

Maternal Morbidity in Vaginal Delivery With or Without Episiotomy in Nulliparous Women

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ABSTRACT

Introduction: Episiotomy incision is the most common surgical procedure around the globe and in many countries, it has become a routine policy. Episiotomy in all women with vaginal delivery has no benefit. Rate of episiotomy varies widely around the globe, while in Nepal all nulliparous and primiparous hospital deliveries are given routine episiotomy. So, this study aimed to compare the maternal morbidity during first vaginal birth in women with or without episiotomy.

Methods: This is a hospital based randomized prospective comparative study conducted in the Obstetrics and Gynaecology Department of a teaching hospital of Kathmandu, Nepal. The subjects were divided into episiotomy group and no episiotomy group. Under local anaesthesia mediolateral episiotomy was given in the second stage with crowning of the head in episiotomy group. Nature of morbidity seen were recorded in both the groups immediately after delivery, after 6 hours and after 1 week and compared.

Results: In no episiotomy group intact perineum (26.3%), laceration (10.5%) and first and second degree spontaneous perineal tear (63.1%) were observed. Total perineal surgical repair was performed 81.55% patients. Intact perineum was high among no episiotomy group. Third degree tear, vulval haematoma, wound gaping and perineal oedema were seen in episiotomy group.

Conclusion: Anterior perineal laceration rate was high in no episiotomy group than episiotomy group but overall few morbidities were present in no episiotomy group in comparison to episiotomy group. So, episiotomy should not be considered to prevent insignificant anterior perineal lacerations.

Keywords: episiotomy; perineal tear; Nepal

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INTRODUCTION

Perineal trauma during child birth is common and has significant maternal morbidity. It can be spontaneous or after episiotomy during birth process. Episiotomy practice has increased after Pomeroy with the concept “all primigravida should receive an episiotomy to protect the fetal head,” then it became routine to shorten second stage of labour and prevent injury to mother and baby.^{1,2} These days in the obstetric practice, episiotomy incision is the most common surgical procedure around the globe and in many countries, it became a routine policy.³⁻⁵

Episiotomy in all women with vaginal delivery has no benefit rather causes unnecessary pain to the mother, complications and prolonged suffering and cost.⁵ Reduced lacerations have put forth as a benefit of episiotomy overlooking an episiotomy, a second-degree tear. Number of studies strongly suggests episiotomy is in fact associated with an increased rate of severe perineal injuries like third or fourth degree tears.²

Episiotomy rate varies widely namely, 62% in US and 30% in Europe.⁶ In our part of the world, especially in Nepal, such type of study and publications is not known and, hence, the exact incidence of episiotomy cannot be quoted. It has been often seen and heard that all nulliparous and primi-parous hospital deliveries are given routine episiotomy in Nepal. So, this study aimed to compare the maternal morbidity during first vaginal birth in women with or without episiotomy.

METHODS

This was a hospital based randomized prospective comparative study conducted in the Department of Obstetrics and Gynaecology of a teaching hospital of Kathmandu, Nepal for a duration of one year in 2009. Nulliparous women in active stage of labour attending labour unit with singleton pregnancy with

cephalic presentation at term (Gestational age 37-42 weeks) were included in the study. Multiparous women, mal-presentations and mal-positions, multifetal pregnancy, pregnancy with medical disorder, instrumental deliveries, big baby (Clinically or USG weight > 4 kg), preterm and previous perineal surgery cases were excluded. A total of 152 cases who fulfilled the selection criteria were randomly recruited for this study, 76 cases in episiotomy group and 76 cases in no episiotomy group.

Approval from research committee of the institute was taken. A pilot study was conducted in 10 patients to test the feasibility of this study. Modifications were made as per the findings of the pilot study. Details of the study were explained to the patient and only those willing to participate in the study and fulfilling the inclusion criteria were included into the study after taking the informed consent. Delivery was conducted by a single person and cases were examined during and immediately after delivery at the labour room, after six hours in maternity ward and after one week. The morbidities were recorded and compared between the two groups.

A structural questionnaire was used on all the participants, which were filled by the researcher. The collected data were entered in Statistical Package for Social Science (SPSS) and analysis was using Chi-Square test.

RESULTS

Maximum women were in the age group of 20-29 years in both the groups. The mean age in episiotomy group was 22.88 ± 3.241 years and mean age in no episiotomy group was 22.49 ± 2.788 years which was statistically insignificant ($p=0.422$). In both groups, most of the parturient

Table 1: Distribution of Gestational Age.

| Gestational Age (weeks) | Group | | | |
|-------------------------|------------|-------|---------------|-------|
| | Episiotomy | | No Episiotomy | |
| | Frequency | % | Frequency | % |
| <40 | 47 | 61.8 | 55 | 72.4 |
| 40 or more | 29 | 38.2 | 21 | 27.6 |
| Total | 76 | 100.0 | 76 | 100.0 |

were delivering within the expected date (<40 weeks) (Table 1.).

