

## A CLINICAL STUDY OF THE RATE OF EPISIOTOMY AND PERINEAL OUTCOMES AFTER DELIVERY

Phat Prapawichar\*

### Abstract

Episiotomy is widely performed as a 'routine' procedure during childbirth. The potential benefits for the use of the episiotomy include the prevention of severe perineal lacerations and pelvic floor relaxation. Evidently, episiotomy procedure may increase the likelihood of severe perineal pain, healing outcomes, and third or fourth degree tears. In spite of all these factors this procedure still remains a clinical practice and as part of normal delivery. The aim of this study was to investigate the rate of episiotomy and perineal outcomes after normal delivery. This cross-sectional study was conducted using a self-administered survey and chart review in two government hospitals located in Bangkok, Thailand. Anonymous patient's data of 400 women was analyzed using descriptive statistics. The results revealed 80% of women received episiotomy. 2.2% of women who had episiotomy experienced a severe perineal laceration, compared to those who delivered without episiotomy. Perineal pain appears to be highest (90.94%) in women who had episiotomy than those who had spontaneous delivery without episiotomy (70%). Therefore, restrictive use of this procedure should be recommended to reduce complications and increase comfort for women after delivery.

**Keywords:** birth interventions, Episiotomy, perineal, delivery, vaginal birth

---

\*Phat Prapawichar, RN, MNurs, holds a Master degree in Nursing from School of Nursing, Midwifery, and Indigenous Health, University of Wollongong, NSW, 2522, Australia (2006) and B.N.S from Assumption University of Thailand (2002). Currently she is working as a Lecturer in the Bernadette de Lourdes School of Nursing Science, Assumption University of Thailand. She is a Doctoral candidate in the Faculty of Nursing Siriraj Hospital, Mahidol University, Thailand

## **INTRODUCTION**

Episiotomy is a surgical enlargement of the vagina during delivery to facilitate a baby's birth. It became widespread in clinical practice as a routine procedure throughout the world (Graham, Carroli, Davies, & Medves, 2005). The reasons for performing episiotomy procedure include prevention of perineal lacerations and fetal injury. However, recent research studies have found that the routine use of episiotomy does not have any advantage in the prevention of severe perineal lacerations or otherwise called as third-and-fourth degree tears (Manzanares, Cobo, Moreno-Martínez, Sánchez-Gila, & Pineda, 2013; Youssef et al, 2005). Moreover, many adverse effects on maternal morbidity associated with episiotomy procedure have been reported, for example, increased risk of severe perineal lacerations (Ceh, 2011) and severe pain (Priddis, Dahlen, & Schmied, 2013). These complications are potential morbidities of postpartum resulting from the use of episiotomy (Aytan, Tapisiz, Tuncay, & Avsar, 2005; Graham, Carroli, Davies, & Medves, 2005; Lam, Wong, & Pun, 2006). However, health care professionals around the world continue to use it routinely within the hospitals.

The performance of an episiotomy procedure may be justified for specific maternal or fetal indications; however, the liberal use of episiotomies is now being questioned (Chalmers et al., 2009). World Health Organization (WHO) has recommended restrictive use of episiotomy. Many Western has adopted WHO recommendations but this procedure remains substantial within developing countries (Coulm et al., 2012; Lam, Wong, & Pun, 2006;

Graham, Carroli, Davies, & Medves, 2005; Kropp, Hartwell, & Althabe, 2005) including Thailand (Liamputtong, 2004).

A recent review found that the episiotomy rates were very high in developing countries (Trinh et al., 2013). A research study conducted in Jordan evaluated the use of episiotomy in 460 women. The results found that 37% received episiotomy and the degree of perineum lacerations was up to 58% (Shaban, Hatamleh, Khresheh, & Homer, 2011). Similarly, in Hong Kong a prospective observational survey conducted by Lam and colleagues (2006) found that the use of the episiotomy in primiparous and multiparous women was 97.9 % and 71.4 %, respectively. The average use of this procedure was 85.5 % indicating that this procedure was routinely performed in Hong Kong (Lam, Wong, & Pun, 2006). Therefore, the routine use of episiotomy procedure should be avoided in order to prevent serious complications after delivery.

