

Avoidance of Routine Use of Episiotomy in Primigravida

Dr. Trifa Ahmed Hamda*

Dr. Ghada S. Alsakkal**

ABSTRACT

Background: The justification of the routine use of the episiotomy arose at the beginning of 20th century. It was based on personal beliefs without scientific basis and this led to the incorporation of episiotomy in daily practice. High-quality methodological studies gave strong evidence that episiotomy should not be done routinely. The purpose of this study was to find out the rate and degrees of perineal tear in women with versus without episiotomy and to evaluate the severity of pain and complications including wound infection, wound dehiscence and dyspareunia.

Methods: This is a prospective interventional study included 200 primigravida with term pregnancy, who attended the labor room at Maternity Teaching Hospital from 1st of January 2008 till 1st of July 2008. Episiotomy was done for a group and avoided in another group, then follow up was done to evaluate complications.

Results: Perineal tears were significantly more in patients with episiotomy as episiotomy itself is regarded as second degree perineal tear. There was significant difference in the severity of pain, wound infection and dyspareunia among both groups but there was no significant difference in the Apgar score of the newborn in both group.

Conclusions: This study does not support maternal benefits of routine episiotomy

Keywords: Episiotomy, perineal tears, wound infection, dyspareunia

INTRODUCTION:

Episiotomy is one of the most common surgical procedures. It was introduced in clinical practice in the eighteenth century without having strong scientific evidence of its benefits¹. Figures about the worldwide use of episiotomy are not well known and episiotomy rate vary considerably according to individual practices and policies of staff and institutions. The overall rates of episiotomy in different countries range from 8% in Netherland, 14% in England, 50% in the USA to 99% in Eastern European countries^{2,3}. These adverse rates suggest either that the practice of episiotomy is not always justified or that it is not used when actually appropriate. Perhaps the major justification of the use of episiotomy is the prevention of severe perineal tears, it was claimed that its use would prevent the occurrence of third and fourth degree tears.

Observational studies have shown inconclusive results and in retrospective analysis concluded that episiotomy does not prevent third or fourth degree tears.^{4,5,6} Many studies showed that episiotomy does not prevent pelvic floor relaxation and its sequelae^{7,8}. The routine use of episiotomy achieve no short term goals that it has been hypothesized to achieve and it is harmful to the degree that it create a surgical incision of greater extent than many women might have not experienced if it is not performed⁸. In Hawler city, there has been no study undertaken to evaluate episiotomy. Monthly, there are about 480 primigravid women deliver vaginally in the hospital, episiotomy was performed for all of them without selection. Therefore, there is a high rate of episiotomy. This routine use involves a greater need for surgical perineal repair, thereby involving higher

* (M.B.Ch.B.) Maternity teaching hospital.

** (C.A.B.O.G. 1991) lecturer in medical college (Hawler medical university).

costs of medical care, needs suture materials, time for suturing and more maternal discomfort.

Objectives of the study was to find out the rates and degrees of perineal tear in women with or without episiotomy, to evaluate severity of the pain among both groups and to find out the rate of complication including wound infection, wound dehiscence and dyspareunia among both groups.

MATERIALS AND METHODS:

This study is a prospective interventional study, undertaken in the Maternity Teaching Hospital, in Erbil city, Kurdistan governorate, North of Iraq. It began with collection of cases, in a period between the first of January, 2008 till the first of July 2008. Two hundred primigravid women who attended labor room were included in the study. The age of the women ranged between 16-40 years old. Women which were included had term pregnancy (37 weeks or more) with singleton, vertex presentation. Full history and physical examination including obstetrical examination were carried out. Follow up of the patients during the first stage of labor was done using the partogram to discover any abnormality in the progress of labor and the fetal wellbeing. Closer observations were done during the second stage of labor for the mother and the fetus. The samples of the patients were randomly taken and divided in to two groups. Episiotomy was not done for the first group (100 patients) while the second group (100 patients) had the episiotomy. After the assessment of progress of labor and fetal wellbeing, women with the following criteria were excluded from the study.

1. Premature baby.
2. Malpresentation.
3. Malposition.
4. Fetal distress.
5. Women with very tight perineum.
6. Big baby or hydrocephalus.

When women reached the second stage of

labor and felt the urge to push, they were put in lithotomy position. When the fetal head was distending the perineum (crowning) and after the perineum was infiltrated with local anesthesia (5cc lidocaine 2%, manufactured in Astrazeneca AB, Sweden), mediolateral episiotomy was performed by midwife for the second group followed by the support of perineum. Those women how did not undergo episiotomy, they only received support of the perineal region. After delivery of the baby and placenta, the perineal region and vagina were examined for the presence of bleeding and tears. Then episiotomy was sutured under a light source in three layers; starting from the angle of the episiotomy, vagina, muscular layer and skin. Perineal tears sutured according to the degree of the tear. For first degree tear only skin was sutured, while for the second degree tear the same steps of suturing as episiotomy. Suturing materials used were of absorbable types, in the form of polyglycolic acid (Vicryl 2/0 or 3/0 manufactured by TEB Keyhan - Iran), as this type of suture causes less infection than catgut suture. Finally per rectal examination was done and antibiotic in the form of amoxicillin 500 mg (4 times daily) and analgesia in the form of paracetamol 500mg and/or ibuprofen 400mg (3 times daily) were given. Following the suturing; women were kept in the hospital for few hours and were advised for follow up visits. They were seen twice after the delivery, the first visit was after 10 days for pain evaluation and the development of any complications such as infection and wound dehiscence. The severity of pain experienced by the women were assessed using a four-point pain score according to the acute pain service measurement by Dundee D. in Ninewells hospital and medical school, 2002.

