cacciatore, Romano, & La Rosa, 2009), (Mohamed, 2016) Although perineal rupture are generally minor complications, women with perineal rupture can experience physical, psychological and social problems (Sa, B., Pacheco-da-costa, S., Gutie, C. & Navarro-braza, 2013), (Leveno et al., 2007) Perineal tear in vaginal delivery, provides anatomical and functional defects in women. Even if the tear has been repaired or stitched, it can still affect the quality of the woman's life. This situation contributes to the emergence of complaints of pelvic floor dysfunction in the future (Sa, B., Pacheco-da-costa, S., Gutie, C. & Navarro-braza, 2013).

The diagnosis must be thorough through history taking and physical examination. To assess, classify, and treat pelvic floor dysfunction, the Pelvic Floor Distress Inventory Index-20 can be used (Tami, 2018). This questionnaire is a medical instrument that aims to complete a good analysis for patients and to assess pelvic floor dysfunction disorders so that they can identify urogenital symptoms, determine the intensity and severity of symptoms, assess their impact on quality of life in women, and are also used as parameters in the management in pelvic floor dysfunction (Good & Solomon, 2019).

The Pelvic Floor Distress Inventory Index-20 (PFDI-20) questionnaire is one of the most frequently used questionnaires in analyzing pelvic floor dysfunction, in addition to the use of other questionnaires such as: Pelvic Floor Impact Questionnaire (PFIQ-7) and International Consultation on Incontinence Questionnaire – Vaginal Symptoms (ICIQ-VS). The PFDI-20 is a Grade A recommended questionnaire by the International Consultation on Incontinence (ICI) in evaluating pelvic floor dysfunction symptoms and their impact on women's quality of life (Zuchelo LTS, Bezerra IMP, Da Silva ATM, 2018).

The PFDI-20 questionnaire has been translated into Indonesian and several validation tests have been carried out in several previous studies. In research by Santoso (2020) it was found that the validity value of the PFDI-20 was 0.30 (0.385-0.781) and the reliability value was 0.911 (0.902-0.913), with these results it was concluded that, this questionnaire is valid and reliable to be used for Indonesian women population (Health, 2018). Therefore, we are interested in using this PFDI-20 questionnaire to be used in evaluating pelvic floor dysfunction symptoms and their impact on women's quality of life.

Based on the description above, we are interested in finding out about the correlation between perineal rupture and women's quality of life after vaginal delivery based on the Pelvic Floor Distress Inventory-20 (PFDI-20) score.

Research Methods

This study was an analytical study with a cross-sectional comparative study approach, conducted at the Network Hospital of Obstetrics & Gynecology Residency

Program, Medical Faculty of Andalas University, namely Pariaman Hospital, Achmad Mochtar Hospital, Padang Panjang Hospital, Batu Sangkar Hospital, Roeksodiwiry Hospital, and Andalas University Hospital, started from August 2020 until the number of samples is met. The sample of this study was 96 post-vaginal women who were selected by consecutive sampling, i.e. 48 respondents with vaginal delivery with perineal rupture and 48 respondents without perineal rupture. Quality of life was measured through interviews with the PFDI-20 questionnaire and perineal rupture were grouped from medical record data. Data were analyzed using chi-square test.

Results and Discussion

A. Results

1) Subjects Characteristics

There were a total of 96 respondents consisting of 48 respondents with vaginal delivery with perineal rupture and 48 respondents without perineal tears who met the inclusion criteria. This study aims to determine the correlation between perineal rupture and women's quality of life after vaginal delivery based on the Pelvic Floor Distress Inventory-20 (PFDI-20) score.

Table 1
Subjects Characteristics

Characteristic	f (n=96)	%
Parity		
Primiparous	28	29.2
Multiparous	68	70.8
Perineal Rupture		
Without Rupture	48	50.0
First degree	19	19.8
Second degree	29	30.2
Quality of Life		
Not affected	28	29.2
Affected	68	70.8

Based on table 1, it was found that there were 28 respondents with primiparous status (29.2%) while 68 people (70.8%). The frequency distribution of the degrees of perineal rupture were 48 people (50.0%) without perineal tears, 19 people (19.8%) with 1st degree perineal tears, and 29 people (30.2%) with 2nd degree perineal tears. The quality of life of women after vaginal delivery was mostly affected, as many as 68 people (70.8%), and as many as 28 people (29.2%) not having a impaired quality of life after vaginal delivery.

