Episiotomy versus no-episiotomy approach and its impact on severe perineal trauma: An institutional experience

Saima Yasmin Qadir[1], Shazia Siddiq[2], Zahid Sarfraz[1], Ayesha Zahoor Quershi[1]

ABSTRACT

Objective: To compare the frequency of third and fourth degree perineal tears with and without episiotomy in mothers undergoing vaginal delivery.

Study Design: randomized controlled trail

Place and Duration: Labour Ward Emergency of Obstetrcics and Gynaecology Department of Nishtar Hospital, Multan, from 1st January to 31st December 2017.

Methodology: Total 1000 patients divided equally in two groups, episiotomy (group-A) and no-episiotomy (group-B) fulfilling the inclusion criteria of full term pregnancy, full cervical dilatation ,well engaged fetal head and maternal urge to push were included in the study. The patients with history of surgically treated fourth degree perineal tears were excluded. The maternal outcome in terms of frequency of episiotomy, instrumental delivery and perineal trauma including third and fourth degree tears were observed alongwith other demographic variables.

Results: Episiotomy was observed as 26.6% and 7.8% for the episiotomy and no -episiotomy groups respectively. The outcomes of third degree and fourth degree was observed as 1% and 0.6% respectively in episiotomy group. The outcomes of third degree and fourth degree was observed as 1% and 0.8% respectively in no-episiotomy group. The coefficients were statistically significant in primigravida and mode of delivery (p=0.000) being more common with forceps. Episiotomy has insignificant relationship with severe perineal trauma.

Conclusion: There is no difference in frequency of severe perineal trauma with and without episiotomy approach in women undergoing vaginal delivery

Keywords: Spontaneous vaginal delivery, Episiotomy, Perineal tear, Instrumental vaginal delivery

How to Cite This:

Qadir SY, Siddiq S, Sarfraz Z, Quershi AZ. Episiotomy versus no-episiotomy approach and its impact on severe perineal trauma: An institutional experience. Isra Med J. 2019; 11(5): 367-370.

1. Senior Registrar of Gynaecology & Obstetrics, Nishtar Medical University and Hospital
2. Assistant Professor of Gynaecology & Obstetrics, Nishtar Medical University and Hospital

Correspondence:

Saima Yasmin Qadir

Senior Registrar of Gynaecology & Obstetrics, Nishtar Medical University and Hospital

Email: asharahmad71@hotmail.com

Received for Publication: December 20, 2018

1st Revision of Manuscript: January 01, 2019

2nd Revision of Manuscript: March 29, 2019

3rd Revision of Manuscript: July 04, 2019

4th Revision of Manuscript: September 25, 2019

5th Revision of Manuscript: October 11, 2019

Accepted for Publication: December 14, 2019

INTRODUCTION

From the start of 20th century the hospital based deliveries were popularized, midwives and clinicians introduced an idea of labelling the females body as a dependent counterpart on medical intervention to enable the child birth. This belief together with a change of birth place, away from home, resulted in highest episiotomy rate[1]. Episiotomy is a widely done intervention during child birth, regardless of poor scientific evidence, with its rate ranging between 9.7% to 100%[2] to cut short second stage of labor and prevent perineal tears by widening the pernium[3]. It was believed that the surgical incision might heal quickly, with less pain and lower infection rate than perineal tears. Use of episiotomy fell significantly hence the frequency of perineal tears also reduced 4.8% vs 2.4%[4]. Studies revealed that episiotomy increases tears, infection and postpartum hemorrhage without decreasing the long term complications such as perineal pain and urinary incontinence[5]. From 1970s and onward, clinicians started re-thinking about the use of episiotomy, its merits and demerits. Obstetricians did not only highlight the lack of evidence in support of episiotomy, they also found it

potentially harmful in causing perineal tears, hematoma, infection, healing complications and later on dysperunia. A question raised whether there is an indeed any indication for this procedure, even practicing selectively will have benefits.

