

IDENTIFICATION OF PERINEAL RUPTURE CHARACTERISTICS

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ABSTRAK: IDENTIFIKASI KARAKTERISTIK KEJADIAN RUPTUR PERINEUM

Latar Belakang: Ruptur perineum merupakan salah satu masalah besar yang berkaitan dengan morbiditas dan mortalitas setelah kelahiran. Salah satu komplikasi yang dapat terjadi akibat ruptur perineum yaitu infeksi dan perdarahan. Beberapa faktor penyebab terjadinya ruptur perineum yaitu faktor ibu, janin dan persalinan.

Tujuan: Mengidentifikasi karakteristik ibu bersalin yang mengalami ruptur perineum.

Metode: Metode penelitian ini yaitu penelitian deskriptif dan dilaksanakan di Puskesmas Kediri Kabupaten Lombok Barat. Sampel dalam penelitian ini adalah 80 ibu bersalin pada tahun 2023 yang mengalami ruptur perineum dengan teknik purposive sampling. Data yang di ambil dalam penelitian ini adalah data sekunder, diolah secara univariat, dan disajikan dalam bentuk tabel distribusi frekuensi.

Hasil: Hasil penelitian ini didapatkan dari 80 responden yaitu sebagian besar usia responden 20-35 tahun sebanyak 64 (80,0%), sebagian besar paritas responden multipara sebanyak 59 (73,8%), sebagian besar jarak kehamilan responden > 2 tahun sebanyak 71 (88,7%), sebagian besar responden dengan robekan derajat 2 sebanyak 68 (85,0%), serta berat bayi baru lahir sebagian besar 2500-4000 gram sebanyak 75 (93,7%).

Kesimpulan: Perlunya perhatian dan kesadaran bidan dan ibu hamil dengan kondisi usia < 20 tahun dan > 35 tahun, jarak kehamilan < 2 tahun, berat BBL > 4000 gram saat hamil terhadap kejadian ruptur perineum, sehingga dapat meminimalkan robekan perineum.

Saran: Diharapkan bidan meningkatkan kualitas dan kuantitas pelayanan pemeriksaan kehamilan sehingga dapat mendeteksi kelainan pada ibu hamil sejak dini sebagai upaya preventif terjadinya ruptur perineum terutama pada persalinan normal.

Kata Kunci: Karakteristik, Persalinan, Ruptur Perineum

ABSTRACT

Background: Perineal rupture is a major problem related to morbidity and mortality after birth. One of the complications that can occur due to perineal rupture is infection and bleeding. Several factors cause perineal rupture, namely maternal, fetal and childbirth factors.

Purpose: Identifying the characteristics of mothers who experience perineal rupture.

Method: This research method is descriptive research and was carried out at the Kediri Community Health Center, West Lombok Regency. The sample in this study was 80 mothers giving birth in 2023 who experienced perineal rupture using a purposive sampling technique. The data taken in this research is secondary data, processed univariately, and presented in the form of a frequency distribution table.

Results: The results of this study were obtained from 80 respondents, namely the majority of respondents aged 20-35 years as many as 64 (80.0%), the majority of respondents were multiparous as many as 59 (73.8%), the majority of respondents' pregnancy interval was > 2 years as many as 71 (88.7%), the majority of respondents with grade 2 tears were 68 (85.0%), and most of the newborns weighed 2500-4000 grams, 75 (93.7%).

Conclusion: There is a need for attention and awareness by midwives and pregnant women aged < 20 years and > 35 years, between pregnancies < 2 years, BBL weight > 4000 grams during pregnancy regarding the incidence of perineal rupture, so as to minimize perineal tears.

Suggestion: It is hoped that midwives will improve the quality and quantity of pregnancy examination services so that they can detect abnormalities in pregnant women early as an effort to prevent perineal rupture, especially in normal deliveries.

Keywords: Characteristics, Childbirth, Perineal Rupture

INTRODUCTION

Normal delivery according to the World Health Organization (WHO) is labor that begins spontaneously, has low risk at the beginning of labor, and remains so throughout the labor process. In normal delivery, the baby is born spontaneously in a posterior head presentation at a gestational age between 37 weeks and 42 complete weeks. After delivery, mother and baby were in good condition (Walyani, 2019).

