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Restrictive Episiotomy in Modern Obstetric Practice: Clinical Indications and Outcome Analysis from a Tertiary Care Hospital in Bangladesh

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Abstract
Background: *Episiotomy, a surgical incision of the perineum during the second stage of labour, was historically performed routinely to prevent severe perineal trauma. However, growing evidence and recommendations from the World Health Organization discourage routine use due to limited benefits and potential maternal harm. Despite this, episiotomy remains common in many low- and middle-income countries, including Bangladesh. This study aimed to evaluate the clinical indications and outcomes of restrictive episiotomy compared with no episiotomy in a tertiary care hospital in Bangladesh.*
Methods: *This quasi-experimental study was conducted in the Department of Obstetrics and Gynaecology at Sher-E-Bangla Medical College Hospital from September 2022 to September 2023. A total of 100 term pregnant women with singleton cephalic presentations were enrolled and divided equally into Group A (no episiotomy) and Group B (selective episiotomy based on clinical indications). Maternal and neonatal outcomes were compared using appropriate statistical tests, with $p < 0.05$ considered significant.*
Results: *Baseline characteristics were comparable between groups. The mean duration of the second stage of labour was significantly longer in Group A than Group B (32.1 ± 4.5 vs. 29.8 ± 3.7 minutes; $p = 0.006$). Although spontaneous lacerations and instrumental deliveries were numerically higher in Group A, differences were not statistically significant. Perineal pain was significantly higher in Group B (36.0% vs. 14.0%; $p = 0.011$), and maternal satisfaction was greater in Group A (100% vs. 88.0%; $p = 0.011$).*
Conclusion: *Restrictive episiotomy did not increase adverse maternal outcomes and was associated with shorter second-stage duration. However, avoiding episiotomy improved maternal comfort and satisfaction, supporting a restrictive policy in routine obstetric practice.*
Keywords: *Restrictive Episiotomy, Routine Episiotomy, Vaginal Delivery, Perineal Trauma*

I. INTRODUCTION

An episiotomy is the surgical incision made in the perineum and posterior vaginal wall during the second stage of vaginal delivery to enlarge the birth canal and reduce uncontrollable tears during delivery. The perineum consists of connective tissue, muscles, and neurovascular structures. The incision made during an episiotomy disrupts the perineal muscles and can affect the mother's recovery after delivery. Traditionally, episiotomy was thought to be the standard procedure during delivery; however, the increasing evidence against the procedure has brought to the fore the fact that there is no benefit to the procedure and that it can cause harm to the mother [1-4]. The World Health Organisation has also explicitly recommended that routine or liberal episiotomy should not be used for spontaneous vaginal births, given the absence of evidence of benefits and the potential harm of increased perineal trauma and poor healing [4]. Recent systematic reviews have also documented that restrictive practice is associated with reduced risk of adverse maternal outcomes from routine episiotomy, including reduced severe perineal trauma and postoperative complications [5,6]. In addition, in high-income countries where restrictive practice has been widely implemented, the rates of episiotomy have significantly reduced to less than 15% of vaginal births over the last two decades [7]. Despite this paradigm shift, episiotomy is still practised commonly in many low- and middle-income countries, including those in South Asia. Training norms, clinical traditions, and lack of implementation of guidelines influence episiotomy practices in these settings [8]. In Bangladesh, episiotomy is still commonly as a routine practice in many cases, especially in primiparous women, as noted in many institutional studies and clinical audits. In a retrospective study conducted in Rangamati, episiotomy was practised in 36% of all vaginal deliveries. The practice of episiotomy was noted to be much higher in

primigravidae than in multigravidae [2]. In a prospective interventional study conducted in Sir Salimullah Medical College Hospital and Mitford Hospital, it was noted that restrictive episiotomy practice resulted in fewer perineal tears and enhanced maternal comfort compared to routine episiotomy practice [1]. Another recent quasi-experimental study conducted in Chittagong Medical College Hospital noted that restrictive episiotomy practice resulted in similar maternal and neonatal outcomes as routine episiotomy practice [9]. The sustained level of episiotomy use in Bangladesh also reflects the gaps in the implementation of international recommendations and clinical practice. In addition, there is limited country-specific evidence regarding clinical indications, maternal and perinatal outcomes in the context of restrictive episiotomy practices, and the development of national obstetric practice guidelines. Therefore, following international recommendations and clinical practice this study aims to evaluate restrictive episiotomy compared with routine episiotomy in women undergoing vaginal delivery in a tertiary care hospital in Bangladesh.