The episiotomy rates declined worldwide, Kaddoura reported episiotomy rates fallen from 80-97.4% in 2009 to 73.3% in 2014[6]. Murraca reported decline in episiotomy use during 2004 to 2017 from 53.1% to 43.2%.[4] The developed countries have made great effort to reduce incidence of episiotomy but still developing countries report 100 % incidence among nullipara and 28.5% in multipara[7]. The World Health Organization (WHO) recommends an episiotomy rate of 10% as "good goal to pursue" in randomized controlled trail conducted in united kingdom in 1984[8,9]. Carroli performed Cochrane systemic review which raises the question regarding real indications of episiotomy[10]. They included preterm delivery, breech, fetal macrosomia, shoulder dystocia, instrumental delivery, non-reassuring fetal heart rate, or rigid perineum. These indications had been debated for long time but it is for sure that routine episiotomy should be avoided and should be performed only in selected cases. Scott suggests episiotomy era has come to an end and let the natural forces of labour should gradually distend the perineum[1].

There is very limited data on this subject in our local population. Compared with the wealth of published information for severe perineal trauma, less is known about episiotomy versus no-episiotomy policy and impact on severe perineal trauma at national level. We have performed this study to compare the frequency of third and fourth degree perineal tears with and without episiotomy in mothers undergoing delivery. So this study was conducted with an objective to compare the frequency of third and fourth degree perineal tears with and without episiotomy in mothers undergoing vaginal delivery.

METHODOLOGY

This randomized controlled trail was conducted in clinically stable patients of any parity full filling the inclusion criteria of full term pregnancy, full cervical dilatation, fully engaged fetal head and maternal urge to push in Labour Ward Emergency of Gynecology and Obstetrics in Nishtar Hospital during 1st January to 31st December 2017. Their randomization was generated using random allocation software program version 1.0. Opaque, sealed consecutively numbered envelopes containing each participant's allocation was done, each envelope was opened only during second stage of labour. A total number of thousand patients were included in this study, n=500 in episiotomy group (group-A) and n=500 in no- episiotomy group (group-B). In group-A, the doctor was instructed to perform episiotomy selectively according to their institutional policy. In group- B, the management was based on the principal that episiotomy is unnecessary even in situation in which the literature suggests that it may confer some benefit. Therefore no episiotomy will be performed except under exceptional circumstances where clinical judgment considered the procedure absolutely necessary. Clinician was specified as the resident of third or fourth year of fellowship of gynecology and obstetrics program. The patients with history of surgically treated fourth degree perineal tears were excluded. Informed consent obtained from all the patients and permission to conduct study was taken from hospital ethical committee. The maternal outcome in terms of frequency of episiotomy, instrumental delivery and frequency of perineal tears including third and fourth degree tears were observed.

Data Analysis: Data was analyzed with IBM- SPSS-version 21, frequency and percentages are computed for qualitative varaibles, mean ±SD are presented for age and number of current pregnancies, chi square test applied to compare the severe perineal trauma in both groups taken p value < 0.05 as significant. Simple linear regression model was applied to observe the relationship between third and fourth degree perineal tears (dependent variable) and gestational age, number of current pregnancies, mode of delivery and episiotomy (independent variable). Coefficients (rate of change) were observed among these variables.

RESULTS

Thousand patients were included in this study, n=500 in episiotomy group (group-A) and n=500 in no-episiotomy group (group-B).

