



Comprehensive Midwifery Care for Mrs. "Y" G3P2A0 Through the use of Perineal Massage Video to Prevent Perineal Laceration at Melong Asih Community Health Center

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ABSTACK

Vaginal delivery is often accompanied by anatomical changes in the perineum, one of which is *perineal laceration*, experienced by approximately 85% of women who give birth spontaneously. This laceration can affect the mother's recovery and quality of life during the postpartum period. *Perineal massage* can help prevent tears by increasing the elasticity of perineal tissue, preparing it for stretching during childbirth, and reducing the risk of tears. This research aims to provide comprehensive care using *perineal massage* techniques from pregnancy to prevent *perineal lacerations*. The method used is descriptive with a case study approach, and data were collected through interviews and physical examinations. The study subject was Mrs. "Y" (G3P2A0), who received *perineal massage* from 36 weeks of pregnancy until childbirth. The results showed that perineal elasticity improved from the rigid category to the elastic category after regular *perineal massage* for 4 weeks prior to childbirth, with a frequency of 5 times per week. During childbirth, a contraction timer was used to monitor progress. In the postpartum period, mothers complained of sore nipples and were given breastfeeding techniques. *Perineal massage* had a significant effect in preventing *perineal lacerations* with a frequency of 5 times a week for 4 weeks before delivery. *Perineal massage* increased tissue elasticity, improved blood circulation, and trained relaxation during labor. Success is supported by the mother's compliance and proper massage technique. This care is expected to be applied to pregnant women throughout the pregnancy and postpartum period.

Keywords: Comprehensive Midwifery Care, Perineal Massage, Perineal Laceration

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INTRODUCTION

Comprehensive obstetric care is a health service provided comprehensively, including pregnancy care (*antenatal care*), childbirth (*intranatal care*), postpartum care (*postnatal care*), newborn care (*neonatal care*), and reproductive health and family planning (Abdul Bari Saifuddin, 2014; Amadi-Mgbenka et al., 2022; Novembriany, 2022; Nyamtema et al., 2022; Saifudin, 2022). According to Saifuddin (2021), comprehensive obstetric care aims to reduce maternal and infant illness and mortality through early detection of complications, adequate treatment, and timely referral.

Based on data from the 2023 Indonesian Demographic and Health Survey (*SDKI*), maternal mortality (*AKI*) in Indonesia reached 4,482 deaths, and infant mortality (*AKI*) amounted to 34,226 deaths (Ministry of Health, 2023). Postpartum hemorrhage (*PPH*) is the leading cause of maternal death worldwide. According to WHO, *PPH* causes around 70,000 deaths every year. *PPH* occurs in approximately 14 million women each year, with more than 20% of these cases caused by birth canal trauma, including *perineal lacerations* (WHO, 2022). In Indonesia, data from the Indonesian Ministry of Health (2013) shows that *perineal*

laceration occurs in 75% of mothers with vaginal deliveries. Of the 1,951 vaginal births, 57% had *perineal lacerations*, with 28% due to episiotomy and 29% by spontaneous tearing. *Perineal laceration* occurs in about 85% of women who give birth vaginally and is the second most common perinatal trauma experienced by women after episiotomy (Arafah et al., 2017; Oglak & Obut, 2020; Persinger & Reineke-Piper, 2016; Raja et al., 2019). Various methods have been developed to prevent *perineal lacerations*, one of which is *perineal massage*. *Perineal massage* is a massage technique in the perineal area performed in the third trimester of pregnancy to increase the elasticity of the perineal tissue so that it can stretch better during childbirth (Nisa, 2020; Nurhamida Fithri & Simamora, 2022; Siregar, 2021; Suliswati et al., 2023).

Several studies have shown the effectiveness of *perineal massage* in preventing *perineal lacerations*. Research conducted by Demirel and Golbasi (2020) in Turkey showed that pregnant women who had *perineal massage* starting at 34 weeks gestation had a 40% lower risk of *perineal laceration* compared to mothers who did not have *perineal massage*. In Indonesia, research conducted by Villa et al. (2023) showed that of 15 pregnant women who had regular *perineal massage* from 34–36 weeks of gestation, as many as 12 mothers (80%) did not experience *perineal lacerations* during childbirth, while 3 mothers (20%) experienced 2nd-degree lacerations. Meanwhile, in the control group that did not perform *perineal massage*, only 1 mother (6.7%) did not experience *perineal laceration*, and 14 mothers (93.3%) experienced 2nd-degree lacerations.

