ORIGINAL ARTICLE

Perineal Massage and its Effects on the Incidence of Episiotomy and Perineal Trauma during Second Stage of Labor

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Received on: 19 February 2023; *Accepted on:* 27 March 2023; *Published on:* 11 May 2023

Abstract

Aim: To study perineal massage and its effects on the incidence of episiotomy and perineal trauma during second stage of labor

Materials and methods: This is an observational study conducted among 150 primigravida women admitted to labor ward, Gandhi Hospital. At commencement of second stage of labor, participants were randomized into massage and control groups, 75 each and frequency of episiotomy, perineal tears, and second stage of labor duration were compared.

Results and analysis: Episiotomy incidence was 80 and 93.3% in massage and control group, respectively, indicating increased need of episiotomy in the later group. Time duration of second stage labor was reduced in the massage group. In both massage and control groups, the perineal tears incidence was similar.

Conclusion: Perineal massage considerately declined episiotomy rates, time duration of second stage of labor.

Keywords: Episiotomy incidence, Frequency of perineal tears, Labor duration, Perineal massage.

Journal of South Asian Federation of Obstetrics and Gynaecology (2023): 10.5005/jp-journals-10006-2224

Introduction

Any damage to the genitalia during childbirth, either spontaneously or intentionally by surgical incision, i.e., episiotomy is described as perineal trauma.[1] Perineal trauma is affecting up to 90% of primiparous women.[2] Predisposing factors for perineal trauma include weight of baby at birth, prolonged duration of labor predominantly the second stage, instrumental delivery.[3–6] Perineal damage may result in stress urinary incontinence (3.7–19%),[7,8] fecal incontinence (2–6%),[9–13] and painful intercourse (22.4–37.3%).[14]

There are many protective strategies for hindrance of perineal injuries like perineal massage, warm compress, hands off—hands on during childbirth[15,16] which are now obsolete. This study aims to re-employe one of these techniques, i.e., perineal massage in the present-day practice in lowering the rates of episiotomy and perineal tears.

Perineal massaging strategy is done using a lubricant applied at the onset of active phase of labor, leads to dilation of muscle and avoids perineal trauma,[17] and decreases episiotomy necessity.[18]

Materials and Methods

Inclusion Criteria of the Study

Primigravida women with term gestation, with single alive fetus, with cephalic presentation with adequate pelvis were taken.

Exclusion Criteria of the Study

- Twin pregnancy
- Perineal trauma during previous vaginal deliveries
- Cephalopelvic disproportion
- Big baby

Methodology

This is an observational study conducted among 150 primigravida women admitted to labor ward, Gandhi Hospital. At commencement of second stage of labor, participants were randomized into massage and control groups, 75 each after consent from study participants was taken.

Gentle massage was administered over the perineum using lignocaine gel 2% during second stage labor to women in the massage group in a sweeping motion, during uterine contraction. However, for those in control group, routine care like perineal support was given. Liberal episiotomy was given in both the groups based on necessity.[19]

After the delivery, inspection to look for the perineal tears was done and the end result was noted in terms of episiotomy rates, frequency of perineal tears and their types (according Sultan's classification),[20] and intact perineum.

Results and Analysis

The mean gestational age (GA) in the massage group is 38.56+/–0.97 (SD), mean GA in the control group is 38.76+/–0.92 (SD) (Table 1).

No considerate difference (p = 0.200) came out in the distribution of GA between the massage and control groups.[21]

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How to cite this article: Shah S, Sundari LD, Damavarapu K, *et al*. Perineal Massage and its Effects on the Incidence of Episiotomy and Perineal Trauma during Second Stage of Labor. J South Asian Feder Obst Gynae 2023;15(2):139–141.