Most of the women were housewives i.e. 68.4% in each group. Out of 152 cases, majority of women had adequate (>4) ANC attendance i.e. 78.9% in episiotomy group and 85.5% in no episiotomy group. The estimated visible blood loss in episiotomy group was more in no episiotomy group (average blood loss 128.49 ± 27.797 ml and 96.45 ± 29.358 ml respectively) and this was statistically significant ($p < 0.001$).

In no episiotomy group intact perineum was in 26.3%, perineal laceration in 10.5%, spontaneous tear in 63.1% and total perineal repair was 63.1%. In episiotomy group, there was 1 case of third

degree perineal tear due to lack of proper support during delivery (Table 2.).

One patient developed a vulval hematoma, detected after six hours of vaginal delivery with episiotomy. It was evacuated under general anesthesia. Two cases of perineal edema were detected and were managed by peri-light, dressing, analgesics and antibiotics. During one week follow up two cases had episiotomy wound gaping (Table 3.).

DISCUSSION

Episiotomy is one of the commonest obstetric interventions during child birth. Various studies demonstrate that the routine use of episiotomy should be abandoned and selective (restrictive) use of episiotomy should be adapted. In few countries the trend has declined, but in majority it is still a routine policy especially during first vaginal births. In the present study, various morbidity of episiotomy and no episiotomy group during first viable vaginal birth were studied and compared. In no episiotomy group, spontaneous perineal tear (first and second - degree) rate was 63.1%. Intact perineum was 26.3% and laceration was 10.5%. In episiotomy group 1 case had third degree perineal tear. From 1976 to 1994⁷ the rate of episiotomy for

Table 2: Perineal status immediately after delivery

| Perineal status | Group | | | |
|--|------------|------|---------------|------|
| | Episiotomy | | No Episiotomy | |
| | Frequency | % | Frequency | % |
| Intact | - | - | 20 | 26.3 |
| Laceration | 4 | 5.26 | 8 | 10.5 |
| First degree tear | - | - | 40 | 52.6 |
| First degree with cervical tear | - | - | 2 | 2.6 |
| Second degree tear | - | - | 6 | 7.9 |
| Third degree tear | 1 | 1.31 | - | - |
| Total | - | - | 76 | 100 |

Table 3: Complications after 6 hours and 1 week of delivery

| Complications | Group | | | |
|--------------------------|------------|------|---------------|---|
| | Episiotomy | | No Episiotomy | |
| | Frequency | % | Frequency | % |
| Hematoma | 1 | 1.31 | - | - |
| Perineal edema | 2 | 2.63 | - | - |
| Episiotomy gaping | 2 | 2.63 | - | - |
| Total | 5 | 6.57 | - | - |

spontaneous vaginal deliveries at the University of California, San Francisco, fell from 86.8% to 10.4%. In England, there is a dramatic fall of episiotomy rate to 20% from 50% in 1980.⁵ In all Swedish labor wards in 1995 the mean incidence of episiotomy in nulliparae was 24.5%, a significant decrease from 33.7% in 1989.⁷

In this study, there was no third-degree tear or other complications among no episiotomy group whereas in episiotomy group one third degree tear, one vulval hematoma, two perineal edemas and two episiotomy gaping were reported. Homsy et. al.⁸ reviewed the articles where, the relationship of mediolateral episiotomy to third-degree tear was 1.4 % in contrast to 0.8% without episiotomy ($p < 0.01$). In the present study, the total intact perineum rate was 26.3% among no episiotomy group. Various studies had mentioned that the rate of intact perineum increases significantly after reduction of the episiotomy rates.^{2,8-12} The observed rate of anterior perineal laceration was higher among no episiotomy group. Nearly in agreement with this finding Ecker et. al.¹³ observed up to 40% insignificant vaginal lacerations when the episiotomy rate was decreased from 93% to 35%. However, these anterior vaginal lacerations do not need any suturing and are considered to carry a very low incidence of pain or other morbidity.

Among the episiotomy group, in this study, the complication rate was 13.15%. Out of which the

vulval hematoma was 1.31%. In contrast to the finding of this study, the Argentine Episiotomy Trial Collaborative Group measured about 4% vulval hematoma in both the trial groups¹⁴ whereas the vulval hematoma reported by Rockner et. al.¹⁰ was very high after episiotomy than without episiotomy (38% versus 13%). According to Kelin et. al.¹⁰ study, the primiparous women cared for by physicians with the lowest episiotomy rates had the lowest rate of 3rd and 4th degree tears (1.9%); by contrast, the groups of physicians with the highest episiotomy rates sustained 3rd and 4th degree tear of 20.9%. Limitations of this study are small sample size and being purely single centered. So to generate the firm evidence there is requirement of larger and multi centric studies.

CONCLUSION

Episiotomy is one of the commonest obstetric surgical method. Its use must be limited as the anterior perineal laceration rate is high in no episiotomy group than in episiotomy group, however it did not need any suturing. Other operative complications like hematomas, edema and wound gaping and infection can also occur following episiotomy.

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