STRADA Jurnal Ilmiah Kesehatan
DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

The Effect of Perineal Massage On Perineal Rupture Incidence On Primipara Mothers' Labor In Kasih Ibu Clinic In 2020

Cholisah Suralaga*, Analia, Sri Dinengsih
Universitas Nasional Jakarta, Indonesia
** Correspondent Author: cholisah.suralaga@civitas.unas.ac.id*

ABSTRACT
Labor is a physiological thing which can also cause complications. There are various kinds of complications in the delivery process, one of which is the birth canal, namely perineal rupture. Based on a preliminary study that was carried out at Kasih Ibu Clinic in May - June 2020, there 83 mothers who experienced incidence of spontaneous perineal rupture experienced by primigravida mothers out of 135 normal deliveries, while those who did not experience perineal rupture were 52 people (38, 5%). One of the ways to reduce perineal rupture is by performing perineal massage to improve health, blood flow, and perineal elasticity. This research was performed to examine the effect of perineal massage on perineal rupture among mother with primipara childbirth in *Kasih Ibu* clinic 2020. A quasi-experiment was used to conduct the current research by using post-test with control group design was conducted. There were 15 in the intervention group and 15 others in the control group. A total sampling was used. The independent t – test was used to identify the mean differences between groups. Results obtained that there was a significant effect of perineal massage on perineal rupture among mother with primipara labor in kasih ibu clinic 2020 with p-value = 0.009 (*p-value* < α = *0.05).* Perineal massage can prevent the occurrence of perineal rupture in normal delivery. Perineal massage can be applied intensively in kasih ibu clinics, especially for primigravida pregnant women.

Keywords: Perineal Massage, Primigravida, Perineal Rupture

Received March 17, 2021; Revised April 8, 2021; Accepted April 28, 2021

STRADA Jurnal Ilmiah Kesehatan
DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

BACKGROUND

Labor is a physiological event experienced by every woman. Every woman wants to go through normal labor process. Normal labor is started with regular uterine contractions which is followed by cervical opening until the release of the conception results, including the fetus, placenta, amniotic fluid, and amniotic fluid from the uterus through vagina, in which this process is done by the mother's own effort and strength (Sarwono, 2016).

Labor is a physiological process in which complication can occur. There are various complications which can occur during labor process, one of them occurs in the birth canal, which is the perineal rupture. Perineal rupture can occur spontaneously (rupture) or on purpose (episiotomy). In general, perineal ruptures can be healed but this can disturb mothers' comfort during puerperium. Perineal ruptures generally occur in primigravida mothers because the baby has never passed through the birth canal and the perineal muscles are still stiff so that this event will easily occur (Manuaba IBG, 2015).

In 2018, the Maternal Mortality Rate (MMR) was 830 mothers worldwide who died due to disease and complications related to pregnancy and labor. Meanwhile, the SDG's (Sustainable Development Goals) of MMR target in 2030 is less than 70 per 100,000 KH (WHO, 2018). Until 2019, MMR in Indonesia was still high, which is 305 per 100,000 live births. Whereas the Indonesia MMR target in 2015 was 102 per 100,000 live births. (Ministry of Health of the Republic of Indonesia, 2019).

There were 267 normal labors reported in Banten Province in 2019, of which 55 of them were primigravida labors. Among those 55 primigravida labors, 54 of them experienced perineal rupture, while 1 primigravida labor did not experience perineal rupture. Meanwhile, in the case of multigravida labor, as many as 156 people (85%) experienced ruptured, while the other 27 people (15%) did not experience rupture (Profile of Banten Provincial Health Office, 2019).

In 2009, there were 2.7 million worldwide cases of perineal rupture in mothers who gave birth. This figure was estimated to reach 6.3 million in 2010, in line with the increasing number of midwives who did not know how to provide good midwifery service. In Asia, perineal rupture becomes quite a problem because 50% of the perineal rupture in the world occurred in Asia (Roslena, 2017).

