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Research Article

Judicial use of episiotomy in singleton normal vaginal deliveries at term: the changing trend

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ABSTRACT

Background: Episiotomy is the most commonly performed surgical procedures during delivery; but there is extensive disagreement about the necessity and benefits of this procedure. This study is an effort to compare the outcome of routine versus restricted use of episiotomy in tertiary care center.
Methods: A prospective observational study was conducted for singleton normal vaginal term deliveries. Deliveries managed with routine use of episiotomy formed the 'control group', while those managed with restricted use of episiotomy formed the 'study group'. Data so obtained was analyzed.
Results: Total no of deliveries analyzed were 458 (210 control group+248 study group). Restricted use of episiotomy led to 64% (n=159) women delivering without any perineal lacerations in 'study group'. This translated into 41% (n=38) reduction in no of perineal lacerations in primipara, and 23% (n=36) in multipara, compared to the 'control group'. Only 2% of primipara in 'study group' had severe 3rd degree perineal tears.
Conclusions: 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 is a surgical incision into perineal body to enlarge the vaginal opening to facilitate birth and to prevent tears. Although it is one of the most commonly performed surgical procedures during delivery, there is extensive disagreement about the necessity and benefits of this procedure.

The lack of consensus about routine on restricted use of episiotomy is reflected in wide variation in the episiotomy rates being reported in different studies. Low and colleagues 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.[1] In the United States, there has been a steady decline in episiotomy rates from 62% to 30-35%.[2,3] Sartore A et al reported 51.2% of primipara and 12.6% of multipara women received an episiotomy, in their institution.[4] Similar figures regarding episiotomy rates in institutional deliveries in India are not available. Medline search revealed only one cross-sectional study by Bhatia JC et al, where in 23% of institutional deliveries received an episiotomy.[5]

In 2006, 'ACOG committee on public bulletins' on good scientific evidences, recommended that restricted use of episiotomy is preferable to its routine on liberal use.[3] In SHKM GMC, Mewat, the episiotomy rate for women who delivered vaginally was 71%. Being a tertiary care center and teaching institute, this data was subjected to medical audit. On 24th August, after a peer review, a

consensus decision was taken to introduce the practice of restricted use of episiotomy in our hospital (SHKM GMC, Mewat).

METHODS

A prospective observational study was designed to analyse the outcome of policy of restricted use of episiotomy in singleton normal vaginal deliveries at term. Deliveries conducted between 24th August 2014 and 29th February 2015, formed the 'study group' (n=248). All deliveries from 1st March 2014 up to 23rd August 2014, which were managed with routine use of episiotomy, was taken as 'control group' (n=210). The exclusion criteria included the instrumental deliveries, preterm deliveries, abnormal presentations, vaginal birth after caesarean (VBAC) and multiple generations. 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 neonate and need for NICU admission. A scoring system was devised to record the severity of Perineal laceration (Table 1).

Under the earlier policy of routine on liberal use of episiotomy, all primigravidas were given an episiotomy. Multigravidas were given an episiotomy when birth attendant felt that episiotomy could facilitate or hasten the delivery. Under the policy of restricted use of episiotomy, great restraint was observed in giving episiotomy, for primigravidas as well as multigravidas. Episiotomy was given only when 2nd stage of labour was prolonged for more than 60 minutes, with an unyielding perineum, and if the birth attendant felt the need for an episiotomy to prevent more serious perineal tears. When indicated, only a medio-lateral episiotomy was given in our hospital (SHKM GMC, Mewat).

Statistical analysis was accomplished using the X^2 –test and Fischer's exact test where appropriate. Chi-square value and associated p-values were calculated, assuring significance at the $p<0.05$.

RESULTS

Total no. of deliveries analysed were 458 (210 control group+248 study group). The control group consisted of 85 primipara and 125 multiparous women. The study group constituted of 93 primipara and 155 multiparous women.

The overall episiotomy rate in the control group was 68% (n=142) and in study group 24% (n=59). The restricted use of episiotomy resulted in a significant reduction in overall episiotomy rate ($p<0.001$) in our institution (SHKM GMC, Mewat).

Table 1: Scoring system.

Severity of perineal laceration	Score
Intact perineum and 1st degree perineal tears	0
Episiotomy and 2nd degree perineal tears	1
3rd and 4th degree tears	2

This data was further stratified by parity. In the Control Group 82 primiparas (96%) and 60 multiparas (48%) received an episiotomy. In the Study Group 37 multiparous (40%) and 22 multiparas (14%) delivered with an episiotomy (Table 2).

Table 2: Distribution of episiotomy by parity.

Sr. No	Parameters	Control Group	Study Group
1.	Primipara	85	93
	Normal delivery episiotomy	82 (96%)	37 (40%)
2.	Multipara	125	155
	Normal delivery episiotomy	60 (48%)	22 (14%)
3	Total	210	248
	Normal delivery episiotomy	142 (68%)	59 (24%)

Table 3: Distribution of perineal tears by parity.

Sr. No.	Parity	Control Group	Study Group
1.	Primipara	85	93
	2nd Degree	0	12 (13%)
	3rd & 4th Degree	0	02 (2%)
2.	Multipara	125	155
	2nd Degree	2 (1.6%)	16 (10%)
	3rd & 4th Degree	0	0
3.	Total	210	248
	2nd Degree	2 (0.6%)	28 (11%)
	3rd & 4th Degree	0	2 (0.8%)

Table 4: Distribution of episiotomy by birth-weight.

