

# The Changing Trends in Episiotomy in the Allied Teaching Hospitals of Rawalpindi Medical College

TAYYABA MAJEED, FATIMA WAHEED, MUNAZZA NAHEED, SADAF AFZAL, ZAHID MAHMOOD\*

## ABSTRACT

**Aim:** To evaluate the changing trends in episiotomies in patients giving birth by normal vaginal deliveries over last forty years.

**Design:** Retrospective observational study.

**Settings:** The study was conducted in three allied hospitals attached with Rawalpindi Medical College between 1967 and 2007.

**Method:** A total of 180,106 patients were entered in the study. The data was analyzed and outcome measured in terms of frequency of normal vaginal deliveries with and without episiotomies and the change in frequencies on ten yearly basis.

**Results:** After exclusion of cases, where data on mode of delivery was missing or women were delivered by Caesarean section, forceps or vacuum or through assisted breech delivery, a total of 124,798 cases were available for analysis. Among these women, 70506 (56.5%) were delivered normally and 54292(43.5%) had episiotomy during delivery. When data was analyzed according to parity, it was found that in all the Nulliparous women, 20% delivered through normal vaginal delivery and 80% received episiotomy during delivery.

Upon analysis the vaginal delivery and episiotomy on ten yearly basis, following trends were seen. During the first ten years (1967 to 1976), 5593 women were delivered vaginally. Among these, 4012 (71.73%) had normal vaginal delivery and 1581 (28.26%) had episiotomy during delivery. During the second ten years (1976 to 1986), a total of 16763 women were delivered normally. Out of these, 11539 (68.83%) had normal vaginal delivery and 5224 (31.16%) had episiotomy during delivery. In the third ten years (1986 to 1996), 33643 women were analyzed who had normal vaginal deliveries. Among this group, 20885 (62.07%) had normal vaginal delivery and 12758 (37.92%) had episiotomy. During the last ten years (1996 to 2007), 68799 women were analyzed who were delivered vaginally. Among this category, 34070 (49.52%) had normal vaginal delivery and 34729 (50.47%) had episiotomy during delivery.

**Conclusion:** The episiotomy rate of 80% in primigravida cases is very high and above the international standards. The reasons for this very high rate need to be evaluated by another study. Majority of the deliveries are performed by junior doctors and it's the training problem which needs to be addressed.

**Keywords:** Episiotomy, Caesarean section, nulliparous women

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## INTRODUCTION

The exact origins of episiotomy are not known but first accounts in European medical texts date back to the mid 18<sup>th</sup> century. It became widely used in the early 20<sup>th</sup> century due to a doctor named Joseph DeLee, who was keen to establish obstetrics as a medical speciality and who believed episiotomy should be used to prevent brain damage, epilepsy, and cerebral palsy that might result from the battering of the fetal head against the rigid perineum<sup>1,2</sup>.

Episiotomy has been a mainstay of obstetrical practice since the 1920s, when leading doctors declared that cutting the perineum was best for baby and mom, says Ian Graham, Ph.D., assistant professor of medicine at the University of Ottawa and author of *Episiotomy: Challenging Obstetric Interventions*. Despite a lack of good data, doctors claimed the incision not only protected against tears, incontinence, and weakened pelvic floor muscles, but also made delivery easier on the baby<sup>5,7,10</sup>.

Episiotomy is done to prevent severe perineal tears, but its routine use has been questioned. Routine episiotomy has declined since liberal usage has been discouraged<sup>11,12</sup>.

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*Department of Obstetrics & Gynaecology, Central Park Medical College, Lahore*

*\*Professor of Surgery, Lahore Medical & Dental College, Lahore*  
Correspondence to Prof. Tayyaba Majeed Email: dr.tayyaba@hotmail.com Cell: 0300-4315535

Episiotomy refers to a surgical incision of the female perineum performed by the person at the time of parturition. It is usually performed with scissors when the perineum is stretched and distended, just prior to crowning of the fetal head. The purpose is to increase the diameter of the soft tissue pelvic outlet, thereby preventing perineal lacerations, facilitating delivery, and reducing the time for expulsion of the infant<sup>3,4,6</sup>.

Episiotomy is one of the most common operations performed on women, but rates differ geographically. The prevalence of episiotomy is highest in Latin America and lower in Europe with reported rates varying widely from 1 percent to 80 percent. In United States, changing trends in obstetrical practice have influenced the decision to perform an episiotomy and resulted in a decreasing prevalence of the procedure<sup>5,8,9</sup>.

These variations in rates seen worldwide clearly indicate that episiotomy is heavily driven by professional norms, different experiences in training and individual provider preference and not by physiological necessity<sup>7</sup>. According to a recently published Cochrane review of midwifery-led care versus consultant led care, the rates of episiotomy are 16% lower if you give birth in a midwife led unit. While 1<sup>st</sup> and 2<sup>nd</sup> degree tears occur in approximately half of all births, 3<sup>rd</sup> and 4<sup>th</sup> degree tears that require

surgical intervention account for around 6% of overall perineal trauma in childbirth<sup>13,14</sup>.

The objective of this study was to evaluate the changing trends in episiotomies in patients giving birth by normal vaginal deliveries over last forty years.

## METHODS AND MATERIALS

The record of over 180,106 deliveries conducted at the three allied teaching hospitals of Rawalpindi Medical College was evaluated for the purpose of the study. Data from years 1967-2007 was obtained from the labour room registers and entered into worksheets. The data was analyzed and outcome measured in terms of frequency of normal vaginal deliveries with and without episiotomies and the change in frequencies on ten yearly basis. Unfortunately in our set-up, either facilities do not exist for such efforts or their importance is not well understood. At present we do not have any registry services in Pakistan which can keep track of statistics pertaining to basic obstetric outcomes. This dearth of information does not allow us to find out the prevailing practices and measures the outcome in obstetric practice.