Perineal rupture can actually be prevented if the perineum is elastic, or the mother can push well, therefore there are many ways to prevent the occurrence of perineal rupture. Efforts to prevent perineal rupture have been carried out, including Kegel and pregnancy exercises. In addition to pregnancy and Kegel exercises, the other efforts to prevent ruptures can be done by using perineal massage techniques, but not many people know that such massage can prevent the occurrence of perineal rupture. The benefits of this massage is that this is easily done, can be done alone, does not need a long, and does not need expensive costs (Aprilia, 2016).

Perineal massage is a perineal massage technique performed during pregnancy or 2 weeks before labor. This message is useful to increase hormonal changes, softening the connective tissue so that the perineal tissue becomes more elastic and easier to stretch. Increased elasticity of the perineum will prevent the incidence of perineal rupture and episiotomy. This technique can be done once a day during the last few weeks of pregnancy in the perineal area (the area between the vagina and anus) (Aprilia, 2016).

Perineal massage has a relationship to reduce ruptures in the perineum during labor. One of the efforts that can be done is perineal massage. Perineal massage is one of the oldest and most certain way to improve health, blood flow, elasticity, and relaxation of the pelvic

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

floor muscles. If a perineal rupture occurs, perineal massage can speed up the healing process of the perineum (Agung Putri, 2017).

Perineal massage during antenatal which starts from 35 weeks of pregnancy will reduce the possibility of perineal trauma which needs stitches. Perineal massage is also useful for relieving perineal pain after labor (Shinta and Kholifah 2018).

Based on a preliminary study at Kasih Ibu Clinic in May - June 2020, as many as 83 primigravida mothers (61.5%) of 135 normal labors experienced spontaneous perineal rupture, while the remaining 52 mothers (38.5%) did not experience perineal rupture (Profile of Kasih Ibu Clinic, 2019). All pregnant women and those who gave birth at Kasih Ibu clinic have never had a perineal massage because no routine class has been done for the pregnant mothers

Based on the background above, the authors wanted to know the effect of perineal massage on the incidence of perineal rupture in primiparous mothers, therefore the authors conducted a study entitled "The Effect of Perineal Massage on the Perineal Rupture Incidence in Primipara Mothers' Labor at Kasih Ibu Clinic in 2020".

METHOD

This research was conducted through an experiment using post test with control group design involving all populations that met the inclusion and exclusion criteria. The research was conducted at Kasih Ibu Clinic, Tangerang District involving 30 primigravidas at the pregnancy age of more than 35 weeks consisting of 15 people in the intervention group and 15 people in the control group. Samples were selected through total sampling. instrument used to collect the data was documentation, booklets, observation sheets, and partograph sheets. Data analysis was done using Independent Sample T Test. The independent variable in this study was massage in primigrapid pregnant women, while the dependent variable in this study was perineal rupture in primiparous women.

The data obtained from the research results were processed and analyzed. Univariate analysis was carried out to obtain an overview of the frequency distribution or the proportion based on the variables studied. The results were then presented in table or graph form to find out the proportion of each variable. Bivariate analysis was performed to examine the effect of independent variable on the dependent variable. This test was used to determine the effect of perineal massage on perineal rupture. The analysis technique used was Independent Sample T Test.

RESULT

Univariate Analysis

Based on Respondents'' Characteristics

Table 4.1 Frequency distribution of respondents Characteristics

Characteristics	Experiement		Control	
	F	%	F	%
Age (years old)				
20-35	11	73.3	9	60.0
<20 and >35	4	26.7	6	40.0
Baby Weight				
2500-3500	12	80.0	11	73.3
>3500	3	20.0	4	26.7

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

Pregnancy Age				
37-40	13	86.7	10	66.7
>40	2	13.3	5	33.3
Total	15	100	15	100

Based on the respondents' characteristics in Table 4.1 above, the age of the experimental group was mostly at 20-35 years by11 people (73.3%), while in the control group was mostly at the age of 20-35 years old by people (60.0%). Based on the baby's weight in the experimental group, most of them were 2500-3500 grams by 12 people (80.0%), while in the control group was 2500-3500 by 11 people (73.3%). Based on the pregnancy age during the labor in the experimental group, most of them were 37-40 weeks old aby 13 people (86.7%), while in the control group were mostly at 37-40 weeks by 10 people (66.7%).

