Original Article

Restricted use of Episiotomy

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Abstract

Objective : To compare the outcome of restricted versus routine use of episiotomy in a tertiary care center. **Method :** 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 number of deliveries analyzed was 458 ('Control Group': n=210, 'Study Group': n=248). Restricted use of episiotomy led to 64% (n=159) women delivering without any perineal laceration, in 'Study Group'. This translated into 41% (n=38) reduction in the number 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 third degree perineal tears. **Conclusion :** Restricted use of episiotomy resulted in considerable reduction in maternal morbidity due to perineal lacerations.

Key words : episiotomy, perineal lacerations, perineal tears, restricted use, routine

Introduction

Episiotomy is a surgical incision into the perineal body to enlarge the vaginal opening to facilitate birth or to prevent perineal 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 or restricted use of episiotomy is reflected in the wide variation in the epi-

siotomy 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 births¹. In the United States, there has been a steady decline in episiotomy rates from 62% in 1987 to 30 – 35 % in 2003^{2,3}. Sartore A et al reported 51.2% of primipara and 12.6% of multiparous women received an episiotomy, in their institution⁴. 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, in 1993 wherein 23.5 per cent of institutional deliveries received an episiotomy⁵.

In 2006, 'ACOG committee on practice bulletins,' based on good scientific evidence, recommended that restricted use of episiotomy is preferable to its routine or liberal use³.

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In our institution in 2006, the episiotomy rate for women who delivered vaginally was 71%. Being a tertiary care center and a teaching hospital, this data was subjected to medical audit. On 24 Aug 2007, after a peer review, a consensus decision was taken to introduce the practice of restricted use of episiotomy in our hospital. This was in accordance with the current guidelines on the subject.

A study was designed to compare the outcome of restricted versus routine use of episiotomy in our Hospital.

Methods

A prospective observational study was designed to analyze the outcome of the policy of restricted use of epi-

siotomy in singleton normal vaginal deliveries at term. Deliveries conducted between 24 Aug 07 and 29 Feb 08, formed the study group (n = 248). All deliveries from 01 Mar 07 up to 23 Aug 07, which were managed with routine use of episiotomy, formed the control group (n = 210). The exclusion criteria included instrumental deliveries, preterm deliveries, abnormal presentations, 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

Table1 : Distribution of episiotomy by parity

	Control Group	Study Group
Primipara		
Normal Delivery	85	93
Episiotomy	96% (n=82)	40% (n=37)
Multipara		
Normal Delivery	125	155
Episiotomy	48% (n=60)	14% (n=22)
Total		
Vaginal Delivery	210	248
Episiotomy	68% (n=142)	24% (n=59)

Table2 : Distribution of perineal tears by parity

	Control Group	Study Group
Primipara	85	93
Second-degree	0	13% (n=12)
Third / Fourth degree	0	02% (n=02)
Multipara	125	155
Second-degree	1.6% (n=2)	10% (n = 16)
Third / Fourth degree	0	0
Total	210	248
Second-degree	0.6% (n=2)	11% (n=28)
Third / Fourth degree	0	0.8% (n=02)

Table3 : Distribution of episiotomy by birth weight

Birth Weight (Kg)	Control Group		Study Group	
	Total	Episiotomy	Total	Episiotomy
< 2.50	24	67% (n=16)	37	22% (n=08)
2.50 – 2.99	77	74% (n=56)	123	21% (n=25)
3 – 3.50	95	66% (n=62)	72	22% (n=16)
> 3.50	14	57% (n= 08)	16	62% (n=10)
Total	210	(n= 142)	248	(n= 59)

Table4 : 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	67% (n=16)	00%	67%	37	22%	16% (n=06)	38% (n=14)
2.50 – 2.99	77	74%	01% (n=1)	74% (n=57)	123	21%	9% (n=11)	29% (n=36)
3 – 3.50	95	66%	01% (n=1)	66% (n=63)	72	22%	17% (n=12)	39% (n=28)
> 3.50	14	57% (n=08)	00%	57%	16	62%	06% (n=01)	69% (n=11)
Total	210	69% (n=144)	248					36% (n=89)

first-degree perineal tears were given a score of 0. Episiotomy and second-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 the birth attendant felt that episiotomy could facilitate or hasten the delivery. Under the policy of restricted use of epi-

siotomy, 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 60 minutes, with an unyielding perineum, or if the birth attendant 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 X2 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.

Results

Total number of deliveries analyzed was 458 (control group: $n=210$, study group: $n=248$). 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 the study group 24 % ($n = 59$). The restricted use of episiotomy resulted in a significant reduction in the overall episiotomy rate ($P < 0.001$) in our hospital.

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 primiparas (40%) and 22 multiparas (14%) delivered with an episiotomy (Table1).

Among primiparas in the control group there were no tears recorded. In the study group 13% ($n = 12$) primiparas had second-degree tears and 2% ($n = 2$) had severe degree perineal tears. Among multiparas, in the control group 1.6% ($n = 2$) had second-degree tears, whereas, in the study group second-degree tears were noted in 10% ($n = 16$). There was no third or fourth degree tears noted in either group of multiparas (Table2). Distribution of episiotomy in control group and study group by birth weight of the neonate is given in Table3. When the policy of routine use of episiotomy was in vogue, in the control group, 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 3.5 Kg, then 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 36% ($n = 89$), which was significantly less when compared to 69% ($n = 144$) in the control group ($P < 0.001$) (Table4).

There was no correlation of episiotomy or tears to the maternal age in both the groups (Table5).

There was no difference in the neonatal outcome in the two groups. Among this study population there were 06 admissions to NICU for birth asphyxia, 03 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, faecal incontinence, and sexual dysfunction. Potential benefits to the foetus were thought to include a shortened second stage of labour resulting from more rapid vaginal delivery³.

This routine use of episiotomy has resulted in many researchers questioning the very purpose of this procedure, as well as questioning the potential benefits attributed to episiotomy. Liberal or 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 second-degree perineal tears recovered after 2.4 weeks. Women with episiotomy recovered from perineal pain after 2.6 weeks⁶. Sartore A et al 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 pain⁴. Signorello 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, women with intact perineum reported the best outcomes and episiotomy conferred the same profile of sexual 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 childbirth⁷.

In our institution, the policy of 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 64% (n=159) women delivering with intact perineum, that is, without perineal trauma due to episiotomy or tear. In control group, intact perineum was noted in only 31% (n=66). This translated into statistically significant reduction in the number of perineal lacerations in primipara 41% (n=39), and in multipara 25% (n=54). 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. In primiparas 48 episiotomies and in multiparous women 106 episiotomies would have to be performed to prevent one severe perineal tear. Another significant conclusion was that a higher episiotomy rate was not associated with a lower tear rate⁸.

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

Conclusion

As medical student, every doctor is taught about the benefits of episiotomy. The hands-on experience of giving an episiotomy and suturing an episiotomy is part of every medical students 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.

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