

Research Article

Perineal Massage during Second Stage of Labor to the Perineal Laceration Degree in Primigravida

Efek Masase Perineum Kala Dua Persalinan terhadap Derajat Laserasi Perineum pada Primigravida

Sitti Arafah, David Lotisna, Eddy Tiro

Department of Obstetrics and Gynecology
Faculty of Medicine Universitas Hasanuddin/
Dr. Wahidin Sudiro Husodo Hospital
Makassar

Abstract

Objective: To determine the effect of perineal massage during second stage of labor on the perineal laceration degree in primigravida.

Methods: The design of this study was non randomized controlled trial by conducting massage training of the perineum to 20 obstetrics and gynecology residents. All residents had passed the normal delivery care training. Primigravida who met the inclusion criteria were included in this study. We assessed the degree of perineal laceration in this study. Data were analyzed using Chi square test in SPSS.

Results: We obtained 103 subjects for massage group and 79 subjects for control group. There was a significant association between massage group and the incidence of intact perineum. In the massage group, most of perineal lacerations were first degree of laceration (52.4%); whereas, in the control group, most of them were second degree of laceration (77.2%). Statistical analysis showed a significant association between perineal massage and decreased of perineal laceration degree ($p < 0.05$).

Conclusion: Perineal massage during second stage of labor in primigravida can reduce the degree of perineal laceration.

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Keywords: degree of perineal laceration, perineal massage, primigravida, second stage of labor

Abstrak

Tujuan: Untuk mengetahui efek masase perineum pada kala II persalinan terhadap derajat laserasi perineum pada primigravida.

Metode: Penelitian ini menggunakan desain uji coba terkontrol tidak acak. Dilakukan pelatihan masase perineum terhadap 20 orang residen obstetri dan ginekologi (semua residen telah mengikuti pelatihan Asuhan Persalinan Normal). Primigravida yang memenuhi kriteria inklusi diikutsertakan dalam penelitian. Kami melakukan penilaian derajat laserasi perineum pada kasus penelitian. Data dianalisis dengan uji Chi square.

Hasil: Dari 182 sampel, didapatkan 103 sampel untuk kelompok masase dan 79 sampel kelompok kontrol. Terdapat hubungan yang bermakna antara perlakuan masase perineum dengan keutuhan perineum. Pada kelompok masase, mayoritas derajat laserasi adalah laserasi tingkat 1 (52,4%), sedangkan pada kelompok kontrol mayoritas derajat laserasi adalah laserasi tingkat 2 (77,2%). Hasil uji statistik menunjukkan hubungan yang bermakna antara masase perineum dan penurunan derajat laserasi perineum ($p < 0,05$).

Kesimpulan: Masase perineum kala II persalinan pada primigravida dapat menurunkan derajat laserasi perineum.

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Kata kunci: derajat laserasi perineum, kala II persalinan, masase perineum, primigravida

Correspondence: Sitti Arafah, dr.arafahbuchari@gmail.com

INTRODUCTION

During delivery process, women had risk for perineal trauma, especially in the first labor. As many as 60% of women have ever experienced perineal trauma in vaginal delivery and at least 1,000 women require perineal suturing after childbirth. Birth canal trauma is caused by episiotomy, spontaneous perineal laceration, forceps trauma, extraction vacuum or extraction version.^{1,2}

Study in UK showed that 85% of women who undergo vaginal delivery got perineal trauma and two-third of them had to do perineal suturing.

Three million vaginal deliveries of women were generally experienced perineal trauma caused by spontaneous rupture and episiotomy in the United States. Complications occurred in perineal trauma include bleeding, hematome, abscess, perineal pain, fistula, dyspareunia, and alvi incontinence.^{1,3,4}

There is strong evidence that episiotomy is ineffective to prevent complications from delivery. Thacker and Banta in 1983 questioned the benefit of routine episiotomy. Since 1860 to 1980, the incidence of third and fourth degree of perineal rupture in women without episiotomy was between 0 and 6.4% compared with the women

with episiotomy, including from 0 to 23.9%. Their result did not point out the benefit of episiotomy in terms of reducing the incidence of urinary and alvi incontinence.^{1,5}

Perineal pain was reported more intense immediately after postpartum and continued until two-week postpartum in 30% of women; even, 7% of women experienced the pain up to three-month postpartum. Women delivering vaginally without perineal trauma or with perineal trauma had several advantages, such as shorter length of stay, better pelvic floor muscle strength and sexual function, also low level of depression and perineal pain. Perineal trauma could also cause discomfort and pain during sexual intercourse.^{6,7}

Perineal massage is one of the ways to increase blood flow, elasticity, and relaxation of the pelvic floor muscles. It can soften the perineal tissue; thus, it will open without resistance during childbirth. Perineal massage is able to reduce the risk of perineal trauma or the need for episiotomy at primigravida.⁷

Study by Geranmayeh and Karacam reported that the decrease of perineal laceration degree and episiotomy rate in primigravida was because of perineal massage performing in the second stage of labor. However, a study by Stamp concluded that perineal massage in the second stage did not have significant impact on the degree of perineal laceration and perineal pain after delivery.^{8,9}

Study about perineal massage antepartum on primigravida had been held in Makassar; no studies focused on perineal massage in the second stage of labor in primigravida, yet. Therefore, this study aims to determine the effect of perineal massage during second stage of labor to the degree of perineal laceration in primigravida.