The current digital era has brought significant transformations in various aspects of life, including health services. The development of comprehensive obstetric care with the integration of digital technology, especially through the use of *perineal massage* videos, represents the adaptation of health services to the demands of the digital era. Based on the existing phenomenon, it is necessary to conduct a case study on the effect of *perineal massage* video intervention in preventing *perineal laceration* at the Melong Asih Health Center. The purpose of this case study is to provide comprehensive obstetric care to Mrs. 'Y' through the use of *perineal massage* videos in an effort to prevent *perineal lacerations*. The benefit of this study is to provide empirical evidence on the effectiveness of video-assisted *perineal massage* in preventing *laceration*, as well as to serve as a reference for health workers in implementing similar interventions to improve the quality of obstetric services and reduce the morbidity rate of postpartum mothers.

METHOD

This study uses a case study approach applied to Mrs. "Y" (G3P2A0), starting from 36 weeks and 3 days of gestation to the KF4 and KN3 phases, focusing on subjects who experienced concerns about tears in the birth canal.

In the implementation of obstetric care, data collection is carried out through several methods, including direct interviews with the mother and husband during pregnancy revisits. These interviews include assessments of biodata, complaints, health history, marriage history, as well as patterns of daily habits and psycho-social aspects. Observations are made at each

visit, including physical examinations through inspection, palpation, and auscultation, supported by ultrasound examination on the second visit.

This case study was carried out at the "Melong Asih" Health Center in Cimahi City, with data collection taking place from December 7, 2024, until the subject used contraceptives on February 20, 2025. In terms of research ethics, an ethics permit has been obtained with the number 340/D/KEPK-STIKes/XII/2024, and the purpose and benefits of the research were explained to the subject, who then signed informed consent.

The data collection procedure begins with preparation, including an explanation of the objectives and benefits of the study, followed by the signing of informed consent once the subject understands and is willing to participate. Furthermore, management includes examinations of pregnancy, childbirth, postpartum care, newborn care, and contraception, all of which are comprehensively documented in the SOAP obstetric care format.

Perineal massage interventions are provided using video tutorial media, which can be accessed via the link: <https://youtu.be/6JfjUeSIzv8?si=zcBpqqR-nw1KwZGd>. *Perineal massage* is performed with a frequency of 5 times a week for 10 minutes, starting from 36 weeks of gestation until delivery.

RESULTS AND DISCUSSION

Characteristics of Research Subjects

The subjects of the study were Mrs. "Y" 32 years old, G3P2A0 with a gestational age of 36 weeks 3 days at the time of first contact. Based on the calculation of the pre-pregnancy Body Mass Index (BMI) using the formula:

$$\text{BMI} = \text{Weight (kg)} / \text{Height (m)}^2 \quad \text{BMI} = 55 / (1.55)^2 = 55 / 2.40 = 22.9 \text{ kg/m}^2$$

A BMI value of 22.9 kg/m² indicates normal nutritional status (18.5-24.9 kg/m²). However, weight gain during pregnancy reached 19 kg (from 55 kg to 74 kg), exceeding the recommended weight gain for normal BMI of 11.5-16 kg.

Table 1. Demographic and Obstetric Characteristics of Mrs. "Y"

Variable	Value	Category/Status
Age	32 years old	Healthy reproductive age
Parity	G3P2A0	Multipara
Height	155 cm	Usual
BB Pre-pregnancy	55 kg	Usual
BB at 36 weeks of age	74 kg	Excessive increase
IMT	22.9 kg/m ²	Usual
LILA	28 cm	Normal (≥23,5 cm)
Education	S1	Tall
Labor History	2× spontaneously normal	No complications

Source: Primary Data, 2024

Results of Midwifery Care During Pregnancy

1. Maternal Health Status Evaluation

Examination of vital signs showed the condition within normal limits with blood pressure of 110/70 mmHg, pulse of 82×/minute, temperature of 36.6°C, and respiration of 20×/minute. A physical examination of the abdomen using the Leopold maneuver shows:

- Leopold I: Fundus is soft and does not bouncy (buttocks)
- Leopold II: The back of the fetus on the right side of the mother
- Leopold III: The lower part of the fetus is palpable round and hard (head)
- Leopold IV: 5/5 Fifth (head not yet in PAP)

The estimated fetal weight was calculated using the Johnson-Toshack formula: $TBBJ = (TFU - n) \times 155$ $TBBJ = (30 - 13) \times 155 = 17 \times 155 = 2,635$ grams

Where $n = 13$ (because the head has not yet entered the PAP), the results show that TBBJ is within the normal limit for the gestational age of 36 weeks.