Childbirth is also a process that is susceptible to complications that can harm the mother and baby and is one of the causes of maternal death. Postpartum mothers can experience various complications such as bleeding due to uterine atony, retained placenta and perineal rupture (Sigalingging and Sikumbang, 2018).

The prevalence of perineal rupture cases among mothers giving birth in the world is 2.7 million cases in 2020. This figure is expected to reach 6.3 million in 2050. On the Asian continent alone, 50% of women giving birth experience perineal rupture. Based on 2019 data from the Indonesian Ministry of Health, there were 4,221 maternal deaths in Indonesia, with most deaths caused by bleeding. In 2017, it was discovered that 75% of mothers who gave birth vaginally experienced perineal rupture in Indonesia (Kementerian Kesehatan Republik Indonesia, 2018b).

In Indonesia, the prevalence of birthing mothers who experience birth canal injuries is 85% of the 20 million mothers giving birth. Of the percentages, 85% of mothers in labor experienced injuries, 35% of mothers in labor experienced perineal rupture, 25% experienced cervical tears, 22% experienced vaginal injuries and 3% experienced uterine rupture. Postpartum hemorrhage is the main cause of 40% of maternal deaths in Indonesia. Until 2018, the maternal mortality rate was still quite high, namely 305 maternal deaths per 100,000 live births, which placed Indonesia in second place after Laos in ASEAN (Kementerian Kesehatan Republik Indonesia, 2018b).

Based on West Lombok health profile data in 2022, the MMR in West Lombok is 80 per 100,000 live births. This figure is smaller than in 2021, namely 90 per 100,000 live births. Most of them are caused by bleeding, one of the causes is perineal rupture (Syamsuri et al., 2022).

Perineal rupture is often a complication in childbirth, especially in vaginal delivery. Perineal rupture is a tear in the perineum or injury to the birth canal that occurs during the birth of a baby, whether using tools or not. The tears that occurred were

episiotomy wounds and mild spontaneous perineal tears (Al Thaydi et al., 2018).

Three important factors in the occurrence of perineal rupture are maternal factors, fetal factors, and birth procedure factors (Waldenström and Ekéus, 2017). Maternal factors include age, parity, primipara, and obesity (Oliveira et al., 2014). Birth spacing is also a maternal factor that influences perineal rupture (Lenden, Wardana, and Karmaya, 2020). Fetal factors include large birth weight and persistent posterior occiput position (Oliveira et al., 2014). Large babies (macrosomia), shoulder dystocia, large fetal head circumference are also factors related to the fetus (Waldenström and Ekéus, 2017). Meanwhile, factors related to labor include prolonged second stage, analgesic status, episiotomy, and assistance with vaginal delivery (Oliveira et al., 2014).

The impacts caused by perineal rupture include heavy bleeding which can spread to the lower uterine segment and heavy bleeding which causes the mother to be helpless, weak, blood pressure drops, anemia and weight loss. Perineal rupture can occur due to spontaneous rupture or episiotomy. The perineum performed by episiotomy must be performed for indications such as large babies, partus precipitatus, stiff perineum and abnormal delivery (Maisaroh and Yuliwati, 2019).

Based on data obtained from the 2021 West Nusa Tenggara Province Health Profile, it shows that 16,533 (9%) of 183,699 postpartum mothers experienced perineal rupture or birth canal tearing (BPS NTB, 2023).

The government's policy in an effort to prevent perineal rupture is to protect the perineum in the second stage of labor when the baby's head opens the vulva (diameter 5-6 cm). Based on Minister of Health Regulation number 28 of 2017 concerning licensing and implementation of midwife practice, midwives have the authority to cover maternal health services. One of the authorities that midwives have is suturing stage I and II birth canal wounds and providing comprehensive services. In Service Standards, midwives provide high quality care, caring for mothers, responsive to local culture during childbirth, leading clean and safe births, handling certain situations and emergencies to optimize the health of mother and baby (Kementerian Kesehatan Republik Indonesia, 2018a)

In an effort to reduce the impact, researchers are interested in identifying the characteristics of mothers who experience perineal rupture so that it is hoped that they can minimize the occurrence of perineal rupture which can cause bleeding.

