

Episiotomy and Perineal Tears in Primigravidae

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ABSTRACT

The objective of the study was to determine the frequency and indications for episiotomy and perineal tears in primigravidae.

Design: Descriptive.

Patients and methods: Retrospective data analysis of all the primigravidae delivered in gynae unit III, Jinnah Hospital Lahore from September 2009 to February 2010. The data consisted of age, period of gestation, type of delivery spontaneous with or without episiotomy or assisted with forceps or vacuum, duration of second stage of labour and reason for making episiotomy. Perineal tears if present were recorded for site, size, involvement of skin, muscle and mucosa.

Results: A total of 621 primigravidae delivered during the study period. Out of these 444 delivered vaginally. Out of these 61.67% delivered with episiotomy, 6.60% delivered vaginally without episiotomy and 2.25% delivered with vacuum and forceps. 1.44% of the patients had perineal tears or lacerations. 0.9% of the tears occurred in the vaginal delivery with episiotomy, 0.16 in vaginal delivery and 0.3% in vaginal delivery with vacuum and forceps. The indications for making an episiotomy was impending tear in 42.56% and prolonged second stage of labour in 42.82% of the cases.

Conclusion: This study concludes that frequency of perineal tears is low in low risk primigravidae delivering in tertiary care hospital with or without episiotomy.

The frequency of performing episiotomy in low risk primigravidae is high with indications being impending tear and prolonged second stage of labour.

Key words: episiotomy, perineal tear, primigravidae

INTRODUCTION

Episiotomy rates vary considerably. They have been reported to be 83% in the primigravid. The hospital based deliveries in United States gives a rate of 50%, 30% in Sweden and 53% in England and Wales. The maternal advantages of an episiotomy are supposed reduction in third and fourth degree of perineal tears and preservation of muscles of the perineal floor. Although no large benefit is quoted for the baby but it is suggested that it reduces the risk of cerebral trauma.

The evidence to support routine use of episiotomy in the primigravid and the multigravid is lacking and there are studies and guidelines suggesting that episiotomies may result in increased blood loss, higher infection rate and an increase in third and fourth degree perineal tears. Despite availability of evidence based suggestions the rate of making episiotomies in low risk primigravidae remains high. This study was conducted to find out the frequency of episiotomy in primigravidae and to find out whether the incidence of perineal tears are higher in patients undergoing episiotomies. The study also looks into the indications for making an episiotomy.

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MATERIALS AND METHODS

The data of all the primigravidae delivered in Gynae Unit III Jinnah Hospital Lahore from September 2009 to February 2010 were collected. The data consisted of age, period of gestation, type of delivery spontaneous with or without episiotomy or assisted with forceps or vacuum, duration of second stage of labour and reason for making an episiotomy. Perineal tears if present were recorded for site, size, involvement of skin, muscle and mucosa. All the high risk primigravidae were excluded from the study like primigravidae carrying twins, with hypertension, diabetes mellitus and other chronic illnesses. primigravidae with intrauterine fetal demise were also excluded from the study. Those primigravidae who had delivered at home with tears were also excluded. Jinnah Hospital Lahore is a tertiary care hospital with three gynae units; with a delivery rate of 3500 to 4000 each unit annually. The operational definition for perineal tear used were:

1st-degree tears are where the fourchette and vaginal mucosa are damaged and the underlying muscles are exposed, but not torn. 2nd-degree tears are to the posterior vaginal walls and perineal muscles, but the anal sphincter is intact. 3rd-degree tears extend to the anal sphincter that is torn, but the rectal mucosa is intact. 4th-degree tears are where

the anal canal is opened, and the tear may spread to the rectum.

RESULTS

A total of 621 primigravidae delivered during the study period. Out of these 448 delivered vaginally and fulfilled the study criteria. Out of these 87.72% delivered with episiotomy, 9.15% delivered vaginally without episiotomy and 3.125% delivered with vacuum and forceps. 5.134% of the patients had perineal tears or lacerations. 2.009% of the tears occurred in the vaginal delivery with episiotomy, 1.339% in vaginal delivery and 1.786% in vaginal delivery with vacuum and forceps. The indications for making an episiotomy was impending tear in 44% and prolonged second stage of labour in 40% of the cases.

Table 1: Case distribution by age (n=448)

Age (Years)	=n	%age
17-19	45	10
20-25	233	52
26-30	112	25
31-35	36	8
36-40	18	4
More than 40	4	1

Table 2: Indications for episiotomy (n=448)

Indications for episiotomy	=n	%age
Fetal distress	58	13
Impending tear	197	44
Prolonged second stage	179	40
Instrumental delivery	14	3

Table 3: 6 months data for mode of delivery

Month	=n	C/S	SVD	SVD+Epi siotomy	Assis- ted delivery	Fetal IUDS
Sept 09	99	21	6	72	-	2
Oct 09	106	32	5	66	3	3
Nov 09	112	24	15	70	3	2
Dec 09	98	32	6	57	3	2
Jan 10	89	26	5	55	3	0
Feb 10	121	42	4	73	2	1
	625	177	41	393	14	10

Table 4: Prenial tear and mode of delivery

Perenial tear	SVD	SVD with episiotomy	Instrumenta l delivery
I ⁰ degree tear	2	3	2
II ⁰ degree tear	1	2	
III ⁰ degree tear			2
IV ⁰ degree tear			
Mucosal tear	3	4	4
Sub total	6	9	8
Total	448	448	448
%age	1.339%	2.009%	1.786%

DISCUSSION

The first published account of episiotomy in a medical journal was in 1810, but it took another 100 years for it to become a normal part of obstetric practice. There are earlier reports from London in 1741¹.

