

COMPARISON OF RESTRICTED VS ROUTINE USE OF EPISIOTOMY IN A  
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## ABSTRACT

**Objectives:** To compare the outcome of restricted versus routine use of episiotomy in a tertiary center. **Method:** A prospective study was conducted for singleton normal vaginal deliveries at term. Deliveries managed with routine use of episiotomy formed the 'Control Group' while those managed with restricted use of episiotomy formed the 'Study Group'. Data thus obtained was analyzed. **Result:** Total number of deliveries analyzed were 440 ('Control Group': n=200, 'Study Group': n=240). Restricted use of episiotomy led to 65% (n=151) women delivering without any perineal laceration in 'Study Group'. This translated into 44% (n=42) reduction in the number of perineal lacerations in primipara and 25% (n=37) in multipara, compared to the 'Control Group'. Only 2% of primipara in 'Study Group' had third-degree perineal tear. **Conclusion:** Restricted use of episiotomy resulted in considerable reduction in maternal morbidity due to perineal lacerations.

**KEYWORDS:** Episiotomy, perineal lacerations, perineal tears, restricted use, routine.

## INTRODUCTION

**Episiotomy:** Episiotomy is a surgical incision into the perineal body to enlarge the vaginal opening in order to facilitate birth or to prevent perineal tears. It is one of the most commonly performed surgical procedures in obstetrics, although there is extensive disagreement about the necessity and benefits of this procedure.

In 2000, approximately 33% of women giving birth vaginally had an episiotomy. Historically the purpose of this procedure was to facilitate completion of the second stage of labour to improve both maternal and neonatal outcomes. Maternal benefits were thought to include a reduced risk of perineal trauma subsequent pelvic floor dysfunction, prolapse, urinary incontinence, fecal incontinence and sexual dysfunction. Potential benefits to the foetus were thought to include a shortened second stage of labour resulting from some rapid spontaneous delivery or from instrumented vaginal delivery. Despite limited data, this procedure became virtually routine resulting in an underestimation of the potential adverse consequences of episiotomy, including extension to a third- or fourth-degree tear, sphincter dysfunction and dyspareunia.

Anthony S1 and coworkers reviewed more than 43000 singleton vaginal deliveries and concluded that 84 episiotomies would have to be performed to prevent one severe degree perineal laceration. Another conclusion

was that a higher episiotomy concluded from their study that liberal use of mediolateral episiotomy should be discouraged.

The lack of consensus about routine or restricted use of episiotomy is reflected in the wide variation in the episiotomy rates being reported in different studies. MEDLINE search revealed only one cross-sectional study by Bhatia JC et al,<sup>[2]</sup> in 1993 wherein 23.5% of institutional deliveries received an episiotomy. Low and colleagues,<sup>[3]</sup> reported a variation from 13.3% to 84.6% with an average of 51% among spontaneous term births in a prospectively enrolled population of uncomplicated births. In the United States, there has been a steady decline in episiotomy rates from 62% in 1987 to 30-35% in 2003. Sartore A et al,<sup>[4]</sup> reported 51.2% of primipara and 12.6% of multiparous women received an episiotomy, in their institutions. Similar figures regarding episiotomy rates in institutional deliveries in India are not available.

In 2006, 'ACOG committee on practice bulletins,<sup>[5]</sup> based on good scientific evidence, recommended that restricted use of episiotomy is preferable to its routine or liberal use. In accordance with these guidelines a study was designed to compare the outcome of restricted versus routine use of episiotomy in our hospital.

## METHODS

A prospective observational study was conducted in the Department of Obstetrics & Gynaecology, Skims MCH, Bemina, to analyze the outcome of the policy of restricted use of episiotomy in singleton normal vaginal deliveries at term. Deliveries conducted between 20<sup>th</sup> Aug 2016 and 24<sup>th</sup> March 2017, formed the study group (n= 240). All deliveries from 01 March 2016 up to 19<sup>th</sup> Aug 2016, which were managed with routine use of episiotomy, formed the control group (n=200). The exclusion criteria included instrumentations, vaginal birth after caesarian (VBAC) and multiple gestations. All women were of Indian origin and there were no ethnic differences between the two groups.