RESEARCH METHODS

The method used in this research is descriptive, to find out an accurate description of the characteristics of the incidence of perineal rupture in mothers giving birth. This research was carried out at the Kediri Community Health Center, West Lombok Regency in October 2024.

The population in this study were all mothers giving birth at the Kediri Community Health Center, West Lombok Regency in 2023, totaling 402 people (Puskesmas Kediri, 2023). The sample in this study consisted of 80 mothers who gave birth with perineal rupture. The sampling technique uses a purposive sampling method (Sugiono, 2018).

The instrument used in this research is secondary data, namely data obtained by researchers from existing sources (Riadi and Prabawati, 2016). Data was obtained from patient archives/medical records at the Kediri Community Health Center, West Lombok Regency from January to December 2023 consisted of data on women giving birth according to the inclusion and exclusion criteria, namely age, parity, pregnancy distance, degree of perineal rupture, and weight of the newborn.

RESEARCH RESULTS

Respondent Characteristics

Table 1
Distribution of Respondents based on Age, Gravida, Parity, Degree of Perineal Rupture at Kediri Health Center in 2023

Category	N	%
Age		
At risk (< 20 years or > 35 years)	16	20,0
No Risk (20 to 35 years)	64	80,0
Parity		
Primipara	21	26,3
Multiparous	59	73,7
Pregnancy Spacing		
< 2 years	9	11,3
> 2 years	71	88,7
Degree of Perineal Rupture		
Degree 1	12	15,0
Degree 2	68	85,0
Newborn Weight		
> 4000 gram	5	6,3
2500-4000 gram	75	93,7

Source: Secondary data, 2023

Table 1 shows that most of the respondents were aged 20-35 years, 64 (80.0%). Parity was obtained by most respondents with multiparous

mothers as many as 59 (73.8%). The majority of respondents had a pregnancy interval of > 2 years, 71 (88.7%). The degree of perineal rupture of most respondents was grade 2, 68 (85.0%), and the weight of most newborns with a birth weight of 2500-4000 grams was 75 (93.7%).

DISCUSSION

Perineal tears are obstetric tears that occur in the perineal area due to the inability of the pelvic muscles and soft tissue to accommodate the birth of the fetus (O'Kelly and Moore, 2017; Sharma and Thokchom, 2020; Tirta Anggraini, 2020).

The results of this study show that the most commonly found maternal age ranges from 20-35 years, where mothers are of reproductive age, where mothers are in the safe zone which is considered physically and psychologically mature (Hukubun, Budiono, and Kurniawati, 2021). This is in accordance with several studies which say that the mother's age indicates that she is physically young, namely that the function of the body's organs is not yet optimal, especially those related to the birthing process, where the mother tends to have low perineal elasticity and this is the first pregnancy, the possibility of the cause being that the elasticity of the perineum is still stiff. Meanwhile, old age (above 35 years) can cause the elasticity of the perineum to decrease, making it easier for perineal rupture to occur (Hukubun, Budiono, and Kurniawati, 2021; Waldenström and Ekéus, 2017). Older age and very young women have an increased risk of increased incidence of perineal tears compared to women of normal age (Djaković et al., 2018; Goma, Khedr, and Gouda, 2020).

The reproductive organs of women aged < 20 years are not yet fully developed and the muscles in the perineal area are still stiff/inelastic so that during the birth process the perineum is susceptible to rupture. In addition, at the age of > 35 years, the function and quality of women's reproductive organs have decreased compared to the reproductive organs aged 20 - 35 years which have developed optimally for the process of pregnancy and childbirth. At this age, the emotional level is more stable compared to < 20 years of age (Shariff, 2016).

However, the causes of perineal rupture are not only purely influenced by the mother's age, but also physical and sexual activity. Women of reproductive age, namely 20-35 years who do not engage in physical activity/sports and are not active in sexual relations, can experience perineal rupture. Apart from that, infections of the reproductive organs also affect the elasticity of the connective tissue and muscles at the bottom of the genitalia, making them

stiff and potentially prone to perineal rupture (Sigalingging and Sikumbang, 2018).

