ASSESSMENT OF IMMEDIATE PERINEAL COMPLICATIONS OF NORMAL VAGINAL DELIVERY VERSUS VAGINAL DELIVERY WITH EPISIOTOMY IN TERM PREGNANCY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Objective: To assess immediate intra and postpartum perineal complications following normal vaginal delivery versus vaginal delivery with episiotomy in term pregnancy.

Material and methods: This Cross-sectional study, was conducted in Peshawar, Lady Reading Hospital, Gynae ward from 1st November 2019 to 31st January 2020 after approval from Institutional Research Board. A total of 250 patients (125 in each group), 120 in group A with normal vaginal delivery, 115 in group B (vaginal delivery with an episiotomy), and 15 patients were excluded due to different modes of delivery (instrumental delivery/cesarean section). All patients with full-term pregnancies were included. Patients who refused to give consent or had bleeding disorders and indications for instrumental delivery or cesarean section were excluded. Non-probable convenience sampling technique, P-value <0.05, 95% confidence interval, and Chi-square test used for statistical analysis

Results: In the group, A mean age of 22 years, primigravida (PG) 84 (70%) multigravida (MG) 36 (30%) mean period of gestation (POG) 38 weeks, 96(80%) spontaneous, 24 (20%) induced labor. In group B the mean age was 21.8 years, PG 77 (66%), MG 38(33%), mean POG 41 weeks, 97 (84%) spontaneous, and 18 (15%) induced labor. Group A vaginal tears 6 (5%), cervical tears 4 (3%), mixed tears 9 (7.5%), para-urethral tears 2 (1.6%), and perineal tears 9(7.5%). Group B vaginal tears 3 (2.6%), cervical tears 3 (2.6%), mixed tears 2 (1.7%). No significant post-natal pain difference was observed in the groups.

CONCLUSION: Routine practice of episiotomy should be discouraged as no significant difference was observed in both groups.

KEYWORDS: Episiotomy, Term pregnancy, Vaginal delivery.

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INTRODUCTION

Episiotomy is defined as a minor surgical procedure to enlarge the introitus and facilitate the delivery of a baby in the second stage of labor.[1] It is a commonly performed surgical procedure practiced for a long time, although its beneficial role is controversial, still, healthcare practitioners have increased its application more to reduce maternal and baby complications. The World Health Organization (WHO) recommends an episiotomy rate of 10% and discourages its routine application.[2] According to the American College of Obstetricians and Gynecologists (ACOG), "based on the existent evidence, there is no specific situation in which episiotomy is essential, and the decision to perform this procedure should be based on clinical considerations".[3] The incidence in many European countries is approximately 10% and very high in Asia, South America, and Africa.[4]

Research studies showed that despite the recommendations for its restrictive use, still, the prevalence varies in different countries. In Romania, the incidence was 62.1%, Pasc A, et al[5] and a study conducted at Saint Paul's Hospital Millennium Medical College in Addis Ababa, also reported a very high prevalence of episiotomy, which was 65.4%, Tefera T et al.[6]

The routine practice of episiotomy is very common

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in developing countries as compared to developed countries. The valid reason for increasing its need is because of antenatal counseling for women to deliver their babies in hospitals. In addition, multiple factors include certain maternal and fetal indications, gestation period, labor duration, increased pelvic floor resistance, fetal birth weight, fetal distress, and expected complications like perineal tears and lacerations. Mixed tears are lacerations, that can occur spontaneously or iatrogenically, as with an episiotomy, on the perineum, cervix, vagina, and vulva.[7]

According to the Cochrane Database of Systematic Reviews 2017, an episiotomy may lead to intra and post-delivery complications such as postnatal pain and discomfort, postpartum hemorrhage, infection, prolonged hospital stay, and may cause urinary incontinence for a long period. [8] It is necessary to change the practice, especially in developing countries for unnecessary obstetrical intervention, birth attendants should be properly trained and motivated for its application, where indicated.

This study was conducted to assess the complications associated with normal vaginal delivery and vaginal delivery with episiotomy and restrict the routine practice of episiotomy in deliveries to reduce intra and postnatal maternal complications.

MATERIALS AND METHODS

This observational cross-sectional study was conducted in Peshawar, Lady Reading Hospital, Gynae B labor ward from 1st November 2019 to 31st January 2020 after approval from Institutional Ethical Research Board (IREB). The women after giving consent with term pregnancy irrespective of parity were included. Those women, who refused to give consent, had bleeding disorders, mal-presentation, instrumental delivery, or an indication for cesarean section were excluded.