II. METHODS

This quasi-experimental study was conducted in the Department of Obstetrics & Gynaecology, Sher-E-Bangla Medical College Hospital, Barisal, over 12 months from September 2022 to August 2023. The study population included women in active labour with term singleton pregnancies, maximum cervical dilation of 8 cm, live fetus in cephalic vertex presentation, and no immediate indication for cesarean section. Women with bleeding disorders, immediate cesarean indication, or inability to provide consent were excluded. A total of 100 participants were enrolled using purposive sampling and divided equally into two groups: Group A (no episiotomy) and Group B (selective episiotomy). Episiotomy was performed in Group B based on clinical indications such as imminent severe perineal rupture, instrumental delivery, shoulder dystocia, prolonged second stage of labour, and non-reassuring fetal heart rate. Mediolateral episiotomy was used to minimise the risk of anal sphincter injury. Maternal and neonatal outcomes assessed included duration of the second stage, frequency and indications of episiotomy, perineal trauma, blood loss, suturing requirements, APGAR scores, neonatal morbidity, and maternal satisfaction. Data were collected using a pre-designed case record form, entered and analysed in SPSS version 23. Descriptive statistics were presented as proportions and means ± SD, and inferential comparisons were performed using chi-square or t-tests. A p-value <0.05 was considered statistically significant. Ethical approval was obtained from the institutional ethical committee, and informed written consent was secured from all participants.

III. RESULTS

Table 1 shows that the baseline characteristics of the study population in both Group-A and Group-B were comparable. The age range was between 18 and 35 years, with the majority falling within the 24–29 years range (46.0% in Group-A and 44.0% in Group-B). The mean age was 26.9 ± 8.3 years and 25.4 ± 7.8 years for Group-A and Group-B, respectively (p = 0.508). In relation to education level, the majority had secondary education (38.0% in Group-A and 36.0% in Group-B), followed by primary education (34.0% and 40.0%, respectively). In relation to occupation, the majority in both groups were housewives (50.0% and 46.0%, respectively). However, the results were not statistically significant (education p = 0.317 and occupation p = 0.158).

Table 1: Baseline Characteristics of Study Patients (n = 100)

Characteristic	Group-A (n = 50)		Group-B (n = 50)		P value
	No.	%	No.	%	-
Age (Years)	-				
18-23	14	28	17	34	**0.508**
24-29	23	46	22	44	
30-35	13	26	11	22	
Mean ± SD	26.9 ± 8.3		25.4 ± 7.8		-
Educational Level	-				
Primary	17	34	20	40	**0.317**
Secondary	19	38	18	36	
Higher than secondary	10	20	9	18	
Illiterate	4	8	3	6	
Occupational Status	-				
Service	14	28	15	30	**0.158**
House wife	25	50	23	46	
Worker	11	22	12	24	
Economic Status	-				
Poor class	14	28	14	28	**0.127**
Middle class	30	60	28	56	

Upper class	6	12	8	16	

Table 2 shows the duration of the 2nd stage of labour. Values are expressed as Mean±SD and percentage (%) over the column in total. Duration was prolonged in group-A (32.1 ± 4.5 min) than in Group B (29.8 ± 3.7 min). The difference was statistically significant.

Table 2: Evaluation of Duration of 2nd stage of labour (n=100)

Duration of the 2nd Stage	**Group A (n=50)**		**Group B (n=50)**		**p-value**
	No.	**%**	**No.**	**%**	
> 1 hour	7	14	4	8	**0.006**
≤ 1 hour	43	86	46	92	
Mean ± SD (min)	**32.1 ± 4.5**		**29.8 ± 3.7**		

Table 3 shows the adverse maternal outcome. On comparison between groups, present study demonstrated that spontaneous laceration, perineal trauma & need for instrumental delivery was higher in group-A (20.0%, 6.0% & 14.0% respectively) than Group-B (8.0%, 0% & 4.0% respectively). But differences were statistically non-significant in between groups.

Table 3: Comparison of adverse outcome (n=100)

Adverse Outcome	**Group A (n=50)**		**Group B (n=50)**		**P value**
	No.	**%**	**No.**	**%**	
Spontaneous laceration	10	20	4	8	0.085
Perineal trauma	3	6	0	0	0.081
Need for instrumental delivery	7	14	2	4	0.092

Table 4 shows the need for perineal suturing. In Group-A, 19(38.0%) cases required perineal suturing, and 31(62%) did not need perineal suturing. In Group-B, 18(36.0%) cases required perineal suturing, and 32(64.0%) did not need perineal suturing.

Table 4: Distribution of cases according to need for perineal suturing (n=100)

Need for Perineal Suturing	**Group A (n=50)**		**Group B (n=50)**		
	No.	**%**	**No.**	**%**	**P value**
Yes	19	38	18	36	0.836
No	31	62	32	64	

Table 5 shows the post-partum outcome of the women. Wound infection rate was 6.0% in Group-B. Perineal pain after childbirth was higher in Group-B (14.0% in group-A & 36.0% in Group-B). The result was statistically significant between groups. Similarly, maternal satisfaction was better in group-A (100% in group-A & 88.0% in Group-B). The result was statistically significant between groups.