Details of each delivery were recorded with specific attention given to the age of patient, parity, episiotomy, birth weight of the neonate and need for NICU admission. A scoring system was devised to record the severity of perineal laceration. Intact perineum and first degree perineal tears were given a score of 1, and third and fourth degree tears were given a score of 2.

Under the earlier policy of routine or liberal use of episiotomy, all primigravidas were given an episiotomy. Multigravidas were given an episiotomy when resident felt that episiotomy could facilitate or hasten the

delivery. Under the policy of restricted use of episiotomy, great restraint was observed in giving an episiotomy, for primigravidas as well as for multigravidas. Episiotomy was given only when the second stage of labour was prolonged for more than one hour, with an unyielding perineum, or if the resident felt the need for an episiotomy to prevent more serious perineal tears. When indicated, only a mediolateral episiotomy was given in our hospital.

Statistical analysis was accomplished using the X<sup>2</sup> test and Fischer's exact test where appropriate. Chi-Square value and associated P values were calculated, assuming significance at the P<0.05 levels.

**Table 1: Distribution of episiotomy by parity.**

	Control Group	Study Group
<b>Primipara</b>		
Normal Delivery	80	90
Episiotomy	97% (n=78)	40% (n=36)
<b>Multipara</b>		
Normal Delivery	120	150
Episiotomy	50% (n=60)	14% (n=21)
<b>Total</b>		
Vaginal Delivery	200	240
Episiotomy	69% (n=138)	23.7% (n=57)

**Table 2: Distribution of perineal tears by parity.**

	Control Group	Study Group
<b>Primipara</b>	80	90
Second-degree	0	11% (n=10)
Third / Fourth degree	0	1.8% (n=2)
<b>Multipara</b>	120	150
Second-degree	3% (n=4)	10% (n=15)
Third / Fourth degree	0	0
<b>Total</b>	200	240
Second-degree	2% (n=4)	10% (n=25)
Third / Fourth degree	0	0.8% (n=2)

**Table 2: Distribution of episiotomy by birth weight.**

Birth Weight (Kg)	Control group		Study Group	
	Total	Episiotomy	Total	Episiotomy
<2.50	24	59% (n=14)	32	22% (n=7)
2.50 – 2.99	75	72% (n=54)	122	21% (n=25)
3 – 3.50	95	65% (n=62)	70	22% (n=15)
> 3.50	16	50% (n=8)	16	62% (n=10)
Total	200	n=138	240	n=57

**Table 4: Distribution of perineal lacerations by birth weight.**

Birth Weight (Kg)	Control group				Study Group			
	Total	Episiotomy	Tears	Total Laceration	Total	Episiotomy	Tears	Total Lacerations
<2.50	24	59% (n=14)	0%	59% (14)	32	22% (n=7)	15% (n=5)	37% (n=12)
2.50 -2.99	75	72% (n=54)	1% (n=1)	72% (n=55)	122	21% (n=25)	9% (n=11)	30% (n=36)
3 – 3.50	95	65% (n=62)	1% (n=1)	65% (n=63)	70	22% (n=15)	17% (n=10)	37% (n=25)
> 3.50	16	50% (n=8)	0%	50% (n=8)	16	62% (n=10)	12% (n=2)	74% (n=12)
Total	200			70% (n=140)	240			35% (n=85)

## RESULTS

Total number of deliveries analyzed was 440 (control group: n=200, study group: n=240). The control group consisted of 80 primipara and 120 multiparous women. The study group constituted of 90 primipara and 150 multiparous women.

The overall episiotomy rate in the control group was 69% (n=138) and in the study group 23% (n=57). The restricted use of episiotomy resulted in a significant reduction overall episiotomy rate ( $P<0.001$ ) in our hospital.

The data was further stratified by parity. In the control group 78 primiparas (97%) and 60 multiparas (50%) received an episiotomy. In the study group 36 primiparas (40%) and 21 multiparas (14%) delivered with an episiotomy (table-1).