Other research studies pointed out complications of women after receiving an episiotomy include severe perineal lacerations and discomfort because of severe perineal pain during postpartum period (Ceh, 2011; Moore & Moorhead, 2013). Severe perineal laceration or third-degree and fourth-degree tears is a serious complications that increase the morbidity for women during the postpartum period and beyond (Manzanares et al., 2013; Priddis et al., 2013). These lacerations appear to occur from both-an extension of episiotomy or spontaneous delivery. However, a study found that severe perineal laceration were more likely to occur with the women who underwent episiotomy than those who did not opt for episiotomy (Youssef, Ramalingam, Macleod, & Murphy,

2005, especially the midline episiotomy procedure (Aytan, Tapisiz, Tuncay, & Avsar, 2005). Severe perineal laceration may also occur by the extension of an episiotomy into anal sphincter or rectum (Signorello, Harlow, Chekos, & Repke, 2006). Another study found that women who had experienced a third or fourth degree perineal lacerations demonstrated the risk of long term morbidity such as impaired anal continence (Ceh, 2011; Signorello, Harlow, Chekos, & Repke, 2006). Other studies found that the rate and risk of anal sphincter lacerations were decreased with the restrictive use of episiotomy (Andrews, Sultan, Rane, & Jones, 2006). The further revealed that the routine use of episiotomy does not present any of benefits for the women. On the other hand, it may increase the risks of severe perineal lacerations rather than prevent them (Clemons, Towers, McClure, & Boyle, 2005).

Another common complication of having episiotomy is discomfort due to severe perineal pain, which is commonly occurs during postpartum period. Severe perineal pain could decrease ability of the women to perform their normal daily activities, and it can also distract to them at a time when they would prefer to have bonding with their infant and family. Therefore, the investigation of perineal pain between restrictive and liberal use of episiotomy has to be evaluated. Research studies support that the women who had intact perineum or spontaneous lacerations were more likely to have less pain than those who underwent episiotomy (Leeman, Fullilove, Borders, Manocchio, Albers, & Rogers, 2009). A study conducted by Dannecker and colleagues (2004) using a 100-mm visual analog scale to assess postpartum pain with

4 activities- best rest, sitting, walking, and defecation, experienced less pain compared with those who receiving episiotomy group.

In brief, previous research studies found that the women underwent episiotomy appeared more likely to report severe perineal lacerations and pain than those who had spontaneous lacerations. In Thailand, there are few studies which emphasized the use of episiotomy and perineal outcomes of these procedure. Because of the limitation of baseline data, this study was conducted to investigate the use of episiotomy procedure in Thai government hospitals. The health care professionals could use these findings for making decisions to provide appropriate care in their clinical practice, prevent unnecessary complications, and improve the quality of care for women during delivery.

## **METHODOLOGY**

A cross-sectional study was conducted in postpartum units at two government hospitals in Bangkok, Thailand, using a self-administered questionnaires and chart reviews. The objective of this study was to investigate the rate of episiotomy used and perineal outcomes for women who underwent episiotomy and non-episiotomy after normal delivery. Participating hospitals were identified by convenience and remain anonymous. The participating women were approached and recruited to participate in this research study while they were admitted in the postpartum units during September 2012 and January 2013. Participating women included in this research had gone through 37 to 42 weeks of gestation; had experienced vaginal birth and had a live baby. Participant information sheet and informed consent were

obtained with signatures. It was clearly stated that participation in the study was voluntary. An appropriate sample size was selected based on a 95 percent confidence level. A sample size was drawn from two hospitals based on a binomial probability distribution which recommended by Lwang, Tye, and Ayeni (1999).

$$N = \frac{Z^2 (p \cdot q)}{D^2}$$

N = estimated sample size

Z = significance level at 0.05 is 1.96

P = the rate of episiotomy among pregnant Thai women

q = 1-p

d = degree of accuracy desired, set as a 0.05

Further literature review found that the average rate of episiotomy use in Thailand ranged from 51.89 (Iapanan, 1999) to 85.56 percent (unpublished study). Based on the formula, for a rate of 51.89 percent, the sample size (N) should have been 384 cases, and for a rate of 85.6 percent, the sample size should be 189 cases. To insure a minimum

confidence level of 95 percent, an appropriate sample size would consist of 384 cases. In order to prevent the errors, a total numbers of 400 participants were used in this study. Data were collected and analyzed using the SPSS Version 14. Descriptive statistics were used to answer the objectives of the study. Prior to conducting the research, ethics approvals were also obtained from the hospitals involved in the study. Privacy and anonymity were fully respected and maintained throughout the research. No identifying markers were placed on the research instruments and the data was coded to ensure the anonymity.