Source of support: Nil

Conflict of interest: None

Table 1: Comparison of gestational age between study groups (*N* = 150)

	Group	
GA (weeks)	*Massage (n = 75) Mean (SD)*	*Control (n = 75) Mean (SD)*
	38.56 (0.97)	38.76 (0.92)

Chi-square test, *p*-value = 0.200, not significant. GA, gestational age

Table 2: Comparison of episiotomy among two study groups (*N* = 150)

	Group	
Episiotomy	*Massage (n = 75) n (%)*	*Control (n = 75) n (%)*
Yes	60 (80.0)	70 (93.3)
No	15 (20.0)	5 (6.7)

Chi-square test, *p*-value = 0.016, significant

Table 3: Comparison of perineal tears among study groups (*N* = 150)

	Group		
Perineal tears	*Massage (n = 75) n (%)*	*Controls (n = 75) n (%)*	*p-value*
First degree	7 (9.3)	1 (1.3)	0.029*
Second degree	3 (4.0)	2 (2.7)	0.649
Third degree	0	2 (2.7)	0.154
Fourth degree	0	0	
Overall	10 (13.3)	5 (6.7)	0.173
None	65 (86.7)	70 (93.3)	

Chi-square test, *p*-value = 0.076, not significant

Table 4: Comparison of intact perineum between study groups (*N* = 150)

	Group	
Intact perineum	*Massage (n = 75) n (%)*	*Controls (n = 75) n (%)*
Yes	5 (6.7)	–
No	70 (93.3)	75 (100.0)

Chi-square test, *p*-value = 0.023, significant

Episiotomy incidence was 80 and 93.3% in the massage and the control groups, respectively, indicating statistically significant incidence in later group (Table 2).

The perineal tear incidence in the massage group (13.3%) and the control group (6.7%) was similar. Amid the study participants in massage group, first-degree perineal tear was noted in 9.3%, second-degree perineal tear was noted in 4%, and none of them were having third or fourth-degree perineal tear (Table 3).

Among the controls, first degree perineal tear was noted in 1.3%, second degree perineal tear was noted in 2.7%, third degree perineal tear was noted in 2.7%, and none of the participants were having the fourth degree perineal tear.

No considerate difference (p = 0.076) was noted in perineal tears distribution between the massage and the control groups.

The occurrence of intact group in the massage group was 6.7% when compared to the control group (n = 0) indicating a significantly higher difference (p = 0.023) (Table 4).

The second stage labor time duration was considerately reduced (p < 0.001), in the massage group (Table 5).

Table 5: Comparison of time duration of second stage of labor between study groups (*N* = 150)

	Group	
Duration (min)	*Massage (n = 75) Mean (SD)*	*Controls (n = 75) Mean (SD)*
	38.99 (1.97)	49.45 (1.71)

Unpaired *t* test, *p*-value < 0.001, significant

Discussion

This is a observational study conducted among 150 primigravida women admitted to labor ward, Gandhi Hospital. At the commencement of second stage of labor, participants were randomized into massage and control groups, 75 each and frequency of episiotomy, perineal tears, and second stage of labor duration were compared. This study stated that the perineal massage could reduce episiotomy need, perineal trauma.

In this study, episiotomy incidence was 80 and 93% in the massage group and the control group, respectively, which may be set side by side to the Karaçam et al.'s[22] study in which episiotomy rate was also high. It was 52% in the massage group and 60% in controls. The high episiotomy rates in this study could be attributed to customary episiotomy implementation in primigravida in the study institution due to enhanced probability of perineal tear.

In this study, perineal massage had no protective effect on incidence of perineal tears but seemed to be effective in hindrance of third- or fourth-degree perineal tears. Perineal tear frequency was 13.3 and 6.7% in the massage and the control group, respectively, but the difference was meager. Albers[17] and Mei-dan et al.[24] have also outlined in their studies higher incidences of perineal tears in the massage and the control groups, which was not statistically significant.

In this study, the intact perineum incidence was significantly high (p = 0.023) in the massage group (6.7%) than those in the control group (n = 0), which was comparable to studies conducted by Stamp et al.[23] and Albers,[17] in which they observed that perineal massage resulted in more intact perineum, than those in the later group. In this study, the mean second stage labor duration was 38.99+/–1.97 (SD) in the massage group and it was 49.45+/–1.71 (SD) in the control group. Thus second stage labor time duration was magnificently reduced in the massage group by up to 10 minutes, which is comparable to the studies conducted by Stamp et al.[23] and Zare et al.,[25] in which mean second stage labor duration was reduced substantially.[26,27]

Conclusion

In this study, perineal massage considerately declined episiotomy incidence and time duration of second stage of labor. The frequency of perineal tears was not affected but was protective against severe third- and fourth-degree perineal tears. Therefore, it was suggested to practice perineal massage by health professionals as a simple, safe, and fruitful approach to minimize the perineal trauma during delivery and to improve women's quality of life post-vaginal delivery.

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