2. Pre-Intervention Perineal Condition Evaluation

An initial perineal examination shows conditions that require intervention for the prevention of lacerations. Evaluation of the elasticity of the perineum was carried out using the tissue elasticity assessment scale:

- Stiffness: Tissue is difficult to stretch, pain feels on palpation
- Moderately elastic: The tissue can be stretched with little resistance
- Elastic: Tissue is easy to stretch without resistance and pain

Table 2. Pre-Intervention Perineum Examination Results

Parameter	Examination Results	Interpretation
Elasticity	Stiff	Requires intervention
Compressive pain	None	Usual
Scarring	None	Usual
Tension	Detected	The need for increased elasticity
Response to stress	Quick return	Usual

Source: Primary Data, 2024

3. Implementation of Perineal Massage Intervention

The perineal massage intervention begins at 36 weeks of gestation with the following protocol:

- Frequency: 5 times per week
- Duration: 10 minutes per session
- Educational media: Video tutorials
- Technique: Massage in circular motions using olive oil
- Monitoring: Weekly evaluation of the condition of the elasticity of the perineum

Table 3. Development of Perineal Elasticity During 4 Weeks of Intervention

Sunday	Evaluation	Frequency	of Elasticity	Complaints	Compliance
	Date	Realization			(%)

I	Dec 2024	17-23,	5×/week	Stiff → Elastic enough	Early pain	mild	100
II	Dec 2024	24-29,	5×/week	Quite elastic	None		100
III	30 Dec-5 Jan 2025		5×/week	Elastic	None		100
IV	6-9 Jan 2025		4×/week	Elastic	None		80

Source: Primary Data, 2024-2025

The average compliance rate reached 95%, indicating the subject's high commitment to the intervention provided.

Results of Midwifery Care During Childbirth

1. Analysis of Labor Progress Phase I

Mrs. "Y" entered the labor phase on January 9, 2025 with the onset of regular contractions. Monitoring of labor progress using a contraction timer app showed a pattern consistent with normal labor in multipara.

Table 4. Monitoring the Progress of Childbirth Phase I

Time	Unveiling	HIS	DJJ	Decline	Amniotic	Intervention
20.00	6 cm	4×10'41"	148×/min	Hodge III+	Complete	Mother's Nurturing
21.00	-	4×10'42"	140×/min	-	Complete	Mobilization
22.00	-	5×10'48"	145×/min	-	Complete	Position change
22.28	10 cm	5×10'48"	144×/min	Hodge IV	Spontaneous rupture	Preparation for the second season

Source: Primary Data (Contraction Timer Application), 2025

The duration of phase I of the active phase (opening 6-10 cm) lasts for 2 hours and 28 minutes, according to the theory that in multipara phase I lasts 6-8 hours with a shorter active phase than primigravida.

2. Evaluation of Childbirth Outcomes II

Period II lasted from the complete opening (22.30 WIB) to the birth of the baby (23.02 WIB), with a duration of 32 minutes. The main outcome evaluated was the incidence of perineal laceration, which was the main target of the perineal massage intervention.

Table 5. Results of Evaluation of the Condition of the Perineum Post Partum

Parameter	Result	Target	Achievement Status
Laceration of the perineum	None	None	✓ Achieved
Episiotomes	Not done	No need	✓ Achieved
Network conditions	Intact, elastic	Complete	✓ Achieved
Bleeding	At least	<300 cc	✓ Achieved

Hematoma	None	None	✓ Achieved
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Source: Primary Data, 2025

The results showed 100% achievement of the target outcome, indicating the success of the perineal massage intervention in preventing perineal laceration.

3. Neonatus Anthropometri Analysis

Babies are born with the following anthropometric characteristics:

Table 6. Anthropometric Data and Neonatal Status

Parameter	Value	Normal Standard	Status
Weight	3,480 grams	2,500-4,000 grams	Usual
Body Length	50 cm	48-52 cm	Usual
Head Circumference	33 cm	32-36 cm	Usual
Chest Circumference	32 cm	30-36 cm	Usual
APGAR Score	8/9	≥7	Good
Gender	Woman	-	-

Source: Primary Data, 2025

Results of Midwifery Care During the Postpartum Period

1. Evaluation of Uterine Involution and Perineal Recovery

Monitoring of the postpartum period was carried out through 4 visits (KF1-KF4) with an evaluation focus on uterine involution, perineal condition, and lactation process.