The sample size was 250 patients with a 78%[2] prevalence of episiotomy, calculated by using WHO sample size calculator version 2.0, the margin of error was 5.14% along with 95% CI. There were two groups (125 patients in each group). Non- probability convenience sampling technique was used. After taking the informed written consent, a structured proforma was filled immediately after delivery by the patients admitted to the labor room irrespective of their age and parity. For the patients who refused to fill proforma because of discomfort or pain, the period was extended till their discharge from the labor ward.

The patients were equally divided into two groups. Group A underwent normal vaginal delivery without episiotomy. While group B, the decision for mediolateral episiotomy on crowning to facilitate vaginal delivery, in a woman with any parity was taken to avoid immediate complications like perineal trauma, post-operative pain, and hematoma formation. Post-natal pain was assessed by using the nominal scale instead of the Visual Analog Scale (VAS) charts.[9]

For statistical data analysis, the statistical package of Social Sciences (SPSS) version 20 was used, and the results were presented as frequencies and percentages for qualitative variables such as parity status and complications. Mean and standard deviation was used for continuous variables like age, period of gestation, etc. Chi-square was used for categorical variables and the t-test for numerical variables with a P-value < 0.05 was considered statistically significant.

RESULTS

Out of the total of 250 patients (125 patients in each group), in Group A 120 patients, out of which 5 patients were excluded (2 patients developed fetal distress, 3 had labor dystocia) While in Group B total of 115 patients, out of which 10 patients were excluded (7 patients had cesarean due to labor dystocia and fetal distress while 3 had instrumental delivery). A total of 235 patients were assessed in the study.

as shown in table 1a and 1b no significant difference was observed in both groups. In group A, 96(80%) had spontaneous labor and 24(20%) induced, in group B, 97(84%) patients had spontaneous labor, and the rest were induced.

There was no significant difference in both groups regarding the para-urethral, vaginal, and cervical tears. There were significant differences in both groups regarding perineal tears and mixed tears, (combination of perineal, vaginal, or cervical tears) in group A there were just a few patients, perineal tears, and more mixed tears were observed (table2).

The maternal outcomes regarding post-delivery hematoma formation and prolonged stay in the hospital were not significantly different in both groups. Regarding post-delivery pain, the discomfort was observed in the few patients in the group A but the difference in outcome was not significant (table3).

DISCUSSION

The routine practice of episiotomy should be restricted in our population and only its application should be encouraged, where indicated. The results of our study demonstrate no sufficient notable difference regarding intra and post-operative immediate complications in both groups.

While comparing the mean difference in the maternal age, period of gestation, and pattern of labor between the two groups, no statistically significant difference in outcome was noted. In group 1, 96(0.80%) had spontaneous labor, and the rest were induced, while in group 2, 97(0.84%) patients had spontaneous labor and the rest

Table 1a: Quantitative Demographic Data (N = 235)

Features	Groups		t-test	P-value (%95 CI for difference)
	A	B		
	Mean ± SD	Mean ± SD		
Age in years	3.58 ± 22.04	3.7 ± 21.89	0.316	1.08-0.78-) 0.7524)
	1.01 ± 38	1.10 ± 41	0.000	0.7288-1.2712-) 7.264)

Table 1b: Qualitative Demographic Data (N = 235)

Features	Group		X^2 (1)	P-value
	A	B		
Parity				
Primigravida	84 (70)	77 (66)	0.252	0.616
>than p1	36 (30)	38 (33)		
Labor				
Spontaneous	96 (80)	97 (84)	0.756	0.400
Induced	24 (20)	18 (15)		

Table 2: Frequency of Different Tears in both Groups

Complications	Group		X^2 (1)	P-value
	A	B		
	n (%)	n (%)		
Para-urethral tear	Yes	2 (100)	0 (0)	0.164
	No	118 (50.6)	115 (49.4)	
Vaginal tears	Yes	6 (66.7)	3 (33.3)	0.340
	No	114 (50.4)	112 (49.6)	
Cervical tears	Yes	4 (57.4)	3 (42.9)	0.744
	No	116 (50.9)	112 (49.1)	
Perineal tears	Yes	9 (100)	0 (0)	0.003
	No	111 (49.1)	115 (50.9)	
Mixed tears	Yes	9 (81.8)	2 (18.2)	0.037
	No	111 (49.6)	113 (50.4)	

Table 3: Maternal outcome in terms of Hematoma formation, post-natal pain, and hospital stay in group A and B

Complications		Group		X^2 (1)	P-value
		A	B		
		n (%)	n (%)		
Post-delivery pain and discomfort	Yes	21 (17)	27 (23)	1.291	0.263
	No	99 (83)	88 (77)		
Hematoma formation: Prolong hospital stay (more than 24 hours)	Yes	8 (4.3)	5 (6.6)	0.604	0.571
	No	112 (95)	110 (93)		

were induced. A study conducted by Räisänen, S et al.[10] mentioned the common practice of episiotomy among primigravida (55% versus 12%, p≤0.001) and especially those, who were induced as compared to multigravida and with spontaneous labor (66% versus 53%, p=0.036).