Sr. No.	Birth-weight (in Kg)	Control Group		Study Group	
		Total	Episiotomy	Total	Episiotomy
1.	<2.50	24	16 (67%)	37	08 (22%)
2.	2.50-2.99	77	56 (74%)	123	25 (21%)
3.	3.0-3.50	95	62 (66%)	72	16 (22%)
4.	>3.50	14	08 (57%)	16	10 (62%)
		210	142	248	59

Among Primiparas in the control group, there were no tears recorded. In the Study Group 13% (N=12) of the primiparas had 2nd degree perineal tears and 2% (n=2) had severe degree perineal tears. Among Multiparas, in

the control Group, 1.6% (n=2) had 2nd degree tears, whereas in the Study Group, 2nd degree tears were noted in 10% (n=16). There were no 3rd or 4th degree tears noted in the either group of Multipara (Table 3).

Distribution of Episiotomy in relation to birth-weight of the neonate was also noted in both the groups and the data obtained (Table 4).

When the policy of routine use of Episiotomy was in vogue, in the control group and study group, the Episiotomy was given with equal frequency (range 57-74) irrespective of the birth weight of the neonate. In the Study group, when the neonate weighed less than 3.50 kg, then the Episiotomy rate was only 22%, whereas with neonate weight more than 3.5 kg, the Episiotomy rate was significantly higher 62% (p<0.001).

Table 5: Distribution of perineal lacerations by birth-weight.

Sr. No	Birth-weight (in kg)	Total		Episiotomy		Tears		Lacerations	
		Control group	Study group	Control group	Study group	Control group	Study group	Control group	Study group
1.	<2.50	24	37	67%	22%	00%	16%	67%	38%
2.	2.50-2.99	77	123	74%	21%	1%	9%	74%	29%
3.	3.0-3.50	95	72	66%	22%	1%	17%	66%	39%
4.	>3.50	14	16	57%	62%	00%	06%	57%	69%

There was no difference in neonatal outcome in two groups. Among this study population, there were 06 admissions to NICU for birth asphyxia, 03 in each Control and Study group. All these neonates had been delivered with the help of 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, faecal incontinence and sexual dysfunction. Potential benefits to the foetus were thought to include a shortened stage of labour resulting from more rapid vaginal delivery.[3]

This routine use of Episiotomy has resulted in many researches questioning the very purpose of this procedure, as well as the potential benefits attributed to episiotomy. Liberal on routine use of Episiotomy has also resulted in overlooking the potential adverse consequences of Episiotomy.

Maternal Morbidity due to perineal trauma and episiotomy has been a subject of many studies. Macarthur AJ et al 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 2nd degree perineal tears recovered after 2.4 weeks. Women with Episiotomy recovered from perineal pain after 2.6 weeks.[6] Sartore et al concluded from their study that Medio-Lateral Episiotomy does not protect against urinary anal incontinence and genital prolapse. Episiotomy is associated with a lower pelvic floor muscle strength compared with spontaneous perineal tears and with more dyspareunia and perineal pain.[4] Signorella LB et al studied the postpartum sexual functioning and its relationship to perineal trauma. They studied outcomes like time to resuming sexual intercourse, dyspareunia, sexual satisfaction, sexual sensation and likelihood of achieving orgasm. In their study woman with intact perineum reported the best outcomes, as did spontaneous perineal tears. Perineal laceration was also related to the increased frequency and severity of postpartum dyspareunia, indicating that it is important to minimize the extent of perineal damage during child birth.[7]

In our Institution (SHKM GMC), the policy restricted use of episiotomy led to significant reduction in incidence of perineal lacerations. Implementations of the policy of restricted use of Episiotomy led to 64% women delivering with intact perineum, i.e. without perineal trauma due to Episiotomy or tear. In Control Group, intact perineum was noted in only 31%. This translated into statically significant reduction in number of perineal lacerations in Primipara 41% and in Multipara 25%. 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 its significantly contributed to lessen the maternal morbidity.

Perineal tears of severe degree were noted in 2% of Primiparas in the Study Group and none in the Control Group. This number was very small to make a statistical statement in this study. However Anthony S et al reviewed more than 43000 singleton vaginal deliveries and concluded that 84 Episiotomy would have to be performed to prevent one severe degree perineal laceration.

In Primiparas 48 Episiotomies and in Multiparas 106 Episiotomies would have be performed to prevent one severe perineal tear. Another significant conclusion was that a higher Episiotomy rate was not associated with lower tear rate.[8]

Results of this study also indicate that women who deliver neonates weighing more than 3.5 kg were at an increased risk of receiving Episiotomy.

CONCLUSION

As medical student, every doctor is taught about the benefits of Episiotomy. The hands on experience of giving an Episiotomy and suturing Episiotomy are part of every medical student's curriculum. Hence, in spite of mounting evidence against the routine use of Episiotomy, there is reluctance to give up this age-old practice. There is considerable resistance to any change in the existing practice of episiotomy in any institution, including our own institution.

Notwithstanding the above, relevance of Episiotomy in current obstetric practice should not be underestimated. Episiotomy should not be considered a 'taboo' and good clinical judgment should be exercised before embarking on Episiotomy.

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

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