In this study, it was found that multiparous mothers experienced the most ruptures (73.7%) in accordance with the theory which states that perineal tears occur in almost all first deliveries and are not uncommon in subsequent deliveries. Apart from that, high parity also does not preclude the possibility of the mother giving birth again in a short time span. As is known, births less than two years old are classified as high risk because they can cause complications of perineal rupture during delivery (Juliati, Riskina, and Riska, 2020; Kurniawan et al., 2020). In line with research by Hukubun (2021) where the mother's parity is closely related to the incidence of perineal rupture (Hukubun, Budiono, and Kurniawati, 2021). The risk of perineal rupture will be lower in mothers with more than 5 times parity, this is due to the mother's perineum being more flexible and elastic (Jansson et al., 2020; Mary, Kumar, and Padmanaban, 2019).

The results of this study also showed that the majority of pregnancies were > 2 years, 71 (88.7%). A pregnancy gap of less than two years is considered a high-risk pregnancy because it increases the risk of complications during childbirth. A pregnancy interval of 2-3 years is a safer pregnancy interval for the mother and fetus. After delivery, the reproductive organs need time to recover, especially the muscles and tissue in the perineal area, so that too close a pregnancy distance increases the risk of perineal rupture. This is made worse by a history of third or fourth degree perineal rupture and parity (Juliati, Riskina, and Riska, 2020; Keintjem, Purwandari, and Lantaa, 2018).

The results of this study showed that the majority experienced grade 2 birth canal tears (85%). Grade 2 perineal tears include the vaginal mucosa, perineal skin and perineal muscles. Wound repair is carried out after local anesthesia is given, then the urogenital diaphragm muscles are connected in the midline with sutures and then the wound in the vagina and perineal skin is closed by including the underlying tissues (Saifuddin et al., 2014).

Perineal tears could occur because respondents during pregnancy did not do perineal massage so that their perineum was stiff (the perineum was not flexible) and it was easy for rupture to occur. Apart from that, there may also be respondents who pushed not according to theory so that the buttocks were lifted or pushed too hard, causing the birth canal to tear when pushed by the fetal head too quickly. This is in accordance with the theory put forward by Saleha (2009).

Apart from that, the degree of perineal laceration, whether mild, moderate or severe, will influence the pain felt by the mother. A mild degree of perineal laceration will not cause severe pain because the injuries that occur are usually only grade 1 lacerations, namely tears that only occur in the vaginal mucosa, posterior quadriceps, and also the perineal skin. In grade 1 lacerations, stitches are usually not needed because the wound can close itself with good wound care. In some cases, mothers in labor can experience grade 2 perineal lacerations, namely lacerations involving the vaginal mucosa, posterior quadriceps, skin and muscles of the perineum. In grade 2 lacerations, stitches are usually needed, but only a little so that they do not cause severe pain after stitching (Mulati and Susilowati, 2018).

The birth weight of the baby is obtained from the results of weighing in the first 24 hours of birth. The weight of the newborn can affect the second stage of labor. The results of this study showed that the majority of newborn babies weighing 2500-4000 grams was 75 (93.7%). The baby's excess weight increases the risk of perineal rupture because the perineum is not strong enough to withstand the large stretch of the baby's head. This is caused by trauma, soft tissue damage, and is exacerbated by shoulder dystocia. This risk can actually be prevented by examining the estimated fetal weight using the Johnson formula based on the height of the uterine fundus and gestational age by a midwife or the results of an ultrasound examination by a doctor (Cunningham et al., 2009; Suryani, 2015).

CONCLUSION

Characteristics identified with the incidence of perineal rupture in normal delivery include maternal age, parity, gestational age, degree of perineal tear, and birth weight of the baby. There is a need for attention and awareness by midwives and pregnant women aged < 20 years and > 35 years, between pregnancies < 2 years, BBL weight > 4000 grams during pregnancy regarding the incidence of perineal rupture, so as to minimize perineal tears.