Regarding the frequency of vaginal, cervical, and perineal tears, there was the least non-significant difference observed. The Argentine Episiotomy Trial Collaborative Group reported severe perineal trauma that was uncommon in both groups and was slightly less frequent in the restrictive group (1.2% vs. 1.5%). Although the frequency of perineal trauma was more in the restrictive group the complications like other perineal tears, post-delivery pain, and infection were less in the same group. Therefore, they strongly recommend the avoidance of routine use of episiotomy.[11]

The review published by Matern J[12] showed no significant differences in women sustaining perineal tears in two groups (6.1 % (7/115) in episiotomy versus 3.7% (9/243) in those not receiving episiotomy, p = 0.308.

Singh S, T. Thakur et al [13] also reported first-degree perineal tears (n=4805, 3.9%), second-degree perineal tears (n=1082, 0.9%), third and fourth-degree perineal tears (n=186, 0.2%) and cervical tear 0.08 percent in their study which is consistent with the results of our study. They also concluded that the risk of vaginal, cervical, and para-urethral tears was also approximately the same in both the routine and selective groups, except they reported an increase in the anterior tears (n=490, 0.4%) in the selective group[13]. In our study, the rate of vaginal, cervical, para-urethral, and mixed tears, were observed less frequently in women who received episiotomy. However, Vieira F et al [14] also mentioned that avoiding routine episiotomy favored the decreased chances of immediate and late complications, and the common practice of episiotomy does not prevent vaginal and perineal tearing.

Regarding post-delivery pain and hematoma formation, no significant difference was noted in both groups. While Homsi et al [15] observed the complications like increased blood loss, post-natal pain, edema, sometimes hematoma formation, infection, and dehiscence with the episiotomy is more as compared to those with the restricted group. Aziken ME et al[16] also mentioned increased post-natal perineal pain, damage to the Bartholin gland, and delayed wound healing in their study. It needs close attention to reduce the common practice of episiotomy and thus decrease the maternal morbidities

The benefits of avoiding the routine practice of episiotomy in also mentioned by Carroli G et al [17] who documented the decreased risk of less blood loss, perineal trauma, low frequency of postpartum perineal pain, hematoma formation, and the chance of infection.

While Baker et al in their study mentioned that routine episiotomy should be avoided to reduce the chance of unnecessary maternal and fetal complications[18]. The same findings were observed in a study done by Gun I et al[19] who reported that routine episiotomy application did not reduce the complications rates of urinary incontinence, perineal pain, and sexual dysfunction, and has no benefit to the newborn. However, the analysis of different studies did not demonstrate a clear difference between the perinatal outcome, duration of stay in the hospital, and maternal satisfaction level in both groups.

This study helped in understanding the patient's complications associated with the application of episiotomy which will help in conducting interventional studies. The limitation of this study was that it was a single-center study with a small sample size.

CONCLUSION

Based on the results of this study, it is concluded that episiotomy should be carried out, only when considered to be essential or when anticipating the chances of pelvic floor damage and its consequences like vaginal, para-urethral, and perineal tears. In our study, there was no significant difference in the outcome of patients in both groups. Moreover, the data regarding the routine practice of episiotomy in preventing complications is also unclear and needs further studies.

The routine practice of episiotomy should be discouraged to improve the well-being and quality of life of a woman. There should be proper antenatal counseling regarding the intra and post-natal complications with and without episiotomy. Training awareness programs can be frequently arranged regarding the benefits of normal vaginal delivery versus vaginal delivery with routine practice of episiotomy and its complications, especially for traditional birth attendants and healthcare workers and its routine practice should be strongly discouraged.

