

COMPARISON OF THE FREQUENCY OF PERINEAL TEARS WITH AND WITHOUT EPISIOTOMY IN PRIMIGRAVIDA FEMALES UNDERGOING VAGINAL DELIVERY AT TERM

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Abstract

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Objective

To compare the post-delivery complications and recovery between a primigravida (first-time mother) who delivered vaginally without episiotomy and one who delivered vaginally with episiotomy.

Methodology

A prospective cohort study was done in the Department of Obstetrics and Gynaecology Departments of Imran Idress Teaching Hospital/ Islam Teaching Hospital from September 2024 to February 2025. Sixty-two primigravidas who were delivered during term in the same delivery room participated in the study with non-probability consecutive sampling technique. The episiotomy and no-episiotomy groups were split into equal parts. The structured questionnaire and the Likert scale were used to obtain data regarding pain, recovery, mobility

problems, infection and satisfaction after delivery. Means and standard deviations were used to report quantitative variables and frequency and percentages were used to report qualitative variables. The data were analysed using the chi square (χ^2) test in SPSS version 25 with a p value of < 0.05 regarded as statistically significant.

Results

Women who had episiotomy experienced significantly more pain and complications after childbirth than women who did not have episiotomy. Of the women who had episiotomy, 74.2% experienced significant pain after delivery, while, no women who did not have episiotomy experienced any significant pain ($p < 0.001$). For women undergoing episiotomy, it was also common practice to experience slow healing and complications arising from the wounds. Stratified analysis revealed differences in pain level based on gestational age, age at birth, baby's weight, and mode of delivery but episiotomy was the most important factor.

Conclusion

Among primigravida women, use of an episiotomy was linked to higher rates of postpartum pain, recovery time, and complications of the wound. It can be concluded that the use of episiotomy may be selective rather than routine, if there are gains to be made in terms of maternal recovery and reducing unnecessary postpartum morbidity after vaginal delivery.

INTRODUCTION:

The practices of childbirth vary and the quality of maternal care is a crucial factor in maternal and neonatal outcomes. The birth rate is relatively high in Pakistan and a large percentage of deliveries take place in institutional settings in which obstetric techniques are practiced routinely (1). A surgical procedure that is one of these interventions is an episiotomy, which is an incision into the perineum to allow a vaginal birth.

It has been done routinely to prevent severe perineal trauma following a delivery and to bring about a controlled delivery to prevent the tight delivery. It has been done routinely to prevent severe perineal trauma following a delivery and to bring about a controlled delivery to prevent the tight delivery, in primigravida women.

Routine episiotomy has been reduced in global trends, especially in the developed world, shifting to use more restrictive and selective (2,3). Although episiotomy is common, it does come with some short- and long-term issues, such as perineal pain, infection, postpartum hemorrhage and prolonged perineal lacerations. There is some emerging evidence which suggests routine episiotomy does not always guarantee a less severe perineal tear and could even increase the risk of severe perineal tear, in some instances (4).

This has caused much discussion in the obstetric circles about the routine use of it, particularly in first time mothers. In the local context, there is little firm evidence of the benefits and risks of episiotomy for primigravida women. There is still a wide variation of clinical decisions made across many healthcare settings, with a lack of solid evidence-based protocol (5). Lack of specific and relevant data at local level calls for more studies to inform practice. The current study is designed for comparing the incidence of perineal laceration among the primigravida women undergoing term vaginal delivery with and without episiotomy and give evidence that may be useful in elaborating new clinical guidelines and caring for the mother.

MATERIALS AND METHODS

This study will be a prospective comparative cohort that will assess the incidence of perineal lacerations in primigravida women with and without episiotomy during term vaginal delivery (6). The cohort approach is chosen to follow-up outcomes of two naturally occurring cohorts, and determine the time relationship between exposure and outcome.

The study will be Department of Obstetrics and Gynaecology at Imran Idrees Teaching Hospital/ Islam Teaching Hospital Department of Obstetrics and Gynaecology Departments of mran Idress Teaching Hospital/ Islam Teaching Hospital (7) from September 2024 to February 2025. Obtaining informed consent from all participants prior to enrollment and ethical approval from the institutional review board.

There are 62 women who are primigravidas entering the study which is approached by non-probability consecutive sampling technique. The participants will be split into two groups, 31 women will be in episiotomy group (Group A) and 31 women will be in the group without episiotomy (Group B). Only women with singleton pregnancies at term (37+0 to 41+6 weeks) with estimated fetal weight between 2.5 kg and 4 kg will be included. Excluded are women who have cephalopelvic disproportion, a baby weight of more than 4 kg, a maternal BMI of less than 18 kg/m² or who will need episiotomy for other nonroutine medical reasons. Cephalopelvic disproportion will exclude women, as will a fetal weight of more than 4 kg, a maternal BMI less than 18 kg/m², or a woman requiring episiotomy for a reason other than the routine practice of women(8). All deliveries will be monitored for the presence or absence of perineal laceration as the primary outcome and data will be gathered on a structured proforma. Standard clinical grading will be used for perineal tears. Data analysis will be done using SPSS version 25 (9).