Apart from that, it is hoped that health workers, especially midwives, will improve the quality and quantity of pregnancy examination services so that they can detect abnormalities in pregnant women early on as an effort to prevent perineal rupture, especially during normal births, so that the morbidity rate among mothers in labor can be reduced.

SUGESTION

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REFERENCES

- BPS NTB. 2023. 4 BPS Nusa Tenggara Barat *Profil Kesehatan Nusa Tenggara Barat 2022*.
- Cunningham, F. et al. 2009. *Williams Obstetrics: 23rd Edition*. 23rd ed. Mcgraw-hill.
- Djaković, Ivka et al. 2018. "Third and Fourth Degree Perineal Tear in Four-Year Period at Sestre Milosrdnice University Hospital Center, Zagreb, Croatia." *Open Access Macedonian Journal of Medical Sciences* 6(6): 1067–71.
- Goma, Lamiaa, Nahed Khedr, and Ahlam Gouda. 2020. "Effect of Utilizing Hands-on Versus Off Method During Delivery of Fetal Head on Occurrence of Perineal Tear." *Mansoura Nursing Journal* 7(2): 136–52.
- Hukubun, Yuni, Dwi Izzati Budiono, and Eighty Mardiyana Kurniawati. 2021. "The Relationship Between Age, Parity, and Birth Weight With the Degree of Perineal Rupture in the Rsud Jayapura." *Indonesian Midwifery and Health Sciences Journal* 5(1): 103–15.
- Jansson, Markus Harry et al. 2020. "Risk Factors for Perineal and Vaginal Tears in Primiparous Women – the Prospective POPRACT-Cohort Study." *BMC Pregnancy and Childbirth* 20(1): 1–14.
- Juliati, Zulfa Riskina, and Cut Afra Riska. 2020. "Relationship Of Birth Distance And Weight Of Birth With The Event Of The Rupture Perineum In Labor Normal In Rsud Tgk Chik Ditiro Sigli Pidie District." *Journal of Healthcare Technology and Medicine* 6(1): 599–607.
- Keintjem, Femmy, Atik Purwandari, and Novia Alida Lantaa. 2018. "Faktor-Faktor Yang Berhubungan Dengan Kejadian Ruptur Perineum Dalam Proses Persalinan Normal." *JIDAN (Jurnal Ilmiah Bidan)* 5(2): 56–62.
- Kementerian Kesehatan Republik Indonesia. 2018a. *Peraturan Menteri Kesehatan No. 28 Tahun 2017 Tentang Izin Dan Penyelenggaraan Praktik Bidan*. Jakarta: Kementerian Kesehatan Republik Indonesia.
- . 2018b. *Profil Kesehatan Indonesia Tahun 2018*.
- Kurniawan, Fajar et al. 2020. "The Risk Factor of Pregnant Gymnam on The Incidence of Ruptur Perineum in Aliyah Hospital Kendari." *Jurnal Kebidanan* 10(2): 138–42.
- Lenden, Airin Priskah, I Nyoman Gede Wardana, and I Nyoman Mangku Karmaya. 2020. "Paritas Dan Jarak Kelahiran Sebagai Profil Pasien Dengan Ruptur Perineum Pada Persalinan Normal Di RSUD Sanglah Denpasar Tahun 2018." *Jurnal Medika Udayana* 9(9): 6–8.
- Maisaroh, Siti, and Yuliwati. 2019. "FAKTOR YANG BERHUBUNGAN DENGAN RUPTURE PERINEUM." *Jurnal Ilmu Kesehatan Karya Bunda Husada* 17(2): 32–40.
- Mary, Dr. Vinitha Padmini, Dr. GV Anil Kumar, and S Padmanaban. 2019. "Obstetric Anal Sphincter Injuries (Oasis): A Prospective Observational Longitudinal Study." *International Journal of Clinical Obstetrics and Gynaecology* 3(5): 22–26.
- Mulati, Triwik Sri, and Dewi Susilowati. 2018. "Pengaruh Derajat Robekan Perineum Terhadap Skala Nyeri Perineum Pada Ibu Nifas Di Kabupaten Wonogiri." *Jurnal Kebidanan dan Kesehatan Tradisional* 3(1): 51–56.
- O'Kelly, Sonia M., and Zena Eh Moore. 2017. "Antenatal Maternal Education for Improving Postnatal Perineal Healing for Women Who Have Birthed in a Hospital Setting." *Cochrane Database of Systematic Reviews* 2017(12).
- Oliveira, Larissa Santos et al. 2014. "Trauma Perineal Após Parto Vaginal Em Parturientes Saudáveis." *Sao Paulo Medical Journal* 132(4): 231–38.
- Puskesmas Kediri. 2023. *Data Puskesmas Kediri Tahun 2023*.
- Riadi, Edi, and Th. Arie Prabawati. 2016. *Statistika Penelitian: Analisis Manual Dan IBM SPSS*. Yogyakarta: Andi Offset.
- Saifuddin, Abdul Bari, Gulardi Hanifa Wiknjosastro, Biran Affandi, and Djoko Waspodo. 2014. *Buku Panduan Praktis Pelayanan Kesehatan Maternal Dan Neonatal*. Jakarta: PT Bina Pustaka Sarwono Prawirohardjo.
- Saleha, Siti. 2009. "Asuhan Kebidanan Pada Masa Nifas." In *Salemba Medika*.
- Shariff, Fonda Octarianingsih. 2016. "Faktor-Faktor Yang Berhubungan Dengan Kejadian Ruptur Perineum Pada Persalinan Aterm Di Rumah Sakit Umum Daerah Tangerang Tahun 2016." *Jurnal Medika Malahayati* 3(1): 20–25.
- Sharma, Vanita, and Somibala Thokchom. 2020. "Assessment of Perineal Trauma during Child Birth by Estimation of Striae Gravidarum Score among Post-Natal Mothers at Selected Hospitals of New Delhi." *The Nursing Journal of India* 104–7.
- Sigalingging, Muslimah, and Sri Rintani Sikumbang.