Table-I: Demographic characteristics of both groups (N= 1000)

Characteristics	Group A (n=500)	Group B (n=500)	Test of Sig.
Mean Age	31.94±6.60	30.09±7.38	t=4.18,p=0.000
Current pregnancy	2.52±1.01	2.46±0.99	t=0.947,p=0.344
Number of current pregnancy			
First	88(17.6%)	93(18.6%)	χ^2=1.15,p=0.765
Second	167(33.4%)	174(34.8%)	
Third	141(28.2%)	142 (28.4%)	
Four or more	104 20.8%)	91(18.2%)	
Gestational age			
37-40 weeks	380(76%)	369 (73.8%)	χ^2=0.644,p=0.422
40-41 weeks	120 (24%)	131 (26.2%)	
Mode of Delivery			
Normal	397(79.4%)	417 (83.4%)	χ^2=114.6,p=<0.05
Forceps	24(4.8%)	16(3.2%)	
Ventouse	79(15.8%)	67(13.4%)	

Table-I showed the demographics like mean age, number of currant pregnancy, gestational age and mode of delivery. In group A, mean age and mean of current pregnancy was 31.94±6.60 and 2.52±1.01. Number of current pregnancy was first, second, third and four or more was observed as 17.6%, 33.4 %, 28.2% and 20.8% respectively. Distribution of gestational age revealed as 76% between 37-40 weeks and 24% between 40-41 weeks. Mode of delivery normal, forceps and ventouse was observed as 79.4%, 4.8% and 15.8% respectively. In group B, mean age and mean number of current pregnancy was 30.09±7.38 years and 2.46±0.99

respectively. Number of current pregnancy was first, second, third and four or more was observed as 18.6%, 34.8%, 28.4% and 18.2% respectively. Distribution of gestational age revealed as 73.8% between 37-40 weeks and 26.2% between 40-41 weeks. Mode of delivery normal, forceps and ventouse was observed as 83.4%, 3.2%and 13.4% respectively. The difference was statistically insignificant.

Table-II: frequency of episiotomy and perineal tears tears (N=1000)

Characteristics	Group A (n=500)	Group B (n=500)	Test of Sig.
Episiotomy	133(26.6%)	39(7.8%)	χ^2=62.04,p=0.000
Outcomes			
Third degree	5(1%)	5(1%)	χ^2=9.21,p=0.056
Fourth degree	3(0.6%)	4(0.8%)	

Table-II shows that frequency of episiotomy was as 26.6% and 7.8% for the episiotomy and no-episiotomy group respectively. The outcomes in form of frequency of third degree and fourth degree tears were as 1% and 0.6% respectively for episiotomy group. The outcomes in terms of frequency of third degree and fourth degree tears were observed as 1%and 0.8% respectively for no-episiotomy group. Simple linear regression model to find the relationship between dependent variable (tears) and independent variables (number of current pregnancy, gestational age, mode of delivery and episiotomy). The coefficients were statistically significant for mode of delivery (p=0.000). So mode of delivery were associated with increased frequency of tears. Episiotomy has not significant relation with third and fourth degree tears in both groups.

DISCUSSION

Episiotomy is the most frequent surgical intervention under obstetrics practice especially in developing countries aiming to reduce the perineal tears. We have performed this study to evaluate whether episiotomy is protective for the perineal tears. Episiotomy was observed as 26.6% and 7.8% for the episiotomy and no-episiotomy groups respectively in our study. Indian study documented overall episiotomy rate as 70% and 85% among nullipara[3]. The frequency of third degree perineal tears was 1% in both groups and frequency of fourth degree tears was 0.6% and 0.8% in episiotomy and no-episiotomy group. Kaddoura reported that after recommendation of WHO, there is still high rates of episiotomy which is associated with increase risk of perineal trauma[6]. Murraca reported the fall of use of episiotomy during 1997 to 2014 from 53.1% to 43.4[4]. Selmer[11], Welffens[12]and Segi-Dain[13]reported that episiotomy did not protect against obstetric anal sphincter injury while Van –Beval[14] and Thiagamoorthy observed that episiotomy is protective for third and fourth degree perineal trauma[15].

We observed in our study that primigravida were 18.1% among them 53.03% had episiotomy and frequency of third and fourth degree perineal tears was 12.70%. If we say that reason which is maximally rising the rates of episiotomy is no doubt is being mother for the first time. Shalini Singh found 85% episiotomy rates in primigravida[4]. Joanna[16], O, Leary[17] and Horneman[18] reported that primiparity is a significant risk factor for episiotomy and indeed for the perineal tears. Zeki reported that episiotomy was protective for anal sphincter injury in macrosomic infant in primigravida[19].