2) Correlation Between Perineal Rupture and Women's Quality of Life Post Vaginal Delivery

The correlation between perineal rupture and women's quality of life post vaginal delivery can be seen in the following table.

Tabel 2
Correlation Between Perineal Rupture and Women's Quality of Life Post Vaginal Delivery

Rupture	Quality Of Life					
	Unrupture		Total Perineum Impaired		P Value	
	f	%	f	%	f	%
Without	26	54,2	22	45,8	48	100,0
Rupture	2	4,2	46	95,8	48	100,0
Total	28	29,2	68	70,8	96	100,0

Based on table 2 it can be seen that respondents whose quality of life is impaired based on the PFDI-20 score are higher in respondents with perineal rupture after vaginal delivery, 46 respondents (95.8%) compared to those without rupture, which is 22 (45.8%). Statistically, there was a significant relationship between perineal tears and women's quality of life after vaginal delivery ($p < 0.05$).

B. Discussion

1. Frequency Distribution of Perineal Rupture in Vaginal Delivery

In the group of subjects with perineal rupture, the youngest age was 18 years and the oldest was 42 years. This is in accordance with a study conducted by Waldernstrom that in primiparas the highest risk of perineal rupture was in the 25-29 year age group, while in multiparas 30-34 years of age, the risk increased 2-fold at age, the highest risk of primiparous rupture was in age group > 35 years (Pangastuti, N., Iman, S. B., Denny, A., & Emilia, 2020).

For multiparas aged 30-34 years, the degree of perineal rupture in vaginal delivery was 50% without rupture, with a grade 1 (19.8%) and a grade 2 (30.2%) rupture. In accordance with research conducted by Nuring Pangastuti that the highest degree of perineal rupture is grade 2 rupture, which is a rupture that reaches the perineal muscles (Waldenström & Ekéus, 2017).

2. Women's Quality of Life Post Vaginal Delivery

Based on the results of this study, it was found that the decrease in the quality of life was directly proportional to the degree of rupture, but this did not rule out the possibility of a decrease in the quality of life in vaginal deliveries without perineal rupture. Vaginal delivery without perineal rupture is physical function, physical role, bodily pain, general health, vitality, social role functioning, emotional role, and mental health (N, 2014).

The results of Juan's study found that the overall QoL score of the women affected by childbirth decreased over time. Several variables at < 1 year postpartum, for example, "emotional role", were rated as good, but then significantly decreased scores within 1-3 years, then increased after three years postpartum, while the "vitality" variable was almost unchanged. This is consistent

with this study which showed that the vitality and emotional status of patients with perineal rupture did not change too much even though the quality of life had decreased, according to the questionnaire used in this study. Others, for example, the "physical role", had a reduced score at 3 years postpartum. Overall, they showed a decreased quality of life in the 1-3 year postpartum period compared to the first postpartum year. The score dropped even more at three years postpartum. The variable "physical role" also decreased at 3 years postpartum. In general, all variables experienced a decrease in score over time, but there were variables that experienced a significant decrease in scores for the general health, emotional role, and mental health variables (N, 2014), (Martínez-Galiano, Hernández-Martínez, Rodríguez-Almagro, & Delgado-Rodríguez, 2019).

In this study, a significant decrease was also found in general health and emotional role variables in patients with perineal rupture with decreased quality of life even though mental health was not impaired. Thus, the main variables that interfere with the decrease in the quality of life of patients with perineal rupture are the aspects of general health and physical role, while mental health is not too impaired (Triviño-Juárez, J.M.; Romero-Ayuso, D.; Nieto-Pereda, B.; Forjaz, M.J.; Criado-Álvarez, J.J.; Arruti-Sevilla, B.; Avilés-Gamez, B.; OliverBarrecheguren, C.; Mellizo-Díaz, S.; Soto-Lucía, 2017), (Chang et al., 2014), (Bai, Raat, Jaddoe, Mautner, & Korfage, 2018), (Calou et al., 2018), (Pia Seppänen et al., 2019).

