

International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622
© Gynaecology Journal
www.gynaecologyjournal.com
2020; 4(5): 296-298
Received: 22-07-2020
Accepted: 30-08-2020

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Comparative evaluation of maternal outcome in Primigravida delivering with routine episiotomy and with selective episiotomy: A hospital based prospective study

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DOI: <https://doi.org/10.33545/gynae.2020.v4.i5e.721>

Abstract

Background: Episiotomy is common method used during childbirth. It cannot be done in all the conditions due to development of complications during and after delivery. The present study aimed to evaluate maternal outcome in primigravida delivering with routine episiotomy and with selective episiotomy.

Materials and Methods: This study included total 500 patients based on the inclusion and exclusion criteria. They were divided into two groups each of 250. Group-I subjected to routine episiotomy and group - II selective episiotomy. Both groups were explained study procedure and informed consent was obtained. All the patients demographic, clinical, material complications during surgery and after surgery was recorded and analysed. SPSS (16.0) version was used for analysis.

Results: Comparison of age between the groups not showed any significant difference. In both groups maximum patients had 1-3 duration of married life. In both groups maximum patients underwent FTND with RMLE procedure compare to others. At one min most of the patients in group-I and II showed 5-6 APGAR score and at 5 min 6 - 8 score. Group - I showed significant difference in hospital stay compared to group - II. Significant difference was observed compared material complications during surgery and till discharge between the group - I and II.

Conclusion: The study results showed that maternal complications develop more in selective episiotomy than routine episiotomy.

Keywords: Episiotomy, perineal tear, APGAR score, maternal complications, postpartum pain, foetal weight

Introduction

Episiotomy is a surgical incision in the perineum to enlarge the vaginal opening for birth. It is widely performed intervention during childbirth despite poor scientific evidence for its benefit. Episiotomy is the incision of the pudenda, whereas periniotomy is the incision of perineum [1, 2]. Over the years episiotomy has become synonymous with periniotomy. In despite being performed for nearly 250 years the use of this procedure remains highly controversial. This operation is performed with a pair of scissors or a scalpel. It is one of the only surgical procedures to be performed without patient's specific consent [3]. Two most common types of episiotomy are midline or median and mediolateral. Midlinear median episiotomy is favoured in USA and Canada. While mediolateral ones are more commonly perfumed in India and UK [4]. The widely accepted justification for episiotomy is that it facilitates delivery, spares baby's head from trauma and prevents perineal laceration and undue stretching of the pelvic floor which could predispose to subsequent utero vaginal prolapse [5]. Recent studies proved that these claims lack of any scientific basis. In addition the high level of pain reported by series of women after episiotomy led to comment on the need for firm evidence to support or refute the belief that a clean surgical incision in the perineum correctly timed and repaired is more likely than a ragged bruised tear to heal by first intention and cause less trouble at the time and later [6]. In primigravida this procedure used to smooth the delivery but cannot do in the conditions. The present study aimed to evaluate maternal outcome in primigravida delivering with routine episiotomy and with selective episiotomy.

Materials and Methods

Study settings

The study was done in the Department of Obstetrics and Gynecology, SUT Academy of Medical Sciences, Vattapara, Kerala. The study was done during the period of January 2010-December 2013.

Inclusion criteria

- Gestational Age 37-42 weeks
- Live foetus
- Singleton pregnancy
- Vertex presentation
- Estimated foetal weight between 2-3.5kg
- Occipito anterior position

Exclusion criteria

- Multiple pregnancy
- Malpresentation
- Instrumental deliveries
- Estimated foetal weight above 3.5kg
- Dead foetus
- Occipito posterior position

Group distribution

A total of 500 pregnant women were selected on the basis of inclusion and exclusion criteria. They were randomly divided into two groups each of 250.

Group I: Route episiotomy (n = 250).

Group II: Selective episiotomy (n = 250)

Procedure

Both groups patients were explained study procedure and informed consent was obtained. Demographic and clinical data was collected from each patient in both groups. In group-I patients were subjected to route episiotomy. In group-II patients were critically evaluated after that only they were subjected to selective episiotomy. Age, duration of married life, type of procedures, foetal weight, APGAR score, duration of hospital stay, incidence of perineal tear, maternal trauma at the time of delivery and maternal complications till discharge was recorded for comparison.