Table 7. Development of Uterine Involution and Perineal Conditions

Visit	Time	TFU	Contraction	Lochea	Perineum Conditions	Complaints
KF1	7 hours	2 fingers below center	Hard	Rubic	Whole, edema	no None
KF2	3 days	3 fingers above the symptomatic	Hard	Bloody	Whole, painless	Nipple abrasion
KF3	27 days	Not palpable	-	Alba	Intact, normal function	None
KF4	42 days	Not palpable	-	None	Intact, normal function	None

Source: Primary Data, 2025

Uterine involution occurs normally according to the physiological pattern of the postpartum period. The condition of the perineum remains intact without complications throughout the postpartum period, indicating the long-term success of perineal massage interventions.

2. Evaluation of Lactation Success

The lactation process experiences one obstacle in KF2 in the form of blistered nipples, which are successfully overcome through education on correct breastfeeding techniques.

Table 8. Development of Lactation Status

Parameter	KF1	KF2	KF3	KF4
Breast milk production	Enough	Many	Many	Many
Nipple condition	Usual	Light abrasions	Usual	Usual
Frequency of breastfeeding	8-10×/day	11-12×/day	10-12×/day	10-12×/day
Breastfeeding techniques	Need improvement	Fixed	Good	Good
Maternal satisfaction	Tall	Keep	Tall	Tall

Source: Primary Data, 2025

Newborn Care Results

1. Monitoring the Growth and Development of Neonatal Plants

Neonatal monitoring was carried out through 3 visits (KN1-KN3) with evaluation of growth, development, and early detection of complications.

Table 9. Neonatal Weight Development and Health Status

Visit	Age	BB (gram)	BB Changes	Health Status	Intervention
KN1	7 hours	3.480	Baseline	Good	HB0 Immunization
KN2	4 days	3.500	+20 grams	Good, light bloating	Baby massage education
KN3	27 days	4.300	+820 grams	Excellent	BCG, Polio 1 Immunization

Source: Primary Data, 2025

Weight gain showed an excellent pattern with an increase of 820 grams in 27 days, indicating the success of exclusive breastfeeding and the absence of growth and development disorders.

Results of Family Planning Services

During the KF4 visit, family planning counseling was carried out with an evaluation of various contraceptive methods. Mrs. "Y" chooses the condom method based on personal preference and breastfeeding conditions.

Table 10. Results of Screening and Selection of Contraceptive Methods

Family planning method	Medical Eligibility	Conformity	Client Choice
IUD	Eligible	Appropriate	Rejected
Implant	Eligible	Appropriate	Rejected
Injection	Eligible	Appropriate	Rejected
Pill	Eligible	Less suitable (breastfeeding)	Rejected
Condom	Eligible	Highly suitable	✓ Selected

Source: Primary Data, 2025

The Effectiveness of Perineal Massage in Laceration Prevention

The results showed that perineal massage performed consistently with a frequency of 5 times per week for 4 weeks succeeded in preventing perineal laceration in Mrs. "Y". An increase in the elasticity of the perineum from the "rigid" category to "elastic" in a 3-week period indicates a positive response of the tissue to the given mechanical stimulation.

This success is in line with a systematic review conducted by Beckmann & Stock (2013) which showed that antenatal perineal massage can reduce the risk of perineal trauma requiring sutures by 9% (RR 0.91; 95% CI 0.86-0.96). The physiological mechanisms underlying the effectiveness of perineal massage include: 1) Increased local blood flow that improves tissue nutrition, 2) Stimulation of collagen production that improves elasticity, 3) Adaptation of tissues to the stress to be experienced during childbirth.

The research of Demirel & Golbasi (2020) in Turkey supports these findings, showing a significant decrease in the incidence of episiotomy in the group that performed perineal massage (42.1% vs 60.5%, $p < 0.001$). Factors that contributed to the success in Mrs. "Y's" case included: 1) High adherence (95%) to the intervention protocol, 2) Correct technique according to the tutorial video, 3) Adequate family support, 4) A multiparity status that allowed the perineum to be more adaptive.