Table 4.2 Frequency distribution of perineal rupture in experimental and control groups

Perineal Rupture	Groups			
	Experimental		Control	
	F	%	F	%
Yes	3	20	10	66.7
No	12	80	5	33.3
Total	15	100	15	100

Table 4.2 indicates that there were 3 people (20%) in the experimental group and 10 people (66.7%) in the control group who experienced perineal rupture.

Bivariate Analysis

Statistical test using an error rate of (α) of 5% (0.05) was used to determine the effect of perineal massage on perineal rupture. These analysis results were further processed using SPSS program through the Independent Sample T-Test.

Table 4.3 the Effect of Perineal Massage on Perineal Rupture Incidence

R	Mean	SD	t-test	*P value*	N
Perineal rupture was given	0.20	0.414	2.824	0.009	15
Perineal rupture was not given	0.67	0.488			15

The results of the bivariate analysis is presented in Table 4.3 above, indicating a p-value obtained was 0.009 (p-value <α = 0.05). This means that perineal massage affected the incidence of perineal rupture in Primipara mothers during their labor at the Kasih Ibu Clinic in 2020.

DISCUSSION

Univariate Analysis

Frequency Distribution of Respondents' Characteristics

Table 4.1 above shows that based on the respondents' characteristics in the experimental group, most of them were at the age of 20-35 years old by 11 people (73.3%), while in the control group, most of them were at the age of 20-35 years old by 9 people

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

(60.0%). BKKBN (2012) claimed that government recommends that couples of productive age should give birth at the age of 20-35 years old period because this age group has the lowest maternal morbidity rate and maternal and baby mortality rate mortality compared to other age groups.

Furthermore, in the experimental group, most of them had baby's weight of 2500-3500 grams by 12 people (80.0%), while in the control group was 2500-3500 by11 people (73.3%). Chalik (2011) explained that fetal body weight can result in perineal rupture when the fetal weight above 3500 grams, due to the risk of vaginal delivery of trauma such as shoulder dystocia and soft tissue damage to the mother. Meanwhile, based on the pregnancy age during the labor, most of the mothers in the experimental groups were in the labor at 37-40 weeks old by 13 people (86.7%), while most of the mothers in the control group were in labor at the age of 37-40 weeks by 10 people (66.7%).

Frequency Distribution of Perineal Rupture on Experimental and Control Groups

Table 4.2 above shows that there were 3 people (20%) from the experimental group and 10 people (66.7%) in the control group who experienced perineal rupture.

According to the theory proposed by Ommolbanin et al (2014), it was stated that the risk of perineal laceration in the group receiving a massage was smaller than the group who did not receive the perineal massage group. According to this theory, (Aprilia, 2011) further argued that perineal massage during pregnancy can reduce the incidence of perineal trauma.

Previous research conducted by Savitri (2015) supported these results, obtaining the effect of perineal massage on primigravida on the incidence of perineal rupture during delivery at a Bidan Praktek Mandiri in Bengkulu City in 2015. In this research, the perineal rupture incidence in the intervention group after the perineal massage was only 21.4%. Furthermore, Anggraini's research (2015) also studied the relationship between perineal massage and birth canal ruptures in primiparous mothers who gave birth at BPM, South Metro District, Metro City in 2015. The results showed that among 70 mothers who had no ruptures, 59 of them received perineal massage.

In this current research, perineal rupture still occurred in the experimental group after perineal massage. This is caused by several factors, including maternal factors (uncooperative mothers at the time of delivery) and infant factors (baby weight). To deal with uncooperative mothers, one of them is by communicating well in which before the labor, the helper and mother must collaborate because it can regulate the baby's birth rate and prevent lacerations. Cooperation is essential for the successful delivery of the baby and at the time of complete opening, the mother should follow the helper's instructions. Whereas in the control group the incidence of perineal rupture was more due to the fact that respondents did not get perineal massage intervention so that they could not minimize the perineal rupture. Perineal rupture that occurs in each respondent can be caused by factors that affect the occurrence of perineal rupture. Stiff perineal conditions contribute to perineal rupture because a stiff perineum inhibits Kala II labor which increases the risk of baby mortality and causes extensive birth canal damage.

