



Study of Episiotomy Versus Spontaneous Vaginal Delivery in Primigravida

KEYWORDS

Generations Of Ni-Ti Rotary System, Endodontic Rotary File System, Ni-Ti Rotary System

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ABSTRACT

a) We aimed to determine whether routine episiotomy in primigravida is indicated ?
 b) What are the effects on maternal and foetal outcome where episiotomy is routinely performed Vs spontaneous vaginal deliveries.
 c) This study which is a prospective observational study was done in 100 primigravidas with term pregnancies and the women were divided into two groups that is study and control group. The study group were given routine mediolateral episiotomy as per the protocol and the control group they were delivered vaginally (spontaneous).
 d) The study was done at Government Maternity Hospital, Hanamakonda, Department of Obstetrics and Gynaecology from September, 2007 to December, 2008.

INTRODUCTION :

Episiotomy is defined an Incision on the perineum to enlarge the vaginal introitus to facilitate the passage of foetal head and ensure birth of foetus and prevent uncontrolled tear of perineal tissue. It is also used to carry out certain manipulations in the vagina. The importance of episiotomy, though a minor procedure, is out of proportion to it's simplicity. It has two fold importance, both in the mother and the foetus. If episiotomy is performed to late it can result in unavoidable perineal laceration thus defeating the very purpose for which it is being done⁴. Many studies including Cochrane data¹ base on pregnancy and child birth have shown that routine episiotomy may not be justified in modern practice because it has to contributed to anal sphincter incontinence by increasing risk of III^o & IV^o tears perineal trauma is less and need for repair and better healing is seen in selective episiotomy groups. Even compared with spontaneous perineal tears, episiotomy increased the risk of faecal incontinence and it is reasonable to conclude that Episiotomy should not be performed routinely in all cases.

The major argument for episiotomy, is that, it protects the perineum from injury by preventing overstretching of the pelvic floor muscles. Episiotomy is also supposed to prevent pelvic floor relaxation. Many studies have found that deep tears are almost an extension of episiotomy. Pelvic floor relaxation causes sexual dysfunction after child birth, urinary incontinence and uterine prolapse³.

Therefore we have taken up this study in order to demonstrate the morbidity (maternal and foetal) in the women who had a routine episiotomy in primigravida compared to those women who were without a routine episiotomy. Therefore we have tried to evolve a protocol for delivery of primigravida based on this study which is evidence based.

MATERIALS AND METHODS :

Inclusive Criteria:

- All primigravida who were admitted in the labour room without any medical complications like, Pregnancy Induced Hypertension, anaemia, and gestational diabetes.
- All primigravidas with vertex presentation in 2nd stage of labour.

Exclusive Criteria:

- Gravida II & III, IV and grand multies are excluded in the study. The results and data are analysed using studies't' tests, chi-square test and logistic regression analysis and P. value. The data was recorded in the proforma which is enclosed.
- All primigravida with medical complications are excluded in the study.

RESULTS AND OBSERVATIONS :

Duration of IInd Stage Labour :

	Study Group	Control Group
Mean Duration of Labour	50 Minutes	60 Minutes

The chart shows that the mean duration of II stage of labour was less than the control group which is clinically and statistically significant. Because the maternal and foetal morbidity is very much reduced.

Indications of Episiotomy :

a)	Rigid Perineum
b)	Prolonged IInd Stage of Labour
c)	Breech Delivery
d)	Maternal exhaustion
e)	Shoulder Distosia
f)	Foetal Distress
g)	Instrumental delivery (Forceps Delivery)

Study Group :

No. of Patients delivered by Episiotomy - 50 Patients

	No. of Cases	Percentage
Rigid Perineum	25	50%
Beech Delivery	8	16%
Maternal Exhaustion	6	12%
Prolonged 2nd Stage of Labour	4	8%
Instrumental Delivery	4	8%
Foetal Distress	3	6%

This chart shows that the commonest indication for episiotomy was rigid perineum 50% of the women it is commonest indication for episiotomy. 16% of the women breech delivery was the indication and maternal exhaustion is 12%.

Instrumental Vaginal Delivery Rate :

	Study Group	Control Group
Forceps Delivery	60%	40%
Spontaneous Delivery with Episiotomy	40%	60%

It can be seen from above chart the Instrumental delivery rate in episiotomy study group was 60% as compare to 40% in control group.