In 2001 the National Childbirth Trust produced figures for the UK of 15% in England, 13% in Scotland, 10% in Wales and 22% in Northern Ireland². There is considerable international variation in the rate of episiotomy. According to the Royal College of Obstetricians and Gynaecologists (RCOG), it is 8% in Holland, 14% in England, 50% in the USA and 99% in Eastern Europe³.

The frequency of making an episiotomy in this study was 88%, this high rate of episiotomy is explained by the fact that all the patients were primigravadae and delivered in tertiary care teaching hospital. The rate of episiotomy quoted in academia is mostly high as compared to deliveries conducted at home by midwives. This is very much in line with the study carried out by Shion et al, that delivery by a physician, rather than by a trained midwife, also increased the risk of severe laceration more than twofold. A large review of historical data published in 1990 (using data from 1959 to 1966) showed a four- to 12-fold increase in severe perineal lacerations among women undergoing midline episiotomy⁴.

All the episiotomies used in this study to deliver the patient, were medio lateral, which is in accordance with the guidelines stating advantages of mediolateral episiotomy over midline episiotomy. The NICE and RCOG guidelines also outline the recommended technique for performing a mediolateral episiotomy. All the teaching units advocate and train the residents in using medio lateral episiotomies. The greatest advantage of medio lateral episiotomy to the patient is documented to be reduced blood loss and protection to the perineal muscles. This has been documented and maintained by a retrospective population based review by the Dutch National Obstetric Database published in 2001, which reported a strong protective effect of mediolateral episiotomy against severe obstetric lacerations⁵.

The age of primigravadae mostly falls within 20 to 25 years. 4 patients were teenagers and 4 primigravadae had their babies at the age of 40 years. The young age of primigravadae reflects the early motherhood in our culture however the age distribution that majority of the women had their first baby at the ages between 22 to 25 years. This is comparatively earlier than the trend seen in the west, where the women tend to have their first baby after 25 years of age. This observation is inline with

observation in the famous study of Williams et al, which specifically mentions that the rates of episiotomy for women from the Indian subcontinent were almost double those of white women and almost five times higher in women from the Orient. He also suggests that the patients (women) originated from many hospitals (41 for women from the Indian sub-continent and 20 for women from the Orient) and therefore extreme rates in a small number of hospitals is not the explanation for the high rates in these groups⁶.

In this study, 88% delivered with episiotomy, 9% delivered vaginally without episiotomy and 3% delivered with vacuum and forceps. The overall rate of episiotomy depends upon a number of factors but interestingly also on care provider, Gossett and Dunsmoor addressed the practice patterns of physicians in the community hospital setting⁷. Their study carried a review of 3000 deliveries from 2004 to 2005, and showed wide variation in individual provider episiotomy rates, which ranged from 2 to 43%. In this study, provider characteristics more strongly predicted episiotomy use than patient characteristics. Most predictive was a strong, linear correlation between years in practice and episiotomy rates. Providers in practice 10 years or less had episiotomy rates of approximately 15%, those in practice 11–20 years had rates of approximately 25% and those in practice over 20 years had rates of approximately 35%⁷. In another study by Grigoriadis *et al* survey results regarding the use of episiotomy and technique for perineal lacerations among obstetricians in Greece⁸. They comment that the differences in the healthcare systems, provider and patient expectations, and the medical and cultural approaches to peripartum care may influence the perceived clinical efficacy and the acceptance and implementation of new evidence-based guidelines.

The indications for making use of an episiotomy was impending perineal tear was 44% and prolonged stage of labour was 40%. These two indications are the main determinants quoted in many studies forcing the obstetricians to use episiotomy despite the guidelines and evidence supporting the fact that perineal tear are associated more frequently with episiotomy. The use of episiotomy to shorten the prolonged second stage of labour as an indication for episiotomy also confers no benefit to the mother or the baby. This has been backed by a study by Michale Klein which concludes that physician beliefs influence not only clinical practice but also compliance with research protocols⁹.

5.134% of the patients had perineal tears or lacerations. 2.009% of the tears occurred in the vaginal delivery with episiotomy, 1.339% in vaginal delivery and 1.786% in vaginal delivery with vacuum

and forceps. No Patient had IV⁰ perineal tear which is because of the fact that all the instrumental deliveries are supervised and decided by the senior resident on call. I⁰ Perineal tear occurred in 3 patients out of which 2 already had an episiotomy, this is in accordance with evidence that perineal tear may still occur with episiotomy. 2 patients delivered instrumentally developed III⁰ perineal tear, which were extensions of episiotomy already performed. This highlights the morbidity associated with the instrumental delivery which is not only short term but also long term namely painful perineum. The association of perineal tears with assisted vaginal delivery is documented in large number of studies for example in a study by Robinson *et al.* carried out in 1999, the authors reported an increased risk of severe perineal laceration in vacuum deliveries with episiotomy compared with those without episiotomy¹⁰. A Scottish retrospective, population-based cohort study reported an increased risk of severe perineal laceration for operative vaginal deliveries with episiotomy relative to those without episiotomy¹¹. A study published by Kurdish and colleagues in 2006 noted a synergistic effect of operative vaginal delivery and midline episiotomy on the risk of anal sphincter laceration¹².

CONCLUSION

This study concludes that frequency of perineal tears is low in low risk primigravidae delivering in tertiary care hospital with or without episiotomy. The frequency of performing episiotomy in low risk primigravidae is high with indications being impending tear and prolonged second stage of labour.

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