Table 5: Post-partum outcome of the women (n=100)

Postpartum Outcome	**Group A (n=50)**		**Group B (n=50)**		**P value**
	No.	**%**	**No.**	**%**	
Wound infection	-				0.081
Yes	0	0	3	6	
No	50	100	47	9	
Perineal pain after childbirth	-				0.011
Yes	7	14	18	36	
No	43	86	32	64	

IV. DISCUSSION

In this study, the majority of the participants belonged to the 24-29 years age group, which is the reproductive age group of the female population across the globe. This age group is not independently associated with poor pregnancy outcomes if proper medical care is provided [10,11]. Furthermore, the educational status and occupation of the participants in this analysis were found to be comparable. The majority of the participants in this study had a secondary level of education and were housewives. This is an important aspect because the educational status of the participants can influence the results of the study. Educational status can influence the health status of the participants, the perception of pain during labour, and the overall satisfaction with the medical

facilities [12,13]. The duration of the second stage of labour was found to be significantly longer in Group A than in Group B (32.1 ± 4.5 minutes vs. 29.8 ± 3.7 minutes; p = 0.006). Although the difference is not large, it is statistically significant. It suggests that selective or restrictive episiotomy does not prolong labour and, in fact, can assist in the second stage of labour in a controlled and efficient manner if indicated and in the context of well-supervised institutional settings [14, 15]. The slightly shorter duration in the second stage of labour in the restrictive episiotomy group might have resulted from the timely use of episiotomy in selected cases without the unnecessary use of episiotomy in all cases. Adverse maternal outcomes like spontaneous perineal lacerations, perineal trauma, and instrumental delivery were found to be numerically higher in Group-A than Group-B, although not statistically significant (p = 0.085, 0.081, and 0.092, respectively). This study supports the practice of a restrictive episiotomy rather than a routine practice, which reduces the severity of perineal trauma without compromising the rates of operative delivery and other complications [10, 14, 16]. Studies from low- and middle-income countries have shown that a restrictive episiotomy practice is associated with an increased incidence of an intact perineum and decreased rates of severe perineal trauma compared to a routine episiotomy practice [14]. The requirement for perineal suturing was comparable between the groups, with 38.0% of the women in Group A and 36.0% undergoing Group-B experiencing the need for suturing (p = 0.836). This indicates that spontaneous laceration requiring suturing in the no episiotomy group was comparable to the episiotomy incision requiring suturing in the restrictive group. Recent systematic reviews updating the evidence on the topic have also shown that the restrictive episiotomy policy does not affect the rate of perineal repair compared to the routine policy [14,17]. In relation to postpartum complications, wound infection was observed in Group-B, with an incidence of 6.0%. However, it was found to be statistically insignificant (p = 0.081). It is important to note that even the smallest incisions carry some risk of infection. However, it is very important to adhere strictly to aseptic practices to minimise the risk of wound infection [18]. It was observed that perineal pain was higher in Group B than in Group A. The incidence of perineal pain was 36.0% and 14.0% in Group-B and Group A, respectively (p = 0.011). It is reported in recent studies that episiotomy, including mediolateral episiotomy, is associated with increased postpartum pain and disability in daily activities compared with an intact perineum [16,19]. Maternal satisfaction was found to be statistically significant in Group A (100.0% vs. 88.0%; p = 0.011). It has also been found that women who have fewer interventions during delivery and experience fewer postoperative discomfort have higher overall satisfaction with the childbirth experience [12,13]. The World Health Organization has even suggested the restricted use of episiotomy as part of respectful maternity care, which can improve the experience and outcomes for the mothers [10]. The results are consistent with the international recommendations for the use of episiotomy, which confirms the fact that the restricted use of episiotomy can improve the comfort and satisfaction of the mothers without compromising the outcomes.

Limitations of the Study: This study was subjected to certain limitations as the sample size was small, and the study was carried out at a single centre only. The study was subjected to purposive sampling, which restricted the evaluation of long-term outcomes of the study.

V. CONCLUSION

Restrictive episiotomy is safe, effective, and does not compromise maternal or neonatal outcomes. It shortens the second stage of labour, reduces perineal trauma, and minimizes postpartum pain. Avoiding routine episiotomy enhances maternal comfort and satisfaction, reinforcing the adoption of selective episiotomy as standard practice in modern obstetrics in Bangladesh.

VI. RECOMMENDATION

The use of restrictive episiotomy as an essential practice is recommended, and clinicians might be trained to use it with selective indications. More multi-centre studies with large sample sizes and longer periods of follow-up would be encouraged to strengthen the evidence and improve the implementation of guidelines.