Illrd Stage Bleeding :

	Study Group	Control Group
Normal III Stage Bleeding	95%	95%
Traumatic PPH	5%	3%

Above chart shows that the incidence of the traumatic PPH is more in episiotomy group as compare to the control group.

Perineal Lacerations (I^o, II^o & III^o)

	Study Group	Control Group
Perineal Laceration	4.2%	4.5%

This chart shows that there is no clinical and statistical difference between both the groups.

Involvement of Sphincter:

	Study Group	Control Group
Involvement of Sphincter	4%	7.5%

Urinary Disturbances :

	Study Group	Control Group
URINARY DISTURBANCES	3.6%	1.5%

Wound Infection and Wound Dehiscence :

	Study Group	Control Group
Wound Infection and Wound Dehiscence	5%	3%

This chart shows that the wound infection rate was clinically and statistically higher in the Study Group compared to the Control Group.

Complications :

1. Haematoma
2. Wound Infection
3. Wound Gaping

Haematoma :

	Study Group	Control Group
Haematoma	1%	Nil

Wound Infection :

	Study Group	Control Group
Wound Infection	1%	Nil

Wound Gaping:

	Study Group	Control Group
Wound Gaping	1%	Nil

The study shows that the complications like Haematoma, Wound Infections and Wound Gaping are more in the study group compare to control group.

Follow-up :

	Study Group	Control Group
1 st Month	Urinary Disturbances (2%) (Retention, urge, stress and Frequency (2%))	Nil
2nd Month	Pain (6%)	(3%)
3rd Month	Dyspareunia (5%)	Nil

Comparison of the obstetric characteristics of women who sustained a third-degree perineal tear (n=50) with those who did not (n=50) following mediolateral episiotomy at primiparous vaginal delivery (2007-08)

	Cases (Third-degree tear, n=54)	Controls (no third-degree tear, n=46)	P-Value
Age in years at delivery (median)	30(31)	31.3(30.5)	0.5*
Range	18-39	20-42	
Mode of delivery (%) Spontaneous vaginal delivery	19(35.2)	27 (58.7)	0.02**
Assisted vaginal delivery (%)	35 (64.8)	19(41.3)	
Further Breakdown of Assisted vaginal delivery (%)			0.77**
Forceps	8(14.8)	4 (8.7)	
Operator (%)			0.03**
Midwife	18(33.3)	25 (54.3)	
Obstetrician	36 (66.7)	21 (45.7)	
Birth weight (in g)	2755 (2745)	2504(2500)	0.01*
Range	2530-3780	2600-3620	
Faecal continence score at 3 months (median)	1.04 (0)	0.67 (0)	
Faecal continence score at 3 months (median)	1.04 (0)	0.67 (0)	0.3*
Angle of Episiotomy (median)	30.0 (30)	38.0 (40)	<0.001*
Range	18-50	20-55	

Analysis of this chart shows that the operative vaginal delivery rate was 65% in the study group as compared to 40% in the control group. The spontaneous vaginal delivery was 35% in the study group as compared to 58% in the control group. The faecal continence score at 3 months was higher in the study group as compared to control group.

DISCUSSION :

In this study, we are analysing the study done by us with reference to the various studies done in the literature to note the disparities. If any and the concurrence of findings to come to a conclusion regarding the protocol. The mean duration of the 2nd stage of labour was 50min, in study group as compare to 60min, in control group. Evidence does not support maternal benefits traditionally ascribed to routine episiotomy. In fact out comes with episiotomy can be worse. There are no studies in literature regarding 2nd stage of labour.

In our study the indications performing routine episiotomy where as follows :

Rigid perineum	-	50%
Breech Delivery	-	16%
Maternal Exhaustion	-	12%
Prolonged 2nd Stage	-	8%
Instrumental Delivery	-	8%
Foetal Distress	-	6%

In a study done by Munoz et al published in pan American Journal of Public Health 1998 July, It was conducted that

all institutions included in the study performed episiotomies as a routine procedures on nulliparous women. There are significant differences in the indications for primipara women, and multiparous women. The commonest indication was rigid perineum 40% which is conformity with our study.