Statistical analysis

The data was expressed in number, percentage, mean and standard deviation. Statistical Package for Social Sciences (SPSS 16.0) version used for analysis. Unpaired t test applied to find the statistical significant between the groups. P value less than 0.05 ($p < 0.05$) considered statistically significant at 95% confidence interval.

Results

Comparison of mean age between the group-I and II not showed any statistical significant (Graph-1). 214 in group-I and 191 in group-II had 1-3 years duration of married life. 2 in group-I and 6 in group-II showed more than 5 years and 15 in group-I and 11 in group-II had less than 1 year duration of married life (Table-1). In both groups maximum patients under gone FTND with RMLE compared to other procedures. In group-I 25 were under gone FTND and 29 FTVD procedures (Table-2). Comparison of foetal weight between the groups not showed any significant difference (Graph-2). In group-I 118 patients and 111 in group-II showed APGAR score 5-6 in one minute. Only 115 in group-I showed above 7 score in group-I which is lesser compare to

group-II (125). At 5 minutes 186 in group-I and 199 in group-II showed 6-8 APGAR score. APGAR score comparison between the groups showed significant difference ($p < 0.05$) (Table-3). Group-I showed significant difference with group-II compared the hospital stay, incidence of perineal tear (Graph-3). In group-I 24 and 10 in group-II showed 1^o perineal tear. 16 in group-II showed episiotomy extension but none of them had in group-I. 11 in group-I and 6 in group-II showed vaginal was tear. Significant difference was observed between the groups compared no complication at the time of delivery (Table-4). Group-I showed significant difference compared to group-II of maternal complications till discharge ($p < 0.05$) (Table-5).

Table 1: Comparison of mean duration of married life between the groups

Married life (Y)	Group-I (n = 250)	Group-II (n = 250)
Less than 1 Y	15	11
1-3Y	214	191
3-5 Y	19	42
Above 5 Y	2	6
Mean \pm SD Y	1.5 \pm 0.8	1.8 \pm 1.0

($p > 0.05$ no significant difference compared group-I with group-II)

Table 2: Comparison of type of procedure between the groups

Type of procedure	Group-I (n = 250)	Group-II (n = 250)
FTND	0	250
FTVD	0	29 0
FTND with RMLE	217	170 217
FTVD with RMLE	33	26 33

($p > 0.05$ no significant difference compared group-I with group-II)

Table 3: Comparison of mean APGAR score between the groups

Time	APGAR	Group-I (n = 250)	Group-II (n = 250)
1 min	<4	14	17
	5-6	111	118
	> 7	125	115
	Mean \pm SD	6.40 \pm 1.1	6.20 \pm 1.0*
5 min	<5	4	5
	6-8	199	186
	9-10	47	59
	Mean \pm SD	8.00 \pm 0.80	7.90 \pm 0.5*

(* $p < 0.05$ significant compared between group-I with group-II)

Table 4: Comparison of maternal complication till the discharge between the groups

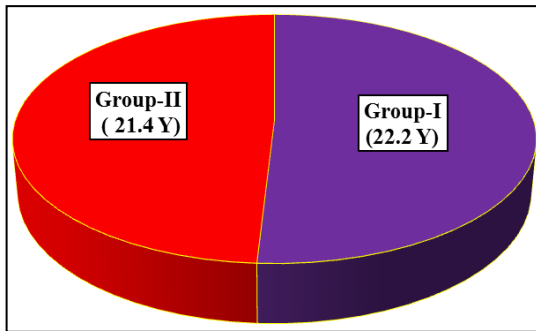
Maternal complication	Group-I (n = 250)	Group-II (n = 250)
Perineal pain	137	80*
Wound infection	5	9
Perineal tear	10	29*
Vaginal wall tear	6	11
Episiotomy extension	12	4
Baby in NICU	8	10
Paraurethral tear	5	4
Foetal complication	0	1