## RESULTS

### Demographic Characteristics

The majority of the women in the study were married (94.5%), only 5% or (0.5%) were separated, widowed or divorced. Most of the women (83%) had attended general antenatal care, only 6% did not receiving any antenatal care during their pregnancy.

Table 1 Summary Demographic characteristics of participants, n=400

Variable	Number of Responses (%)	Variable	Number of Responses (%)
Age ≤ 19	66 16.5	<b>Occupation</b>	
20-24	116 29.0	Housewife	158 39.5
25-29	113 28.3	Employed	239 59.8
30-34	74 18.5	Government official	3 .8
≥ 35	31 7.8	<b>Marital Status</b>	
(Maximum=43, minimum=14)		Married	378 94.5
<b>Education Level</b>		Separated	20 5.0
Primary school	95 23.8	Widowed / Divorced	2 .5
High school	208 52.0	<b>Antenatal care service</b>	
Diploma degree	58 14.5	General care	332 83.0
Bachelor degree	39 9.8	Private care	44 11.0
and higher		No Antenatal care	24 6.0

### Birth experience on episiotomy

Table 2 given below shows the rate of episiotomy in the women who had experienced vaginal delivery, 80% of women received episiotomy, 20% women did not had episiotomy.

Table 2 Episiotomy use in vaginal delivery

Vaginal delivery	Frequency	Percent
Episiotomy	320	80
No Episiotomy	80	20
Total	400	100

### Episiotomy and perineal outcomes

Table 3 presents a cross-tabular analysis of episiotomy and perineal outcomes. The results demonstrated that episiotomy had a positive correlation with severe perineal laceration. 2.2% of women experiencing episiotomy experienced third- and-fourth-degree lacerations and 97.8% reported a second degree laceration (episiotomy itself is defined as a second degree laceration), compared to those who delivered without episiotomy. Table 3 suggests that 13.7% women who delivered without episiotomy had intact perineal; labia tear without sutured were 23.75%; and first degree and second degree of perineal lacerations were 30% and 32.5%, respectively. The findings imply that those women who had experienced with episiotomy seemed to have second-degree laceration inadvertently.

Table 3 Episiotomy and perineal outcomes

<b>Episiotomy</b>	
Severe laceration	7(2.2%)
Second degree laceration	313(97.8%)
<b>No Episiotomy</b>	
Intact perineal	11(1.75%)
Labia tear without suture	19(23.75%)
First degree tears	24(30%)
Second degree tears	26(32.5%)

### Perineal pain

The study found that 86.8% of women in the sample reported perineal pain after the birth; only 13.2% did not experience pain after delivered. The numerical rating scale was used to identify how much pain they were having in the first 24 hours after delivery. The results as in Table-4 show that over one-half of them (55.7%) moderate pain, 20% had severe pain, 21.5% had mild pain, and only 2.8% had no pain after delivery.

Table 4 Perineal pain

None	11(2.8%)
Perineal pain	
Mild	86(21.5%)
Moderate	223(55.7%)
Severe	80(20%)
Total	400(100%)

### **Effect of perineal pain**

*The effect of perineal pain in taking care their babies:* the rating how much of perineal pain effect their ability in terms of taking care their babies and breast feeding were assessed-gave effect, little, and not at all. The study found that most of women (73%) reported perineal pain following delivery caused little effect in their ability to look after their babies. Only 12% of women reported perineal pain made it very difficult for them to look after their babies, and 15% had no trouble. A small fraction of 8.3% women pointed out that perineal pain made them very difficult to provide breastfeeding, 20.5% did not have any problems with regard to breastfeeding. A majority of 71.2% reported very little effect of perineal pain during breastfeeding.