Bivariate Analysis

Table 4.3 presents the effect of perineal massage on the perineal rupture incidence in primiparous mothers. Statistical results which were obtained through bivariate analysis obtained a p-value of 0.009 (p-value $<\alpha = 0.05$), indicating that perineal massage affected the incidence of perineal rupture in primipara mothers in Klinik Kasih Ibu in 2020.

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

This is supported by the theory proposed by Syafrudin (2012) that perineal massage is a technique of massaging the perineum during pregnancy or a few weeks before labor to increase blood flow to this area and increase perineal elasticity. Increased elasticity of the perineum will prevent the incidence of perineal rupture and episiotomy. This is in accordance with Hidayati (2014) research results that perineal massage is one of the most ancient and certain ways to improve health, blood flow, elasticity, and relaxation of the pelvic floor muscles. The benefits of perineal massage are that the perineum does not rupture either spontaneously or episiotomy if the perineal rupture does not exceed grade 2 (vaginal mucous membranes, perineal skin and perineal muscles). This is also in accordance with Anggraini (2012) who argued that perineal massage will soften the perineal tissue so that it opens without resistance during labor, or makes it easier for the baby to pass. This perineal massage makes it possible to deliver the baby with the perineum intact. This is further supported by Jennifer (2011) who claimed that perineal massage can stimulate blood flow to the perineum which will help accelerate the healing process after labor, help mothers relax during vaginal examinations (internal examinations), help prepare mothers mentally to pressure and stretch the perineum when the baby's head is going to discharge, and avoiding the incidence of perineal rupture during the labor by increasing the elasticity of the perineum.

The results of this study are in accordance with the research conducted by Ommolbanin et al (2014) which stated that the risk of perineal laceration in the group which received massage was lower than the group that did not receive the message. It indicates that there was an effect of perineal massage on the incidence of perineal lacerations. Research by Lesley A Smith et al (2013) found that perineal massage has a lower risk of perineal trauma.

This is in line with research conducted by Mutmainah, 2018 obtaining the effect of perineal massage on the prevention of perineal rupture in maternity mothers at BPS Dwi Lestari Natar South Lampung in 2018. Through univariate and bivariate t-test data analysis, the average research results of perineal rupture of mothers who were given perineal massage were 0.67 with a standard deviation of 0.617. Meanwhile, the mean perineal rupture of women who were not given perineal massage was 1.20 with a standard deviation of 0.676. Thus it can be summed up that there was an effect of perineal massage on the prevention of perineal rupture in mothers in labor at BPS Dwi Lestari Natar South Lampung in 2018 (p-value 0.032). This study concluded that perineal massage in primigravida affects the incidence of perineal rupture at delivery. Research published in the American Journal Obstetrician and Gynecology concluded that perineal massage during pregnancy can protect perineal function for at least 3 months postpartum.

According to the researchers' opinion, perineal rupture incidence occurred more in the control group than in the experimental group so that it can be analyzed that perineal massage can prevent the occurrence of perineal rupture. Decreased perineal rupture can occur because the perineal massage allows the tissue in the perineum to relax so that it can cause an increased elasticity of the birth canal which can make it easier for the labor and reduce perineal rupture incidence. In the perineum, there is connective elastic tissue and collagen, so when stimulated by doing perineal massage there will be stretch and contraction in the perineal area so that blood flow becomes smooth and the perineum becomes elastic. This proves that the benefits of perineal massage can help soften the perineal tissue, the tissue will open without resistance during delivery, and can make it easier for the baby to pass. Therefore, perineal massage is proven as one of the methods to prevent perineal rupture.

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

CONCLUSION

There is an effect of perineal massage on the perineal rupture incidence in primiparous delivery mothers at the Kasih Ibu Clinic in 2020 with a p-value of 0.009.

ACKNOWLEDGEMENT

The research would like to express gratitude to Kasih Ibu Clinic, Tangerang District who has allowed the research to be carried out at the research site. Thank is also expressed to Bd. Hj. Netti Novianti, S, SiT, M.Kes as the advisor for input and guidance in completing this undergraduate thesis.