(* $p < 0.05$ significant compared group-I with group-II)

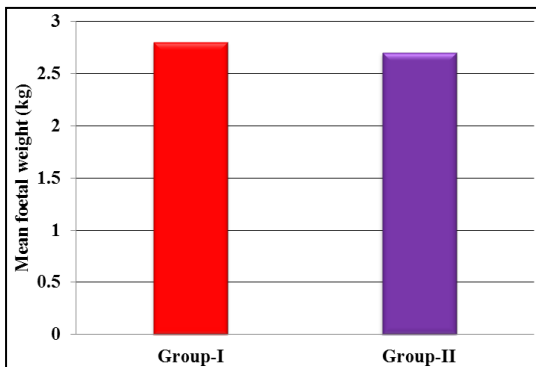
Table 5: Comparison of total maternal complication till the discharge between the groups

Total Maternal complications till discharge	Group-I (n = 250)	Group-II (n = 250)
No complication	102	136*
Present	136	114*
Absent	102	148*

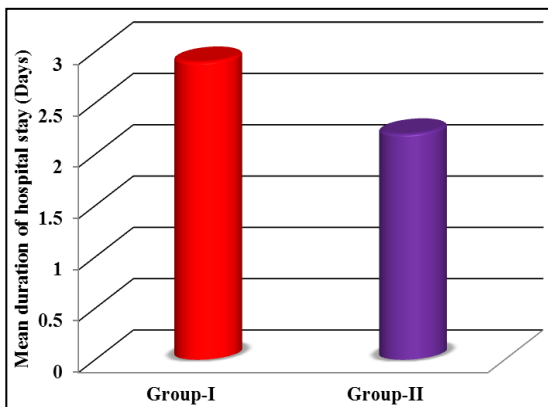
(* $p < 0.05$ significant compared group-I with group-II)



Graph 1: Comparison of mean age between the groups



Graph 2: Comparison of mean foetal weight between the groups



Graph 3: Comparison of mean duration of hospital stay between the groups

Discussion

Intervention to be recommended as a routine in obstetrics convincing evidence of a benefit for mothers and babies must be present. There should not be any adverse effects. For these reasons it is important to determine the effect of episiotomy on managing the perineum in spontaneous vaginal deliveries. This study is compared with the trails done at various centres. In this study age and married life duration does not affect the outcome. In this study overall rate of severe maternal trauma was much lower than the expected from other published studies, but there was more maternal trauma in selective group in this study. The study showed APGAR at 1 min and 5 min were compared. At 1 min the neonates in group-II had lesser score compared to group-I. In this study 4% of neonates in group-II had birth hypoxia compared group-I. Larsson *et al.*, and Thranov *et al.*, studies showed no significant difference in APGAR score at 1 min between the routine and selective episiotomy groups [7, 8]. Similar results were observed in the present study. Group-II showed 11.6% of perineal tear compared to 4.0% in group-I. Sleep *et al.*, carried out a randomised prospective trial to investigate the impact of mediolateral episiotomy on perineal

damage. The restricted episiotomy group had severe perineal tear (0.8%) compared to liberal group (0.2%) [9]. Another study done by Shino *et al.*, showed mediolateral episiotomy significantly increased the risk of third degree tear. The present study group-II showed similar results but group-I showed little different results. 2.2 - 2.9 was the mean hospital stay in both groups. Group-II showed more time of hospital stay compared to group-I. Hueston WJ *et al.*, study also showed that length of hospital stay for regular episiotomy was 0.2 days longer on average than for those without episiotomy¹¹. In this study group-II showed more maternal complications compared to group-I. Bansal *et al.*, found that by reducing the use of episiotomy in vaginal deliveries a significant reduction in perineal trauma occurred but decreases of episiotomy was associated with increase in the rate of vaginal lacerations.

Conclusion

The study results showed that maternal complications are more in selective episiotomy patients at the time of delivery compare to routine episiotomy patients. It was observed that hospital stay also more in selective episiotomy patients. Episiotomy should not be advocated in all cases to be done only for definite foetal of maternal indications.

Conflict of interest: Nil

Funding: Self

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