*The effect of using analgesics for relief during perineal pain.* The use of analgesic for pain relief was evaluated both groups-those who had episiotomy and those who did not. The results pointed out that the women who had undergone episiotomy (60.63%) used more analgesics, compared to those who did not ( 48.75%).

*The effect of perineal pain after the 24 hour of delivery:* The level of perineal pain after 24 hours of delivery was also compared between women who received episiotomy and those who did not. The results demonstrated that perineal pain remained highest in women who had episiotomy than those who had spontaneous delivery without episiotomy, 78.13% versus 58.75%. Moreover, the data suggested that the women who underwent episiotomy had a higher rate

of moderate pain and severe pain 48.75% versus 35%,; compared to those without episiotomy, 8.44% versus 7.5%.

### **DISCUSSION**

The finding of this study point out that episiotomy procedure continues to be performed at a high rate in the government hospitals in Bangkok, Thailand. Studies conducted by Trinh and team ( 2013) found that the episiotomy rates were very high in developing countries (Trinh et al., 2013). Although less popular but this procedure is still used in few developed country (Chalmers, Kaczorowski, O'Brien, & Royle, 2012). The outcomes associated with the use of this procedure revealed that the women who received episiotomy reported more complications, such as, severe perineal pain and laceration than those who gave birth without episiotomy (Hartmann et al., 2005; Leeman, Fullilove, Borders, Manocchio, Albers, & Rogers, 2009; Moore & Moorhead, 2013). Similar study conducted by Pazandeh and team (2015) about use of evidence-based practice for improving the quality of maternity care found that health care providers still do not apply evidence-based outcomes in clinical practice. For example, there is an overuse of induction of labor, fundal pressure during second stage of labor, and routine episiotomy (Pazandeh, Huss, Hirst, House, & Baghban, (Pazandeh, Huss, Hirst, House, & Baghban, 2015). To prevent adverse health outcomes such as severe perineal laceration and severe pain, the restrictive use of this procedure in low risk pregnancy should be recommended by policy makers in every health care organization. The attitudes of health care providers toward the

routine use of birth interventions, in particular the use of episiotomy procedure should be seriously evaluated. The gap of using inappropriate birth interventions should also be investigated in order to improve the quality of care for women during delivery.

### Acknowledgement

I want to give my sincere thanks to all staff in the two hospitals for their kind help throughout this work. I also would like to thank for all the women those who participated in this study.

### REFERENCES

- Andrews, V., Sultan, A.H., Rane, T., & Jones, P.W. (2006). Risk Factors for Obstetric Anal Sphincter Injury: A Prospective Study. *Birth*, 32(2), 117-122.
- Aytan, H., Tapisiz, O.L., Tuncay, G., & Avsar, F.A. (2005). Severe perineal lacerations in nulliparous women and episiotomy type. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 121(1), 46-50.
- Ceh, A. (2011). The impact of episiotomy on the frequency of the third and fourth degree perineal lacerations during vaginal delivery in Slovenian primiparous women. *Obzornik Zdravstvene Nege*, 45(2), 101-104.
- Chalmers, B., Kaczorowski, J., O'Brien, B., & Royle, C. (2012). Rates of Interventions in Labor and Birth across Canada: Findings of the Canadian Maternity Experiences Survey. *Birth: Issues in Perinatal Care*, 39(3), 203-210.
- Chalmers, B., Kaczorowski, J., Levitt, C., Dzakpasu, S., O'Brien, B., Lee, L., Young, D. (2009). Use of routine interventions in vaginal labor and birth: findings from the Maternity Experiences Survey. *Birth: Issues in Perinatal Care*, 36(1), 13-25.
- Clemons, J.L., Towers, G.D., McClure, G.B., & Boyle, A.L. (2005). Decreased anal sphincter lacerations associated with restrictive episiotomy use. *American Journal of Obstetrics and Gynecology*, 192, 1620-1625.
- Coum, B., Ray, C., Lelong, N., Drewniak, N., Zeitlin, J., & Blondel, B. (2012). Obstetric Interventions for Low-Risk Pregnant Women in France: Do Maternity Unit Characteristics Make a Difference? *Birth: Issues in Perinatal Care*, 39(3), 183-191.
- Dannecker, C., Hillemanns, P., Steauss, A., Hasbargen, U., Hepp, H. & Christoph, A (2004). Episiotomy and perineal tears presumed to be imminent: randomized controlled trial. *Acta Obstetrica et Gynecologica Scandinavica*, 83(4), 364-368.
- Graham, I. D., Carroli, G., Davies, C., & Medves, J. M. (2005). Episiotomy rates around the world: an update. *Birth: Issues in Perinatal Care*, 32(3), 219-223.
- Hartmann, K., Viswanathan, M., Palmieri, R., Gartlehner, G., Thorp, J., & Lohr, K.N. (2005). Outcomes of Routine Episiotomy: A systematic review. *Journal of American Medical Association*, 293(17), 2141-2148.
- Kropp, N., Hartwell, T., & Althabe, F. (2005). Episiotomy rates from eleven developing Countries. *International*