METHODS

We used non-randomized controlled trial study. The study was conducted in several teaching hospitals of Obstetrics and Gynecology Department, Faculty of Medicine Universitas Hasanuddin, Makassar from August 2014 to February 2015. We recruited all primigravidas who had delivery in several teaching hospitals of Obstetrics and Gynecology Department, Faculty of Medicine Universitas Hasanuddin, Makassar. The subjects who met the inclusion criteria were asked for the approval participation in the informed consent. We assessed the

qualified subjects in appropriate to the criteria. The data were analyzed using Chi square and Krustal-Wallis test in SPSS. The Chi square analysis was used to determine the difference between perineal status on treatment or control group during second stage of labor. Mean while, Krustal-Wallis test aimed to assess the difference on perineal laceration degree between study and control group. The result was considered significantly if p less than 0.05.

RESULTS

This study was conducted from August 2014 to February 2015 to determine the effect of perineal massage during second stage of labor to the perineal laceration degree in primigravida. We obtained 182 subjects divided into two groups: 103 subjects in massage group and 79 subjects as control group.

Table 1 showed the characteristics of the subject distribution. Both massage and control group consist of women under 30 years old (54.5% VS 45.5%). Women with low educational background were 26 cases (53.0%) on massage group and 23 cases (47.0%) were not performed the massage; while, for high educational background, there were 77 cases (57.9%) in massage group and 56 cases (42.1%) in control group. Most of women had occupation both in massage and without massage group. According to income, there were 75 cases (60.0%) with massage and 50 cases (40.0%) without massage in high income group and 28 cases (49.1%) with massage and 29 cases (50.9%) without massage in low income group. Chi square test concluded that there were not significant differences in each characteristic of subject including age, education, occupation, and income.

Table 1. Characteristics of the Subject

Characteristics	Massage (+) (%)	Massage (-) (%)	p
Age (years old)			
< 30	85 (54.5)	71 (45.5)	0.180
> 30	18 (69.2)	8 (30.8)	
Education			
Low	26 (53.0)	23 (47.0)	0.550
High	77 (57.9)	56 (42.1)	

Occupation			
Yes	84 (54.9)	69 (45.1)	0.290
No	19 (65.5)	10 (34.5)	
Income			
High	75 (60.0)	50 (40.0)	0.170
Low	28 (49.1)	29 (50.9)	

*Chi square test

Table 2 indicated the result on comparative analysis of perineal status between perineal massage and control (without perineal massage) group. Of Table 2, perineal status on women in perineal massage group remaining intact and laceration was 43 (41.7%) and 60 (58.3%). Perineal status in control group who kept intact and laceration was on 4 women (5.1%) and 75 women (94.9%). Result of chi-square test indicated that there was a relationship of perineal massage during second stage labor and perineal status ($p < 0.001$).

Table 3 showed the result on comparative analysis of the perineal laceration degree between perineal massage and control group. In this study, for perineal massage group, the percentage of perineal laceration on first, second, third, and fourth grade was 52.4%, 5.8%, 0%, and 0%; respectively. Meanwhile, in control group, the percentage of laceration on first, second, third, and fourth degree

was 16.4%, 77.2%, 1.3%, 0%; contributively. There was an association between perineal massage during second stage of labor and the degree of perineal laceration ($p < 0.001$).

DISCUSSION

The characteristics of subjects showed in terms of age, education, occupation, and income were not statistically significant with p more than 0.05. therefore, we considered the subjects between groups were nomogenaus. In Table 2, we got p value less than 0.05 for the comparison of perineal status between the perineal massage and control group. In Table 3, the comparison degree of perineal laceration between the perineal massage and control group resulted p value less than 0.05. Therefore, our result concluded that the perineal massage can reduce the degree of perineal laceration.

Massage aims to relieve pain, produce relaxation, and reduce stress caused by the labor process.¹⁰ In this study, 41.7% perineum remained intact on the massage group; while, there were only 5.1% of subjects had intact perineum in control group. A study by Labrecque stated that of 283 primigravida undergoing perineal massage, there was 24.5% perineum kept intact compared to primigravida who did not get perineum massage which showed only 15.1%.¹¹

Table 2. Comparative Analysis of Perineal Status between Perineal Massage and Control Group

	Perineum Intact (+)		Perineum Intact (-)		Total	p
	N	%	N	%		
Massage (+)	43	41.7	60	58.3	103	<0.001
Massage (-)	4	5.1	75	94.9	79	
Total	47	28.8	135	74.2	182	

*Chi square test

Table 3. Comparative Analysis of the Degree of Perineal Laceration between Perineal Massage and Control Group

	Degree of Laceration					Total	p
	Intact	Level 1	Level 2	Level 3	Level 4		
Massage (+)	43	54	6	-	-	103	<0.001
	41.7	52.4	5.8	0	0		
Massage (-)	4	13	61	1		79	
	5.1	16.4	77.2	1.3	0		
Total	47	67	67	1	0	182	

*Kruskal-Wallis test

In this study, for perineal massage group, the percentage of perineal laceration on the first, second, third, and fourth grade was 52.4%, 5.8%, 0%, and 0%; respectively. Meanwhile, in control group, the percentage of laceration on the first, second, third, and fourth degree was 16.4%, 77.2%, 1.3%, 0%; contributively. This result was in appropriate to study by Sofian Muhaji in 2002. They explained that the perineal massage group tended to have lower degree of perineal laceration, especially on the first grade (96.7%). Study by Geranmayeh and Karacam in 2012 recorded the similar result that in the perineal massage group, the patients had more first degree of perineal laceration (42.9%) compared to higher degree of laceration during second stage of labor.^{8,12}

CONCLUSION AND SUGGESTION

In conclusion, perineal massage on the second stage of labor in primigravida can reduce the degree of perineal laceration. Further studies should be held to compare the effectiveness of perineal massage on antenatal and during second stage of labor.

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