Quantitative variables will be presented by mean $\pm$ standard deviation and frequencies and percentages for qualitative variables will be presented. Independent sample t-test and chi-square test will be used to compare the outcomes between groups; p value <0.05 will be considered statistically significant.

Results:

62 primigravida women were studied. The quantitative description of the participants is presented in (Table 1). The age group of most of the participants was the younger reproductive group. Most women were within the term pregnancy range and most deliveries were within normal limits of weight for baby. The results of the study showed that the baseline maternal and fetal data were homogenous in the study population and justified the comparison between women delivered by episiotomy and those without episiotomy.

Table 2 shows the distribution of qualitative variables. The age-wise distribution showed that the highest percentage (40.3%) of the participant group was from 26 to 30 years while 37.1% were between 18 and 25 years. Many of the women had a gestation age at delivery of 39-40 weeks (54.8%). Regarding baby weight, 45.2% of babies weighed 3.1-3.5kg while 9.7% of them were assisted vaginally. 50.0% of women had episiotomy performed and 50.0% of women did not have episiotomy performed.

Compared the pain frequency post-delivery between women undergoing episiotomy and those not. Of women who had received episiotomy, 74.2% reported significant pain while no women who did not undergo episiotomy reported significant pain. The women who did not have episiotomy had 100.0% of them reporting pain absence compared to 25.8% for those with episiotomy (Table 3). These associations between episiotomy and significant pain after delivery were significant on chi-square analysis ($p < 0.001$) which shows these two variables are strongly correlated.

Post-delivery complications of the participants are summarized in (Table 4). Thirty-seven percent of the women reported significant pain after delivery and 33.9% of the women reported that they had difficulty sitting or walking after delivery. Forty-one.9% of women reported a slow recovery process and it was the most frequently reported complication in the study population. 40.3% of participants had infection or swelling

at wound site. Women in this study likely experienced discomfort following delivery and delayed recovery, as findings indicated this was a frequent experience. (Table 5) Stratified analysis of important pain after delivery by potential effect modifiers is presented. Most women aged 26-30 years (44.0%) and 39-40 weeks of gestation (41.2%) had pain. Women who had a baby weight of 2.5-3.0 kg complained of pain more often (50.0%). For delivery type, women who had a normal vaginal delivery had more pain (39.3%) than women who had assisted vaginal delivery (16.7%). Overall, frequency of pain was different in various demographic and obstetric groups.

Descriptive Statistics			
	N	Mean	Std. Deviation
Age (years)	62	1.89	.832
Gestational Age (weeks)	62	1.87	.665
Baby Weight (kg)	62	1.84	.729
Valid N (listwise)	62		

Figure 1: Baseline Quantitative Characteristics of Participants

Variable	Frequency (n)	Percentage (%)
Age (years)		
18–25	23	37.1
26–30	25	40.3
31–35	12	19.4
36–40	2	3.2
Gestational Age (weeks)		
37–38 weeks	18	29.0
39–40 weeks	34	54.8
41–42 weeks	10	16.1
Baby Weight (kg)		
2.5–3.0 kg	22	35.5
3.1–3.5 kg	28	45.2

3.6–4.0 kg	12	19.4
Mode of Delivery		
Assisted Vaginal Delivery	6	9.7
Normal Vaginal Delivery	56	90.3
Episiotomy		
Yes	31	50.0
No	31	50.0

Figure 2: Distribution of Qualitative Variables

Episiotomy	Pain Present n (%)	Pain Absent n (%)	p-value
Yes (n=31)	23 (74.2)	8 (25.8)	
No (n=31)	0 (0.0)	31 (100.0)	
Total	23 (37.1)	39 (62.9)	<0.001

Figure 3: Comparison Between Episiotomy and Significant Pain After Delivery

Complication / Outcome	Frequency (n)	Percentage (%)
Significant pain after delivery	23	37.1
Difficulty sitting or walking after delivery	21	33.9
Slow recovery process	26	41.9
Infection or swelling at wound site	25	40.3

Figure 4: Post-Delivery Complications Among Participants

Effect Modifier	Category	Pain Present n (%)	Pain Absent n (%)
Age (years)	18–25	10 (43.5)	13 (56.5)
	26–30	11 (44.0)	14 (56.0)
	31–35	2 (16.7)	10 (83.3)
	36–40	0 (0.0)	2 (100.0)