The pain scale used was as follows:

1. No pain at rest or on movement.
2. No pain at rest, slight on movement.
3. Intermittent pain at rest, moderate on movement.

4. Continuous pain at rest, severe on movement.
The second follow up was after six weeks of delivery and after having sexual intercourse to evaluate the possibility of developing dyspareunia

RESULTS:

Demographic characteristics of both groups were compared regarding maternal age and their gestational age. The mean age for women in first group was 24.17 years and the second group was 23.55 years. The mean of gestational age in both groups were 38 weeks. There was no significant difference in the maternal age and their gestational age between the two groups (p value = 0.61), as shown in table 1.

Table(1): Demographic characteristics of patients in both study groups.

Variable	Non episiotomy group (n = 100)	Episiotomy group (n = 100)
Age (years)	24.17 ± 4.975	23.55 ± 4.150
Gestational age (weeks)	38.0 ± 2.1	38.0 ± 1.9

Data are presented as mean ± standard deviation for continuous variables.

Women with episiotomy were regarded as a second degree perineal tears so the rate of the second degree tear in women with episiotomy is 100%. Among women without episiotomy 61 women (61%) had no tears, hence the perineum was intact, and 28 women (28%) had first degree perineal tears in which 6 of them had only small lacerations that not required suturing. Eleven women (11%) in the first group had second degree perineal tear. Third or fourth degree tears was not found in both groups. As long as episiotomy was considered a second degree perineal tear, there was highly significant difference in the presence or absence of tear, and in the degree of the perineal tear (p- value = 0.000).

Deep vaginal tear occurred in 2 women in the first group (2%) and in 11 women in the second group (11%). There was significant difference between both groups (p value = 0.01). The presence or absence of tear including all degrees of perineal tears were summarized in (Table 2).

Table(2): Frequencies of perineal tears among the two groups.

Variable	Non episiotomy group	Episiotomy group	Total	P value
No tear	61	0	61	0.000
First degree	28	0	28	0.000
Second degree	11	100	111	0.000
Third degree	0	0	0	1.00
Fourth degree	0	0	0	1.00
Total	100	100		

*Six of patient with first degree tear not need suturing.

First follow up for women was done after 10 days and the following results were observed:

1- Three women in the first group and 11 women in the second group had wound infection so the rate of infection in the first group was 3% and in the second group is 11%. There was significant difference in the rate of infection in both groups (p-value = 0.01).

2- Wound dehiscence was occurred in 3 women (3%) in first group and 6 women (6%) in the second group. There was no significant difference in both groups (p-value = 0.3).

Follow up after 6 weeks done for dyspareunia 27 (27%) women in the first group and 44 women (44%) in the second group had dyspareunia, so there was significant difference in both groups (p-value = 0.012), as shown in (Table 3).

Table(3): Frequencies of complications among both groups.

Complications	Non episiotomy group	Episiotomy group	P-value
Wound infection	3 (3%)	11 (11%)	0.017
Wound Dehiscence	3 (3%)	6 (6%)	0.3
Dyspareunia	27 (27%)	44 (44%)	0.012

P-value less than 0.05 is of statistical significance.

Pain scoring was done in both groups at the first follow up. In the first group 45 women (45%) experienced no pain while in the second group only 4 patient (4%) had no pain. 39 women (39%) in the first group and 18 women (18%) in the second group had mild pain. Moderate pain was experienced in 14 women (14%) in the first group and 45 women (45%) in the second group. In the first group 2 women had sever pain while in the second group 33 women (33%) had sever pain. There was significant difference regarding experience of pain in both groups (p-value = 0.01), as shown in (Table 4).

Table(4): Pain score in the two groups [10 days after delivery]

Parameters	Non episiotomy group	Episiotomy group	P-value
No pain	45	4	0.00
Mild pain	39	18	0.01
Moderate pain	14	45	0.01
Sever pain	2	33	0.01

P-value less than 0.05 is of statistical significance.

Perineal tear is either anterior or posterior according to the site of involvement. In the

first group 19 women (48%) had anterior perineal tear and 20 women (52%) has posterior tear. While in the second group all of them (100 patients) had posterior perineal tear (episiotomy is a posterior perineal tear) and 5 women (5%) had anterior tears as well as posterior perineal tears. There was significant difference in the presence of anterior tear and posterior tear (P-value = 0.00) in both groups, as shown in (Table 5).