2018. "Faktor Yang Berhubungan Dengan Terjadinya Rupture Perineum Pada Ibu Bersalin Di RSUD Imelda Pekerja Indonesia Medan." *Jurnal Bidan Komunitas* 1(3): 161.
- Sugiono. 2018. *Metode Penelitian Kuantitatif*. Bandung: Alfabeta.
- Suryani. 2015. "FAKTOR-FAKTOR YANG BERHUBUNGAN DENGAN RUPTUR PERINEUM PADA PERSALINAN NORMAL DI RUMAH BERSALIN ATIAH." 278 *Jurnal Kesehatan IV*(Faktor-Faktor Yang Berhubungan Dengan Ruptur Perineum Pada Persalinan Normal): 277–83.
- Syamsuri, M. Bisri et al. 2022. 4 Dinas Kesehatan Kabupaten Lombok Barat *Profil Kesehatan Kabupaten Lombok Barat*.
- Al Thaydi, Al Hanouf, Thamer Al Ghamdi, Ahmad Talal Chamsi, and Elham El Mardawi. 2018. "Perineal Tears Incidence and Risk Factors; A Four Years Experience in a Single Saudi Center." *Interventions in Gynaecology and Women's Healthcare* 1(5): 100–103.
- Tirta Anggraini. 2020. "Hubungan Berat Badan Bayi Lahir Dengan Tingkat Robekan Perineum Pada Ibu Bersalin Normal Di Rumah Sakit Pusri Palembang Tahun 2019." *Jurnal Kebidanan : Jurnal Medical Science Ilmu Kesehatan Akademi Kebidanan Budi Mulia Palembang* 10(1): 53–59.
- Waldenström, Ulla, and Cecilia Ekéus. 2017. "Risk of Obstetric Anal Sphincter Injury Increases with Maternal Age Irrespective of Parity: A Population-Based Register Study." *BMC Pregnancy and Childbirth* 17(1): 1–10.
- Walyani, Elisabeth Siwi. 2019. *Asuhan Kebidanan Persalinan & Bayi Baru Lahir*. 1st ed. Yogyakarta: Pustaka Baru.