Parity in our results was associated with postpartum QoL, unlike Prick et al., who reported that parity had no impact on postpartum QoL (Pia Seppänen et al., 2019). However, Bai et al. found that primiparas had a negative impact on postpartum quality of life (Chang et al., 2014). Meanwhile, Park and Choi stated that multipara was a determinant of lower quality of life (Pia M. Seppänen et al., 2018). The results of this study also show that parity is a dominant factor in determining the quality of life of post partum women. Lower quality of life was found in multiparous women compared to nulliparous women. Having health problems during pregnancy, such as high blood pressure, nausea, anxiety, and gestational diabetes are other predisposing factors for a poorer postpartum quality of life (Prick et al., 2015).

Cesarean section was also associated with a poorer postpartum QoL (Pia Seppänen et al., 2019). However, Triviño-Juárez et al did not identify the type of delivery as a factor influencing postpartum QoL in their Spanish study of 546 women (Martínez-Galiano et al., 2019). Further study is needed to determine whether problems in pregnancy also have a role in reducing the quality of life of women who experience perineal rupture as a continuation of this study. Juan also concluded that third/fourth degree perineal rupture and episiotomy led to a poorer postnatal quality of life, while others found no such association (N, 2014), (Pia M. Seppänen et al., 2018), (Pia Seppänen et al., 2019). However, their study did not distinguish between different types of perineal rupture, but consider more severe

perineal rupture to cause greater discomfort (Pia M. Seppänen et al., 2018), (Pia Seppänen et al., 2019), (Park & Choi, 2018), (Borgonovi & Pokropek, 2016).

Similar to Prick et al and Pia et al, women admitted to the ICU is one of the factors that causes a decrease in maternal postpartum quality of life (Calou et al., 2018), (Pia Seppänen et al., 2019). The results reported by Seppänen et al that the quality of life of women admitted to the ICU at 6 months postpartum tend to have scores similar to those given by the general population (Pia M. Seppänen et al., 2018). Gestational age at delivery was also identified as a risk factor for poorer quality of life scores (Bai et al., 2018), (Islam et al., 2013). This study also concluded that a higher degree of tearing had a significant relationship with a decrease in quality of life in postpartum women regardless of the type of perineal rupture.

3. Correlation Between Perineal Rupture and Women's Quality of Life Post Vaginal Delivery

In this study, women with perineal rupture after vaginal delivery were 46 (95.8%) compared to 22 (45.8%). Statistically, there was a significant relationship between perineal rupture and women's quality of life after vaginal delivery ($p < 0.05$). This is in line with the study conducted by Fazari in 2020 that there was a decrease in the quality of life in parturition patients with perineal rupture compared to those without rupture (Priddis, Schmied, & Dahlen, 2014).

In addition, this study is also in line with Ryan's 2018 study where patients with first and second degree perineal ruptures usually recover smoothly. However, in the more extensive third and fourth degrees, there is the possibility of residual defects that can have a significant impact on a woman's quality of life. The most common long-term problems are dyspareunia, perineal pain, and urinary and anal incontinence (Amorim, Silva, Kelly-Irving, & Alves, 2018).

This study is inconsistent with that of Scheer's 2009 study. In our study, we found that there was no reported reduction in quality of life after repeated vaginal births in women with a previous third or fourth degree rupture who had no evidence of anal sphincter incompetence (Fazari A, 2020).

Conclusion

Based on the results of the research and discussion that have been described previously, the following conclusions can be drawn: 1) The distribution of the frequency of perineal rupture in vaginal delivery found that grade 2 perineal rupture was the most common. 2) The quality of life of women after vaginal delivery is mostly impaired. 3) The decrease in women's quality of life after vaginal delivery is directly proportional to the degree of perineal rupture. 4) There is a significant relationship between perineal rupture and women's quality of life after vaginal delivery at the Network Hospital of Obstetrics & Gynecology Residency Program, Medical Faculty of Andalas University.

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