Table(5): Sites of perineal tears.

Group	Site of perineal tear	
	Anterior	Posterior
Non episiotomy	19 (48%)	20 (52%)
Episiotomy	5 (5%)	100 (100%)
P-value	0.00	0.00

P-value less than 0.05 is of statistical significance.

Neonatal out come in both group compared regarding the weight, Apgar score and sex of the baby as shown in table 6.

1. In the first group mean weight was 3262 grams, while in the second group was 3406 grams. There was no significant difference in both groups (p-value = 0.5).
2. Mean Apgar score in the first 5 minute was 9 in both groups, there was no difference in Apgar score in both groups (p-value = 0.2).

Table(6): Comparison in weight, Apgar score of the baby in both groups.

Groups	Mean Apgar score in the first 5 min	Mean weight of newborn {gram}	P-value
Non episiotomy	9±	3262± S.D	0.2
Episiotomy	9±	3406±S.D	0.5
P-value	0.2	0.5	

P-value less than 0.05 is of statistical significance.

Regarding the rate of patients preference of doing episiotomy, 2 women (2%) in the first group and 2 women (2%) in the second group prefer episiotomy and totally 196 women (98%) in both groups do not prefer episiotomy.

DISCUSSION:

The routine use of episiotomy in nulliparous women is still practiced in our hospital. This high rate may be explained by the fact that many doctors are still convinced of the benefits derived from the performance of such technique and the birth attendant still do episiotomy to decrease the duration of the second stage of labor. Recent reviews have conclusively determined that the routine use of episiotomy should be abandoned because it favors the occurrence of severe posterior perineal lacerations and their associated morbidity^{8,9}. The results of the study are comparable to previous reports regarding the presence of perineal tears specifically with the study done by Lily-Scott, 1985¹⁰. Another study done by Gass MS, 1986 did not support routine use of episiotomy¹¹. On the other hand a study done by lam *et al*, 2006 found that there was significant lower rate of tear among women with episiotomy¹². These results do not match with our findings, this is because they calculated episiotomy as no tear, and therefore the validity of that statement may be questioned because the patient must undergo the incision, incision repair and recovery, that is to say iatrogenic tear. In our study there was no third or fourth degree perineal tear in both groups, possibly because of the exclusion of women that has high risk factors for development of deep perineal tears and the limited number of patients included in the study due to limited time.

Anterior perineal lacerations (including tears to the labia major and minor, anterior vaginal, and periurethral lacerations were significantly more in women without episiotomy than women with episiotomy (P-value 0.000). However, the pain, wound infection, wound dehiscence and dyspare-

-eunia were not significantly higher in women with anterior tear than in women with posterior tear. Thranov *et al*,1990 found that among nulliparous women with or without episiotomy, anterior perineal tear found in 22% of women with episiotomy and in 36% without episiotomy, thus there was significantly more women without episiotomy had tears in the labia minor and clitoris area, but these women did not have a significantly increased frequency of postpartum pain when compared with all nulliparous without an anterior tear and the postpartum pain did not persist any longer¹³. Pain assessed in the first follow up and was found significantly more in the women in episiotomy group than women in the other group and the severity of pain directly related to the degree of perineal tear. This goes with Dannecker *et al*, 2004 who noticed that women in the restrictive group (those with lower rate of episiotomy) had considerably lower perineal pain assessed during the first 5 days postpartum¹⁴. There was significantly higher rate of wound infection in women with episiotomy. A previous study by Larsson PG, 1991 assessed perineal problems after episiotomy versus spontaneous perineal laceration and found five times higher rates of wound infection in the episiotomy group(10% versus 2%)¹⁵. This result agrees with our study, while another study by KM lam, 2006¹², there was no significant difference in both groups and this low rate of infection dose not match our result. This is possibly due to good hygienic condition of the women and better sterilization of the instruments used for suturing. We found that dyspareunia was significantly more in women with episiotomy than those women with out episiotomy (P-value 0.01). However, a previous study by Klein *et al*, 1994 assessed perineal pain at first postpartum intercourse and found that there was less pain among women with spontaneous tears than those women with episiotomies¹⁶. While another study by Karacam and Eroglu, 2003, there was no significant difference in dyspareunia in both groups¹⁷

and this dose not match our result. In this study specifically we exclude preterm babies and babies with fetal distress and we use Apgar scores for measurement of fetal condition and the mean of Apgar score in both group was 9, this result agrees with a study by Klein *et al*, 1992 which reported that the Apgar scores were not affected by the use (or frequency of use) of episiotomy¹⁸. In our community most of the women prefer spontaneous lacerations than doing episiotomy and in the present study we found that (98%) of women in both groups were preferred not to do episiotomy and only (2%) of them prefer to do episiotomy, because most of them were afraid from cutting of the perineum and regarded as a major operation.

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