Among primiparas in the control group no tears were recorded. In the study group 11% (n=10) primiparas had second-degree tears and 1.8% (n=2) had severe degree perineal tears. Among multiparas, in the control group 3% (n=4) had second degree tears, whereas, in the study group second degree tears were noted in 10% (n=15). No third or fourth degree tears were noted in either group of multiparas (Table-2). Distribution of episiotomy in control group and study group by birth weight of the neonate is given in Table-3. When the policy of routine use of episiotomy was in vogue, in the control group, episiotomy was given with equal frequency (range 50-72%), irrespective of the birth weight of the neonate. In the study group when the neonate weighed less than 3.5 Kg, the episiotomy rate was only 22%, whereas with neonate weighing more than 3.5 Kg, the episiotomy rate was significantly higher 62% ( $P<0.001$ ).

The total number of parturients who had perineal lacerations, in the study group was 35% (n=85), which was significantly less when compared to 70% (n=140) in the control group ( $P<0.001$ ), (Table-4).

There was no correlation of episiotomy or tears to the maternal age in both the groups.

There was no difference in the neonatal outcome in the two groups. Among the study population there were 08 admissions to NICU for birth asphyxia, 04 each in control and study group. All these neonates had been delivered with the help of an episiotomy.

## DISCUSSION

Episiotomy has been routinely used to facilitate delivery. Maternal benefits attributed to the use of episiotomy include a reduced risk of perineal trauma, subsequent pelvic floor dysfunction, prolapse, urinary incontinence, fecal incontinence and sexual dysfunction. Potential benefits to the foetus were thought to include a shortened second stage of labour resulting from some rapid

spontaneous delivery or from instrumented vaginal delivery.

Maternal morbidity due to perineal trauma and episiotomy has been a subject of many studies. Macarthur AJ *et al.*<sup>[6]</sup> studied perineal pain inflicted due to perineal trauma and the average number of weeks from delivery until cessation of perineal pain. They concluded that women with intact perineum were pain free after 1.9 weeks, whereas women with second-degree perineal tears recovered after 2.4 weeks. Women with episiotomy recovered from perineal pain after 2.6 weeks. Sartore A *et al.*<sup>[4]</sup> concluded from their study that mediolateral episiotomy does not protect against urinary or anal incontinence and genital prolapse. Episiotomy is associated with a lower pelvic floor muscle strength compared with spontaneous perineal tears, and episiotomy is also associated with more dyspareunia and perineal pain. Signorello LB *et al.*<sup>[7]</sup> studied the postpartum sexual functioning and its relationship to perineal trauma. They studied outcomes like time to resuming sexual intercourse, dyspareunia, sexual satisfaction and likelihood of achieving orgasm. In their study women with intact perineum reported best outcome and episiotomy conferred the same profile of sexual outcomes as did spontaneous perineal tears. Perineal laceration was also related to the increase frequency and severity of postpartum dyspareunia indicating that it is important to minimize the extent of perineal damage during child birth.

In our hospital the restricted use of episiotomy led to significant reduction in the incidence of perineal lacerations. Implementation of the policy of restricted use of episiotomy led to 65% (n=159) women delivering with intact perineum, i.e., without perineal trauma due to episiotomy or tear. In the control group intact perineum was noted only in 31% (n=62). This translated into statistically significant reduction in the number of perineal lacerations in primipara 44% (n=42), and in multipara 25% (n=57). Thus, it would be fair to conclude that the policy of restricted use of episiotomy has a strong protective effect on the occurrence of perineal lacerations and it significantly contributed to lessen the maternal morbidity.

Perineal tears of severe degree were noted in 2% (n=2) of primiparas in the 'Study Group', and none in the 'Control Group'. This number (n=2) was very small to make a statistical statement in our study. However, Anthony S *et al* reviewed more than 43000 singleton vaginal deliveries and concluded that 84 episiotomies would have to be performed to prevent one severe degree perineal laceration.

Results of our study also indicate that women, who deliver neonates weighing more than 3.5 Kg, were at an increased risk of receiving an episiotomy.

## CONCLUSION

The policy of restricted use of episiotomy resulted in considerable reduction in maternal morbidity due to perineal lacerations, without any increase in adverse neonatal outcome. Thus, the policy of restricted use of episiotomy may be adopted as a norm for singleton vaginal term deliveries to improve the maternal outcome.

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