The other second common risk factor associated with highest rates of episiotomy and perineal tears were instrumental deliver being more common with forceps delivery. Aukee reported that vaccum assisted vaginal delivery bears an increased risk for tears where forceps not available[20]. Zaki studied that forceps application with episiotomy was protective for third and fourth degree perineal tears especially in mothers having macrosomic infants with gestational diabetes[19].

Our study concluded that primigravida and forceps delivery were associated with increased frequency of tears. Steinier conducted a study and concluded that mediolateral episiotomy was found to be an independent risk factor for third and fourth degree perineal tears[21]. While Joanna observed that mediolateral episiotomy was protective against OASIS than spontaneous tears[16]. We found no difference in the frequency of severe perineal trauma with and without episiotomy. Shalini Singh observed that perineal tears were low in episiotomy group[3].

The Argentine Episiotomy Trail Collaborative Group concluded that the relative risk of severe perineal trauma was similar in both routine and selective groups irrespective to parity, fewer women in selective group required suturing. They concluded that 30% rate of episiotomy is justified in selective group[22].

In Finland, Raison concluded that incidence of obstetric and anal sphincter injuries (OASIS) were 2.3% and 1% , with and without episiotomy in nulliparous while 0.6% and 0.2% in multipara with and without episiotomy[23]. Amorim considered that routine episiotomy is a form of obstetric voilence[9] where female is transformed into a patient especially if done without informed consent while Belizan categorized it as female genital mutilation[24].

CONCLUSION

Our conclusion is that the frequency of severe perineal trauma does not increase with or without episiotomy and frequency of severe perineal trauma remains same in both modalities. No - episiotomy approach is better and preferred option for mothers undergoing labour.

AUTHOR'S CONTRIBUTION

Qadir SY: Conceived idea, Designed research methodology, Literature search, Data collection, Literature review, Data interpretation, Statistical analysis, Manuscript writing, Manuscript final reading and approval

Siddiq S: Literature search, Data collection, Data interpretation

Sarfraz Z: Literature search, Data collection, Data interpretation

Quershi AZ: Literature review, Manuscript final reading and approval

Disclaimer: None.
Conflict of Interest: None.
Source of Funding: None.