Gestational Age (weeks)	37–38 weeks	5 (27.8)	13 (72.2)
	39–40 weeks	14 (41.2)	20 (58.8)
	41–42 weeks	4 (40.0)	6 (60.0)
Baby Weight (kg)	2.5–3.0 kg	11 (50.0)	11 (50.0)
	3.1–3.5 kg	9 (32.1)	19 (67.9)
	3.6–4.0 kg	3 (25.0)	9 (75.0)
Mode of Delivery	Assisted Vaginal Delivery	1 (16.7)	5 (83.3)
	Normal Vaginal Delivery	22 (39.3)	34 (60.7)

Figure 5: Stratified Analysis of Significant Pain After Delivery

Discussion:

This study aimed to identify whether episiotomy is associated with any complications after delivery among primigravida women who delivered vaginally. The results indicated that women who had episiotomy had significantly more post-delivery pain and recovery related complications than those who had not undergone episiotomy (10). This study adds to a body of evidence that indicates routine episiotomy may not always yield positive maternal outcomes, and argues for the need for a judicious approach to episiotomy rather than making it a standard obstetric procedure. In the present study, there was significantly more episiotomy (11) associated with significant pain following delivery.

Around three-fourths of the women in the episiotomy group experienced significant pain whereas none of the women who did not have episiotomy experienced severe post-delivery pain. There was a significant association between episiotomy and pain ($p < 0.001$). This is in line with previous international studies which have found that women experienced greater discomfort, and postpartum pain, after routine episiotomy. Jiang et al. found restrictive episiotomy practices to be linked to better maternal outcomes as well as reduced rates of perineal trauma relative to routine episiotomy. Likewise, Raisanen et al. found that when the episiotomy is not necessary, it results in increased postpartum morbidity such as pain and delayed recovery. The present study also revealed that a substantial number of participants had problems with sitting or walking following birth. This was seen more often in women who had been cut (episiotomy) (12).

Postpartum perineal pain and discomfort can greatly hinder maternal mobility and normal functioning activities. Literature has highlighted the potential for perineal trauma and surgical incisions to impact maternal comfort, interrupt breastfeeding practices and impact maternal wellbeing in the early postpartum period. The results of this study add to the concerns of the practice of episiotomy in uncomplicated delivery. Another significant finding of this study was that women reported a significant number of complications associated with the wound, including infection or swelling,

and their recovery process was slow. The suturing and cutting of the tissue at episiotomy is known to have some complications, including delayed healing of the wound and localized infections (13).

The findings of the present study are like those from low- and middle-income countries where inadequate postpartum care, hygiene practices and delayed follow-up lead to wound complications. Both Carroli and Mignini noted that the use of an episiotomy was avoided and as a result there was less posterior perineal trauma, requiring suturing, and less healing complications. The stratified analysis showed that the post-delivery pain differed between some of the demographic and obstetric groups. A higher percentage of women experienced pain after delivery in the age group 26–30 years and women who delivered between 39–40 weeks were experiencing more pain. Women who gave birth between 2.5–3.0 kg in weight were also more likely to experience pain, as were women who had normal vaginal delivery. Such differences could, however, be due to intrinsic factors of individual pain perception, tissue elasticity and obstetric practices and not necessarily to causal relationships.

Episiotomy was the most significant factor in relation to postpartum pain among the study participants. The current study results are clinically significant as episiotomy is still widely used in a variety of healthcare facilities and especially amongst the primigravida women. Episiotomy traditionally has been done in the belief that it reduces the incidence of severe perineal tears and promotes delivery. With the increasing evidence, however, some routine episiotomy is now being thought of as surgical trauma to the mother which is unnecessary. WHO and other international guidelines recommend that episiotomies be limited and only performed when they are necessary. The present study has some limitations; however, it is important in its findings. The study was carried out in one health facility in a small population which might restrict the applicability of the results. In addition, patient-reported outcomes like pain and satisfaction can be subjective and can be affected by patient's perception and other emotional factors. No long-term follow-up was conducted to evaluate the long-term maternal outcomes like sexual dysfunction or chronic perineal pain. The results of this study indicate that episiotomy is linked with higher levels of postpartum pain and slow recovery for primigravida women. Episiotomy may be used more selectively than routinely for the purpose of alleviating pain and promoting a faster recovery for the mother. There is a need for additional multicenter studies with larger patient samples to further validate maternal outcome with episiotomy practices.

Conclusion:

This study found that episiotomy is significantly related to post-delivery pain, delayed recovery and complications related to wound in the case of primigravida women who have a vaginal delivery. The women who did not have episiotomy, had comparatively fewer complications post birth and less post birth recovery. The results are in line with the selective use of episiotomy to enhance maternal comfort, recovery and postpartum wellbeing.

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