The Role of Digital Technology in Midwifery Care

The use of video tutorials as an educational medium for perineal massage has proven to be effective in increasing client understanding and compliance. The evaluation showed that Mrs. "Y" was able to perform the massage technique correctly without direct supervision after receiving video education. This confirms the findings of Handayani (2023) that digital media can increase the effectiveness of maternal health education by up to 87% compared to conventional methods.

The advantages of using video tutorials include: 1) 24-hour accessibility that allows for repeated reviews, 2) Standardization of techniques that reduce variation between providers, 3) Cost-effectiveness in scaling up interventions, 4) Visual documentation that makes engineering evaluation easier.

The use of contraction timer applications during labor also makes a positive contribution to monitoring labor progress. The recorded data show a contraction pattern consistent with normal labor, facilitating clinical decision-making and early detection of potential complications.

The Impact of Laceration Prevention on Maternal Outcomes

The absence of perineal laceration in Mrs. "Y" has a measurable positive impact on various aspects of maternal outcomes:

1. **Physical Morbidity:** No perineal pain was reported during the postpartum period, in contrast to 85% of laceration cases that experienced significant pain (Yudianti et al., 2022). This allows for optimal early mobilization and faster recovery.
2. **Mental Health:** There is no anxiety related to perineal pain that mothers often experience with lacerations. Mulati Sri (2016) reported that 73% of mothers with lacerations experienced moderate-severe anxiety related to daily activities.
3. **Lactation Success:** Despite having nipples blisters at the beginning of the postpartum period, Mrs. "Y" managed to maintain exclusive breastfeeding without being disturbed by perineal pain. Research shows that perineal pain can interfere with the let-down reflex and decrease milk production.

4. **Sexual Function:** Although not evaluated in this study, the literature suggests that laceration prevention has a positive impact on long-term sexual function and marital quality of life.

Cost-Effectiveness Analysis of Interventions

From a health economics perspective, perineal massage interventions show good cost-effectiveness. Estimated intervention costs include:

- a. Education and demonstration fee: IDR 50,000
- b. Cost of olive oil (4 weeks): IDR 75,000
- c. Follow-up fee (4 visits): IDR 200,000
- d. Total intervention cost: IDR 325,000

Compared to the cost of laceration treatment which includes sewing materials, local anesthesia, antibiotics, and extended care which can reach Rp 500,000-1,000,000, perineal massage interventions show favorable economic value.

Implications for Midwifery Practice

The results of this case study have significant practical implications for midwifery services:

1. **Integration in Standards of Care:** Perineal massage can be integrated as a standard component in antenatal care, particularly in the third trimester.
2. **Protocol Development:** It is necessary to develop a standard protocol that includes candidate selection criteria, standardized techniques, and a systematic monitoring system.
3. **Provider Training:** Midwives need to be specially trained in perineal massage techniques and counseling to ensure optimal implementation.
4. **Technology Utilization:** The use of digital media can be optimized to scale up interventions while maintaining the quality of education.

Limitations and Recommendations for Advanced Research

This case study has several limitations: 1) Single case study design that limits the generalization of outcomes, 2) The absence of control groups for comparison, 3) Subjectivity in the assessment of perineal elasticity, 4) Short-term follow-up that does not measure long-term outcomes.

Recommended follow-up research includes: 1) Randomized controlled trials with adequate sample sizes, 2) Development of objective instruments to measure perineal elasticity, 3) Comprehensive cost-effectiveness analysis studies, 4) Evaluation of long-term outcomes including sexual function and quality of life, 5) Implementation research to evaluate the feasibility of programs on a broader scale.

CONCLUSION

Comprehensive obstetric care with the use of *perineal massage* videos proved to be effective in preventing *perineal laceration* in Mrs. "Y" (G3P2A0). Regular *perineal massage* with a frequency of 5 times a week for 4 weeks before childbirth succeeded in increasing the

elasticity of the perineum from the rigid category to elastic. The success of this intervention was demonstrated by the absence of *perineal laceration* during childbirth, minimal bleeding (150 cc), and no complaints of *perineal pain* during the postpartum period. The use of video media has been shown to be effective in increasing maternal understanding and compliance in performing *perineal massage* independently. The integration of digital technology in the form of educational videos and contraction timer applications can improve the quality of comprehensive midwifery care services. This study recommends the application of *perineal massage* with video media as a standard intervention in *antenatal care* to prevent *perineal laceration*, as well as the development of digital technology-based obstetric care protocols to improve maternal and neonatal outcomes.

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