In our study Instrumental delivery rate was 60% in study group as compared to 40% in control group. In the study which correlates well with study of demons et al published in *Ajog* 2005.

In our study the mean 3rd stage bleeding was 250ml + 100ml. in the study group and in the control group it was 200ml + 50ml. Which proof the fact that there is more blood loss in episiotomy as compared to normal deliveries. Also traumatic PPH is 5% in the study group as compare to 3% in the control group which again proof the hypothesis that blood loss is more in the episiotomy group which is inconformity with studies in the literature. In our study there was no clinical and statistical differences between perineal lacerations (I^o, II^o & III^o).

Which is in conformity with the study of Claman et al *AJOG* 2005 which reported between 4.5% - 5%, that study also suggested that vaginal lacerations and perineal tears were not increased by restrictive episiotomy. In our study, the involvement of the anal sphincter was 7.5%, In the control group as compared to study group which was 4%, Also our results showed that a larger angle of episiotomy is associated with lower risk of III^o tear and sphincter².

Medio lateral episiotomies incisions should be made in as larger an angle as possible, to minimise the risk of sphincter disruption. Our study is in conformity with Daly et al - abstract AMOG - 2005, Which concluded the same findings and it also says that in right medio lateral episiotomy, the angle should be as large as possible to reduce the incidence and thus the potential sequela of obstetric anal sphincter injury. Therefore, this outcome is clinically relevant because episiotomy technique is relatively easy to modify and our findings suggest that a modified practice would potentially lead to reduction in anal sphincter injury rates. In our study, wound infection rate was clinically and statistically higher, in the study group (5%), CF control group 3% which confirms the study of Hughes et al *JAMA* 2005 which proved that episiotomy is a major risk factor for wound infection. Our study also shows that in the study group there was 1% incidence of vulval haematoma and also 1% incidence of wound gaping as compared to the control group. In the follow-up of our cases we have evaluated the women in the first, 2nd & 3rd months. After 1 month 2% in the study group had retention, in continence and frequency (Urge and Stress incontinence) as compared to the control group which did not show any of these problems. In a systematic review on the outcomes of routine episiotomy published in *JAMA* 2005 by John Tharp et al has postulated that urinary incontinence and pelvic floor outcomes have not been followed up into the age range in which women are most likely to have sequela. With this caveat relevant studies are consistent in demonstrating no benefit from episiotomy for prevention of urinary or faecal incontinence or pelvic floor relaxation⁵.

In the second month the pain in the study group was about 6% as compared to 3% in control group. In the third month 5% of study group women compared to nil percent complained of dyspareunia which compares well with *JAMA* study 2005 of RACHAL et al. women with episio-

my, are 53% more likely suffer from dyspareunia 3 months after delivery as compared to normal woman as per the article of Robstein 2005.

CONCLUSIONS

1. There is a need to adopt a more scientific view of the evidence available on this subject, in order to reduce, the prejudice over the routine use of episiotomy.
2. We are questioning the value of routine episiotomy in all primigravidae.
3. The evidence of our study shows that all primigravidae should receive, limited episiotomies in order to improve the maternal outcome / reduce morbidity.
4. Selected episiotomy in all primigravidae is the key word for our study and performed only for maternal and foetal indications,
5. Routine episiotomy results in more blood loss as compared to normal delivery.
6. Our study proves that there is no clinical and statistical difference between control and study groups for perineal lacerations.
7. The perineal lacerations depends on angle of episiotomy (it should be between 15°-25°).
8. Our study proves that the anal sphincter involvement was clinically and statistically less compared to control group.
9. Mediolateral episiotomies incision should be made as large and the angle 15°-25° to minimize degree of disruptions.
10. Routine episiotomy is a major risk factor for wound infection and Haematoma formation.
11. In the follow-up at one month, urinary symptoms like urge incontinence, genuine stress incontinence were and retention were more common with routine episiotomy.
12. Follow-up done at 2nd month revealed perineal pain. Which is clinically and statistically higher than the control group.
13. Dyspareunia is noted in the 3rd month at review which is clinical and statistically significant more compared with control group.

In conclusion, the routine use of episiotomy in primigravidae is not recommended, and a selective and restrictive group of Right Medio Lateral Episiotomy (at an angle of 15°-25°) is recommended for maternal and foetal indications, which significantly reduces maternal morbidity profiles.

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