REFERENCES

1. Scott JR. episiotomy and vaginal trauma. Obstet Gynaecol Clin North Am. 2005; 32:307-321.
2. Hargrove A, Penner K, William T. family physician and obstetrician episiotomy rates in low risk obstetrics in South Alberta. Can Fam Physcian.2011; 57(4):450-456.
3. Shalini S, Thakur T, Nomita C. Pattren of episiotomy use & its immediate complications among vaginal delivries in 18 tertiary care hospitals in India. Indian J Med Res.2016; 143(4): 474-480.
4. Murraca GM., Liu S, Sabr Y Lisonkova S, Skoll A ,Brant R, Cundiff GW, Stephansson O, Razaz N ,Joseph KS. Episiotomy use among vaginal deliveries and the association with anal sphincter injury: a population-based retrospective cohort study. 21; 191(42):E1149-E1158. doi: 10.1503/cmaj.190366[2]
5. Fritel X, Schaal JP, Fauconnier A. Pelvic Floor Disorder4 years after deliver; a comparative versus systematic episiotomy. BJOG. 2008; 115 (2): 247-452.
6. Kaddoura R , DeJong J, Zurayk H, Kabakian T, Abbyad C, Mirza FG. Episiotomy practice in the Middle East.:A Lebanese teaching tertiary care centre experience. Women Birth. 2019; 32(2):e223-e228. doi: 10.1016/j.wombi.2018.07.005.
7. Saadia Z. Rates and indicators for episiotomy in modern obstetrics- a study from Saudia Arabia. Mater Sociomed. 2014; 26(3):188-190. .
8. M.M. Amorim, Isabela C. Selective episiotomy vs. implementation of non-episiotomy protocol: a randomized controlled trail. Repord Health.2017; 24.
9. World Health Organization Division of family health maternal health and safe motherhood. Care in normal birth: a practical guide. Report of a technical working group. World Health Organisation; available from UPL: http://apps.who.int/iris/bitstream/10665/63167/1/WHO_FRH_MSM_96.24.PDF.
10. Carroli G, Migninni L, episiotomy for vaginal birth. Cochrane Database Syst. Rev.2009; (1): CD000081.
11. Selmer-Olsen T, Nohr EA, Tappert C, Eggebø TM. Incidence and risk factors for obstetric anal sphincter ruptures, OASIS, following the introduction of preventive interventions. A retrospective cohort study from a Norwegian hospital 2012-2017. Sex Reprod Health. 2019; 22: 100460.
12. Welffens K. the cocoon, first alongside midwifery –led unit within a Belgian hospital:comparison of the maternal and neonatal outcomes with the standard obstetrics unit over 2 years. Birt .2019. doi.org/10.1111/birt.12466.
13. Segi Dain. Morbidity associated with episiotomy in vaccum delivery: a systematic review and meta-analysis.BJOG. 2015; 122 (8) :1082.
14. van Bavel J, Hukkelhoven CWPM, de Vries C, Papatsonis DNM, de Vogel J, Roovers JWR, Mol BW, de Leeuw JW. The effectiveness of mediolateral episiotomy in preventing obstetric anal sphincter injuries during operative vaginal delivery: a ten-year analysis. Int Urogynecol J. 2018; 29(3): 407-413.
15. Thiagamoorthy G, Jhonson A, Thaker R, Sultan A. A national survey of perineal trauma and its subsequent management in the United Kingdom. Int Urogynecol J. 2014; 25 (12): 1621-1627.
16. Joanna C, D,Souza, Ash Monga, Douglas G. Tincello. Risk Factors for Obstetrics anal sphincter injuries at vaginal birth after cesarean section: a retrospective cohort study. Int Urogynecol J. 2019; 30 (10): 1747-1753.
17. O,Leary BD, Ciprike V. anal sphincter injury associated with shoulder dystocia. J Maternal Fetal Neonatal Med. 2019; 29: 1-5.
18. Hornemann A, Kamischke A, Leudder DW. Advance maternal age is a risk factor for higher grade perineal lacerarions during delivery in nulliparous women. Arch Gynecol Obstet.2010; 281 (1): 59-64.
19. Zeki R, Li Z, Wang AY, Homer CSE, Oats JJN, Marshall D et all. Obstetrics anal sphincter injuries among women with gestational diabetes and women without gestational diabetes: a NSW population –based cohort study. Aust N Z J Obstet Gynecol. 2019; 59(5): 662-669.doi: 10.11111/ajo.
20. Steiner N, Weintraub AY, Wiznitzer A. Episiotomy: A Final Cut? Arch Gynaecol Obstet. 2012; 286: 1369-73.
21. Aukee P, Sundstorm H, Kairluoma MW.The role of mediolateral episiotomy during labour: analysis of risk fators for obstetric anal sphincter tears. Acta Obstet Gynaecol Scand.2006; 85(7):856-860.
22. No author listed. Routine vs selective episiotomy: a randomized controlled trail. Argentine Episiotomy Trail Collaborative Group. Lancet .1993, 18-25; 342 (8886-8887):1517-1518.
23. Raisanen S, Selander T, Cartwright R. The association of episiotomy with obstetric anal sphincter injury- a population based matched cohort study. PLoS One. 2014; 9(9): e107053.
24. Belizan JM, Miller S, Salaria N. We need to stop female genital mutilation! Repord Health.2016; 13: 43.