## RESULTS

Table 1: Type of delivery

Type of delivery	n	%age
Normal delivery without episiotomy	70506	56.5
Normal delivery with episiotomy	54292	43.5
Total	124798	100

Table 2: Parity

Parity	n	%age
Nulliparous	37543	30
Gravida 2 and above	87255	70

Table 3: Relationship of parity with episiotomy

Parity	n	Normal delivery with episiotomy	Normal delivery without episiotomy
Primigravida	37543	30034(80%)	7509(20%)
Gravida 2 and above	87255	24258(27.80%)	62997(72.19%)

Table 4: Analysis on ten yearly basis

Analysis	n	Normal delivery without episiotomy	Normal delivery with episiotomy
1967-1976	5593	4012(71.7%)	1581(28.2%)
1976-1986	16763	11539(68.8%)	5224(31.1%)
1986-1996	33643	20885(62%)	12758(37.9%)
1996-2007	68799	34070(49.5%)	34729(50.4%)

## DISCUSSION

Rawalpindi Medical College is a state funded medical school and three tertiary care teaching hospitals are affiliated with it, namely: Holy Family Hospital, Rawalpindi, Rawalpindi General Hospital, Rawalpindi (Benazir Bhutto Shaheed Hospital), and District Head Quarters Hospital, Rawalpindi. These hospitals deliver approximately 17,000 women every year. Unfortunately, we do-not have any

registry services in Pakistan which can keep track of statistics pertaining to basic obstetric outcomes. The review of outcome measures and practices is extremely important in any clinical setting. The aim of such reviews is to improve patient care by examining practices and unmasking areas requiring improvements.

As regards the incidence of episiotomies performed as part of normal vaginal deliveries, the WHO recommends an episiotomy rate of less than 10% for normal vaginal deliveries. We analyzed the trends in normal vaginal delivery along with episiotomy and interesting results were found. After exclusion of cases, where data on mode of delivery was missing or women were delivered by Caesarean section, forceps or vacuum or through assisted breech delivery, a total of 124,798 cases were available for analysis. They constituted 69.3% of all 180,106 cases originally available for analysis.

Among these women, 70506 (56.5%) were delivered normally and 54292(43.5%) had episiotomy during delivery. When data was analyzed according to parity, it was found that in all the Nulliparous women, who constituted 30% of this cohort (n=37543), 20% (n=7509) delivered through normal vaginal delivery and 80% (n=30034) received episiotomy during delivery. The episiotomy rate of 80% in primigravida cases is very high and above the international standards. The reasons for this very high rate need to be evaluated by another study. Majority of the deliveries are performed by junior doctors and it's the training problem which needs to be addressed. In contrast to this, the patients belonging to the group gravida 2 and above, had an episiotomy rate of 27.80% (n=24258). In this group, the patients delivered normally without episiotomy constituted 72.19% (n=62997).

Upon analysis the vaginal delivery and episiotomy on ten yearly basis, following trends were seen. During the first ten years (1967 to 1976), 5593 women were delivered vaginally. Among these, 4012 (71.73%) had normal vaginal delivery and 1581(28.26%) had episiotomy during delivery. During the second ten years (1976 to 1986), a total of 16763 women were delivered normally. Out of these, 11539(68.83%) had normal vaginal delivery and 5224(31.16%) had episiotomy during delivery. In the third ten years (1986 to 1996), 33643 women were analyzed who had normal vaginal deliveries. Among this group, 20885(62.07%) had normal vaginal delivery and 12758(37.92%) had episiotomy. During the last ten years (1996 to 2007), 68799 women were analyzed who were delivered vaginally. Among this category, 34070(49.52%) had normal vaginal delivery and 34729 (50.47%) had episiotomy during delivery. The trend clearly shows a sharp rise in the rate of episiotomy during the last forty years. Episiotomy scar do give problem to women and lot of work needs to be done to reduce this trend.

When we compared our study with others in the literature, it was found that, generally there was a decline in the episiotomy rate but the results of two studies were more or less matched with our study. A study conducted at Magee-Women Hospital by Howden suggested an episiotomy rate of 45.0% which is around same as shown in our study<sup>7</sup>. Another study by Okeke at UNTH Enugu between 2000 and 2004, showed a fluctuated rate of episiotomy between 52.7% in 2000 and 48.2% in 2004<sup>8</sup>. In

United States, a study conducted by Frankmann et al between 1979-2004 suggested an episiotomy rate declining from 60.9% in 1979 to 24.5% in 2004<sup>(5)</sup>. Another study by Shen YC conducted between 2003-2008, also suggested a decline in episiotomy rate<sup>(9)</sup>. One study by Friedmann in New York, conducted between 2006-2012 showed a decline in episiotomy rate from 17.3% in 2006 to 11.6% in 2012<sup>6</sup>. Another study by Julie Dawson suggested episiotomy rate dropped by 39% between 1980 and 1998.

These variations in rates seen worldwide clearly indicate that episiotomy is heavily driven by professional norms, different experiences in training and individual provider preference and not by physiological necessity.

## CONCLUSION

The episiotomy rate of 80% in primigravida cases is very high and above the international standards. The reasons for this very high rate need to be evaluated by another study. Majority of the deliveries are performed by junior doctors and it's the training problem which needs to be addressed.

It was seen that, 4 out of every 5 nulliparous women received an episiotomy during labour at tertiary care level. Episiotomies are performed almost twice as frequently in nulliparous as compared to multiparous women. In a third world country like ours with high hospital acquired infection rates and low follow-up attendance, the routine use of episiotomies is seriously questionable. Evidence based medicine should be practiced and high rates of episiotomies should be curtailed.

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