REFERENCES

Arikunto, S. 2013, *Prosedur penelitian suatu pendekatan praktik,* PT Rineka Cipta, Jakarta.

Angraini, Martini, 2015, Hubungan Pijat Perineum Dengan Robekan Jalan Lahir Pada Ibu Bersalin Primipara Di BPM Kecamatan Metro Selatan Kota Metro, *Skripsi,* Jurusan Kebidanan Poltekkes Tanjungkarang, Vol. 6 No. 2. hlm 155-159

Aprilia. Y, 2016, *Hipnostetri : Rileks, Nyaman, dan Aman Saat Hamil & Melahirkan,* Gagasmedia, Jakarta.

Beckmann MM, Garrett AJ."Antenatal perineal massage for reducing perineal trauma.", Cochrane Database Syst Rev. 2006 Jan 25;(1): CD005123.

Depkes RI, 2014, *Buku Acuan Asuhan Persalinan Normal.* JNPK-KR. Jakarta.

Herdiana,Trirejeki. dr, 2011, *Tips Pijat Perineum*. *Edisi 3*. EGC, Jakarta.

Jones LE, Marsden N. The application of antenatal perineal massage: a review of literature to determine instruction, dosage and technique Journal of the Association of Chartered Physiotherapists in Women's Health, Spring 2012:8–11.

Kemenkes RI, 2015, *Buku Ajar Kesehatan Ibu dan Anak.* Kementrian Kesehatan Republik Indonesia, Jakarta.

Kemenkes RI, 2019, *Profil Kesehatan Provinsi Banten.*

Manuaba, I.G.B, 2015, *Ilmu Kebidanan Penyakit Kandungan dan KB*. EGC, Jakarta.

Merita, 2016, Penerapan Massage Perineum Untuk Mengurangi Ruptur Perineum Saat Persalinan di BPM Hj. Titik Esnaryati Kabupaten kebumen, *Karya Tulis Ilmiah,* Jurusan DIII Kebidanan STIK Muhamadiyah Gombong.

Oxorn H. 2010, *Patologi dan fisiologi persalinan,* Yayasan Essentia Medika, Jakarta

Prawirohardjo, S., 2016, *Buku Acuan Nasional Pelayanan Kesehatan Maternal dan Neonatal,* PT Bina Pustaka Sarwono Prawirohardjo, Jakarta.

Risza, Suprihatin, 2019, Pengaruh Pijat Perineum Terhadap kejadian ruptur perineum pada ibu bersalin primipara di BPM ny "I" Cipageran Cimahi Utara Kota Cimahi Jawa Barat, *Laporan hasil Penelitian,* Universitas Nasional, Jakarta, Vol 11 (2); September 2019, p-ISSN: 2301-9255 e:ISSN: 2656-1190

Saifuddin, 2010, *Buku Panduan Praktis Pelayanan Kesehatan Maternal dan Neonatal,* PT Bina Pustaka Sarwono Prawirohardjo, Jakarta.

Savitri 2015, Pengaruh Pemijatan Perineum pada Primigravida terhadap Kejadian Ruptur Perineum saat Persalinan di Bidan Praktek Mandiri di Kota Bengkulu, *Laporan Hasil Penelitian,* Universitas Andalas, 4 (1)

Shinta, Kholifah, 2018, Pengaruh Pijat Perineum Selama Masa Kehamilan Terhadap Kejadian Ruptur Perineum Spontan di BPM Shinta, *Skripsi,* Jurnal Kebidanan Universitas Islam Lamongan. Vol. 10 No. 1, Juni 2018.

DOI: 10.30994/sjik.v10i1.732
ISSN: 2252-3847 (print); 2614-350X (online) Vol.10 No.1 May 2021 Page. 883-890

Shipman MK, Boniface DR, Tefft ME, McCloghry F. Antenatal perineal massage and subsequent perineal outcomes: a randomised controlled trial. *British Journal of Obstetrics and Gynaecology*.1997;104(7):87–91.

Syafrudin, 2012, *Isu Terkini dalam Kebidanan (Pijat Perineum),* EGC, Jakarta.