REFERENCES

1. Worku SA, Mitku YM and Getahun SA. Episiotomy Practice and its Associated Factor among Women Who Gave Birth at Public Health Institutions of Akaki Kality in Addis Ababa, Ethiopia. March 25, 2019; 16:318. https://doi.org/10.24105/2090-7214.16.318.
2. 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 1996. http://apps.who.int/iris/bitstream/10665/63167/1/WHO_FRH_MSM_96.24.pdf.
3. American College of Obstetricians-Gynecologists ACOG Practice Bulletin No. 165: Prevention and Management of Obstetric Lacerations at Vaginal Delivery. April 2016. Obstet Gynecol. 2016;128:e1e15.doi:10.1097/AOG.0000000000001523. [PubMed] [CrossRef] [Google Scholar]
4. Graham I, Carroli G, Davies C, Medves JM. Episiotomy rate varies worldwide: An update. 2017.
5. Pasc A, Navolan D, Pu-ca-iu L, Ionescu CA, Szasz FA, Carabineanu A, et al. A multicenter cross-sectional study of episiotomy practice in Romania. J Eval Clin Pract. 2019;25(2):306–311. doi: 10.1111/jep.13062. [PMC free article] [PubMed] [CrossRef] [Google Scholar] [Ref list]
6. Tefera T, Kebede B, Mekonen T. Prevalence of episiotomy and factors associated with the practice of episiotomy at Saint Paul's Hospital millennium medical college: a cross-sectional study. Ethiop J Reprod Health. 2019;11(3):8. [Google Scholar] [Ref list]
7. Ugwu EO, Iferikigwe ES, Obi SN, Eleje GU, Ozumba BC. Effectiveness of antenatal perineal massage in reducing perineal trauma and post-partum morbidities: A randomized controlled trial. J Obstet Gynaecol Res. 2018 Jul;44(7):1252-1258. [PubMed]
8. Cunningham FG, Grant MD. Fetal growth retard at I am

coming. Appleton and Lange. 1997;839-850.

9. Nager CW, Helliwell JP. Episiotomy increases perineal laceration length in primiparous women. Am J Obstet Gynecol. 2001 185(2):444–50. [PubMed] [Google Scholar]

10. Räisänen S, Vehviläinen-Julkunen K, Heinonen S. Need for and consequences of

11. episiotomy in vaginal birth: A critical approach. Midwifery (2010) 26(3) 348-356.

12. Routine vs selective episiotomy: a randomized controlled trial. Argentine Episiotomy Trial Collaborative Group. Lancet 1993; 342(8886-8887):1517–8. [PubMed] [Google Scholar]

13. Matern J. Episiotomy and the risk of severe perineal injuries among Korean women. Fetal Neonatal Med 2017 July; 30(14): 1745-1749.

14. Singh S, Thakur T, Chandhiok N, and Dhillon BS. Pattern of episiotomy use & its immediate complications among vaginal deliveries in 18 tertiary care hospitals in India. Indian J Med Res 2016 Apr; 143(4): 474–480.

15. Vieira F., Guimarães J., Souza M., Sousa P., Santos R., Cavalcante A. Scientific evidence on perineal trauma during labor: Integrative review. Eur. J.Obstet. Gynecol. Reprod. Biol. 2018;223:18–25.doi: 10.1016/j.ejogrb.2018.01.036. [PubMed] [CrossRef] [Google Scholar] [Ref list]

16. Homsi R, Daikoku NH, Littlejohn J, Wheeless CR. Episiotomy: risks of dehiscence and rectovaginal fistula. Obstet Gynecol Surv 1994; 49:803–8. [PubMed] [Google Scholar]

17. Aziken ME, Orhue AA, Onakewhor JU, Onuh S. Observation on the rates, benefits, and complications of episiotomy in a tertiary health institution. [Last accessed on 2020 Mar]; AnnBiomedSci. 2002 1:141–7. Available from: http://www.ncbi.nlm.nih.gov/sites/ [Google Scholar]

18. Carroli G, Mignini L. Episiotomy for vaginal birth. Cochrane Database Syst Rev. 2009 ;(1): CD000081. [PMC free article] (PubMed)Isabela Cristina Coutinho1Instituto de Medicina Integral Prof. Fernando Figueira, Women's Healthcare Centre, 50070-550, Recife, Pernambuco Brazil Find articles by Isabela Cristina CoutinhoInês Melo1Instituto de Medicina Integral Prof. Fernando Figueira, Women's Healthcare Centre, 50070-550, Recife, Pernambuco Brazil Find articles by Inês MeloLeila Katz1Instituto de Medicina Integral Prof. Fernando Figueira, Women's Healthcare Centre, 50070-550, Recife, Pernambuco Brazil

19. Baker PN, Kenny LC. Obstetrics by Ten Teachers 19th edition, published in 2011 by Hodder Arnold, an imprint of Hodder Education, an Hachette UK Company, 338 Euston Road. London NW1 3BH, ISBN-13.;978(0):340.

20. Gün I, Doğan B, and Özdamar O. Long- and short-term complications of episiotomy. Turk J Obstet Gynecol 2016 Sep; 13(3): 144–148.

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Following authors have made substantial contributions to the manuscript as under

Wahab S:	Concept, Design, and drafting of initial manuscript
Kamran Q:	Acquisition and critical review
Karim R:	Analysis and interpretation of data
Khan R:	Data collection
Pervaiz M:	Bibliography and proofreading

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.