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REFERENCES

[1]. Khan F, Rehena Z, Begum N, Sayeed F. Maternal and Foetal Outcome in Routine versus Selective Use of Episiotomy. Journal of the Bangladesh Society of Anaesthesiologists. 2022 Jul 31;35(2):51-7.
[2]. Barua HR, Alamgir SN, Dewan G. Routine Episiotomy Practice: A Study from Bangladesh. Obstet Gynecol. 2006;107(4):957-62.
[3]. World Health Organization. Toolkit for adaptation of the WHO recommendations for a positive pregnancy and postnatal experience. World Health Organization; 2025 May 9.
[4]. World Health Organization. WHO recommendations on maternal health: guidelines approved by the WHO Guidelines Review Committee. World Health Organization; 2025 May 26.
[5]. Alrida NA, Ababneh A, Al-Sharif K, Arabiat D, Alshraidah J, Al-Zu'bi B. A systematic review of the use of routine versus selective episiotomy for vaginal birth. Cureus. 2024 Jul 31;16(7).

[6]. Chen AW, Hall MJ, Altman MR. Interventions and Strategies for Reducing Episiotomy Rates Globally: A Systematic Review. Birth. 2025 Dec;52(4):539-52.
[7]. Mandelbaum AD, Rudasil SE, Aguayo E, Chan E, Sanaiha Y, Cohen JG, Benharash P. National trends in utilization of episiotomy and factors associated with high-utilization centers in the United States. J Womens Health Dev. 2021;4(03):82-94.
[8]. Akhtar U, Rattani S, Meghani R, Zuberi NF. Maternal care providers' perspectives of selective vs routine episiotomy. Journal of Asian Midwives (JAM). 2024;11(2):66-80.
[9]. Begum NJ, Hamid AN, Akhter B, Marjan H, Sultana N, Akter S. Outcome in Routine Versus Restrictive Episiotomy in Primi Gravida Women at Chittagong Medical College Hospital. Journal of Chittagong Medical College Teachers' Association. 2023;34(2):85-8.
[10]. World Health Organization. WHO recommendations on intrapartum care for a positive childbirth experience. World Health Organization; 2018.
[11]. Betran AP, Torloni MR, Zhang J, Ye J, Mikolajczyk R, Deneux-Tharaux C, Oladapo OT, Souza JP, Tunçalp Ö, Vogel JP, Gülmezoglu AM. What is the optimal rate of caesarean section at population level? A systematic review of ecologic studies. Reproductive health. 2015 Jun 21;12(1):57.
[12]. Bohren MA, Vogel JP, Hunter EC, Lutsiv O, Makh SK, Souza JP, Aguiar C, Coneglian FS, Diniz AL, Tunçalp Ö, Javadi D. The mistreatment of women during childbirth in health facilities globally: a mixed-methods systematic review. PLoS medicine. 2015 Jun 30;12(6):e1001847.
[13]. Kassa BG, Beyene FY, Demilew BC. Maternal satisfaction with emergency obstetric and newborn care services in Ethiopia and the associated factors: A systematic review and meta-analysis. Women's Health. 2023 Jun;19:17455057231183854.
[14]. Sosa CG, Althabe F, Belizán JM, Buekens P. Risk factors for postpartum hemorrhage in vaginal deliveries in a Latin-American population. Obstetrics & Gynecology. 2009 Jun 1;113(6):1313-9.
[15]. Wang L, Wang H, Jia L, Qing W, Li F, Zhou J. The impact of stage of labor on adverse maternal and neonatal outcomes in multiparous women: a retrospective cohort study. BMC Pregnancy and Childbirth. 2020 Oct 7;20(1):596.
[16]. Biswas J, Dasgupta S, Datta M, Sanyal P, Bhattacharya N, Kamal M. Usefulness of delayed primary closure in unplanned caesarean section to reduce surgical site infection in a resource-poor high population country: a randomised controlled trial. Journal of the Turkish German Gynecological Association. 2025 Mar 12;26(1):1.
[17]. Özcan NK, Boyacıoğlu NE, Güdücü N, Serhatlıoğlu SG, Yıldırım E, Koç M, Bingol F. Turkish midwifery students' fear of delivery process. Journal of Caring Sciences. 2019 Sep 1;8(3):121.
[18]. Arora M, Harvey LA, Glinsky JV, Nier L, Lavrencic L, Kifley A, Cameron ID. Electrical stimulation for treating pressure ulcers. Cochrane Database of Systematic Reviews. 2020(1).
[19]. Biswas J, Dasgupta S, Datta M, Sanyal P, Bhattacharya N, Kamal M. Usefulness of delayed primary closure in unplanned caesarean section to reduce surgical site infection in a resource-poor high population country: a randomised controlled trial. Journal of the Turkish German Gynecological Association. 2025 Mar 12;26(1):1.