- Journal of Gynecology and Obstetrics, 91, 157-159.
- Lam, K.W., Wong, H.S., & Pun, T.C. (2006). The practice of episiotomy in public hospitals in Hong Kong. *Hong Kong Medical Journal*, 12(2), 94-98.
- Lapanan, D. (1999). Risk factors associated with third and fourth-degree lacerations in spontaneous vaginal deliveries. *Journal of Health Science*, 8(1), 99-109.
- Leeman, L., Fullilove, A. M., Borders, N., Manocchio, R., Albers, L. L., & Rogers, R. G. (2009). Postpartum perineal pain in a low episiotomy setting: association with severity of genital trauma, labor care, and birth variables. *Birth: Issues in Perinatal Care*, 36(4), 283-288.
- Liamputtong, P. (2004). Giving birth in the hospital: childbirth experiences of Thai women in Northern Thailand. *Health Care for Women International*, 25, 454-480.
- Lwanga, S.K., Cho-Yook Tye, Ayeni O. (1999). *Teaching Health Statistics: Lesson and Seminar outlines*, World Health Organisation, Geneva.
- Manzanares, S., Cobo, D., Moreno-Martínez, M. D., Sánchez-Gila, M., & Pineda, A. (2013). Risk of Episiotomy and Perineal Lacerations Recurring After First Delivery. *Birth: Issues in Perinatal Care*, 40(4), 307-311 305.
- Moore, E., & Moorhead, C. (2013). Promoting normality in the management of the perineum during the second stage of labour. *British Journal of Midwifery*, 21(9), 616-620.
- Pazandeh, F., Huss, R., Hirst, J., House, A., & Baghban, A.A. (2015). An evaluation of the quality of care for women with low risk pregnancy: The use of evidence-based practice during labour and childbirth in four public hospitals in Tehran. *Midwifery*, 31(11), 1045-1053.
- Priddis, H., Dahlen, H., & Schmied, V. (2013). Women's experiences following severe perineal trauma: a meta-ethnographic synthesis. *Journal of Advanced Nursing*, 69(4), 748-759.
- Shaban, I. A., Hatamleh, R., Khresheh, R., & Homer, C. (2011). Childbirth practices in Jordanian public hospitals: consistency with evidence-based maternity care? *Int J Evid Based Healthc*, 9(1), 25-31.
- Signorello, L.B., Harlow, B.L., Chekos, A.K., & Repke, J.T. (2006). Midline episiotomy and anal incontinence: retrospective cohort study. *BMJ*, 320, 86-90.
- Trinh, A. T., Khambalia, A., Ampt, A., Morris, J. M., & Roberts, C. L. (2013). Episiotomy rate in Vietnamese-born women in Australia: support for a change in obstetric practice in Viet Nam. *Bulletin of the World Health Organization*, 91(5), 350-356.
- Youssef, R., Ramalingam, U., Macleod, M., & Murphy, D. J. (2005). Cohort study of maternal and neonatal morbidity in relation to use of episiotomy at instrumental vaginal delivery. *An International Journal of Obstetrics and Gynecology*, 12, 941-945.