Trends and Determinants of Episiotomy at The University of Nigeria Teaching Hospital (Unth), Enugu, Nigeria

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ABSTRACT:
BACKGROUND: Episiotomy is the most commonly performed obstetric procedure. The indications and efficacy are poorly established and its practice has remained controversial.
OBJECTIVE: To determine the rate and the determinants of episiotomy in the parturients at the UNTH, Enugu.
METHODS: A five year retrospective review of episiotomy at UNTH Enugu between 1st January ,2000 and 31st December,2004 .
RESULTS: Out of 3032 vaginal deliveries, 1201 women had episiotomy during vaginal delivery, giving a rate of 39.6%. The rate fluctuated between 38.7% in 2000 to 32.7% in 2004.The risk of receiving episiotomy is significantly higher among primigravidae than multigravidae [OR=10.92,(95%CI=8.98,13.28].
Similarly, macrosomia(birth weight>4kg) significantly increases the risk of episiotomy[OR=0.096, (95%CI=0.06,0.15]. Women who had instrumental or destructive vaginal delivery are significantly more likely to receive episiotomy than those who had spontaneous vaginal delivery[OR=0.13 (95%CI=0.07,0.26]. The postpartum blood loss is significantly higher among women that received episiotomy than those who did not[t=42.161, P>0.0001].
CONCLUSIONS: The rate of episiotomy in UNTH, Enugu is high. Primigravidity, macrosomia and instrumental deliveries are factors associated with increased risk of episiotomy. Knowledge of these risk factors will guide in predicting episiotomy among paturients in labour ward.
KEYWORDS: Episiotomy, Trends, determinants, Enugu-Nigeria.

Date Accepted for Publication: 15th June, 2012
NigerJMed 2012:304-307

INTRODUCTION

An episiotomy, otherwise known as "relaxing incision"[1] is the surgical incision of the perineum made to increase the diameter of the vulval outlet in the 2nd stage of labour to facilitate vaginal delivery[1,2]. It is the most commonly performed obstetric procedures[3,4]. Despite this fact, the indications and effectiveness of episiotomy remain poorly established [3,5]. Episiotomy dates back to 1741[6], but its practice has also remained controversial[5,7]. Current evidence supports the restrictive use of episiotomy over routine use[8,9]. This is because the restrictive episiotomy is associated with less posterior perineal trauma, less need for surgical repair and fewer complications in terms of healing[8-10].

Episiotomy is commonly indicated where perineal tears appear inevitable during 2nd stage of labour, shortening of 2nd stage of labour when there is fetal distress and presenting part is already in the perineum, operative vaginal delivery, assisted breech delivery, in occipitoposterior position of the head, prevention of fetal intracranial injury in the delivery of preterm babies[11], previous perineal reconstructive surgery and previous pelvic floor surgery[12].

There is paucity of literature on episiotomy from Nigeria. Thus, most reports on episiotomy are from developed countries. There are wide variations in rates of episiotomy around the world and there is no uniform policy for episiotomy[13-15]. The best guide for episiotomy requires a high level of surgical judgment and common sense[7,9]. This will prevent maternal discomfort and morbidity in the puerperium and sexual dysfunction later[9].

Important variables for episiotomy use include, type of incision and techniques for repair[9]. An episiotomy must be performed at the place and repaired properly within a short time after delivery as possible[16]. The associated risk factors are primigravidity, macrosomia, vaginal breech deliveries, and instrumental deliveries.

Episiotomy appears to be increasingly being performed at the UNTH, Enugu. There is thus need to determine the trend and determinants of episiotomy among paturients who present for labour in the hospital.

METHODS

A 5-year retrospective study of vaginal deliveries at the maternity complex of the UNTH Enugu from January 1st 2000 to December 31st 2004 was carried out. The parturients who had episiotomy were identified from the delivery register and the patient's case notes and relevant data were collected. The information extracted included parity, gestational age at delivery, type of vaginal delivery, birth weight of the newborn and Apgar score at one minute. The findings were analyzed by descriptive and inferential statistics using statistical package for social science (SPSS) version 12. The chi-square test was used to evaluate differences between categorical variables and odds ratios were calculated with 95 percent confidence intervals. P-value less than 0.05 was considered statistically significant.

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The department protocol at the maternity complex UNTH was restrictive episiotomy. Episiotomy is usually given by the attending midwife in uncomplicated vaginal deliveries but only when indicated. The doctors on call (Residents and consultants) perform the operative vaginal deliveries and took deliveries of complicated pregnancies. The mediolateral episiotomy was routinely used and episiotomy repairs were carried out by the doctors on call.

There were 3032 vaginal deliveries during the study period, 1201 parturients had episiotomy giving an overall rate of 39.6%. The rate of episiotomy varied between 38.7% in 2000 to 32.7% in 2004(Table 1). Seven hundred and eighty nine (26%) of the parturients were primigravidae and 79.1% (n=624) of this group of women received episiotomy. Most of the parturients 1153 (38%) were between para 1-2, while 364 (11.9%) were grand-multiparous women. One thousand nine hundred and ten (63%) deliveries were at term, 180 (5.9%) were post term, while 910 (30%) were preterm . The gestational age at delivery in 32(1.1%) women were not recorded. Two thousand eight hundred and eighty two(95.1%) of the babies had normal birth weight(<4kg) while 150 (24.9%) were macrosomic (>4kg). Spontaneous vertex vaginal deliveries were 2969 (97.9%) while instrumental and destructive vaginal deliveries accounted for 2.1% (n=63). Two thousand four hundred and fifty (80.8%) of the babies established good respiration at birth and were normal, 455 (15%) babies had birth asphyxia and 127 (4.2%) were stillborn.

The risk of episiotomy was significantly higher in primigravidae than multigravidae [OR=10.92 (95%CI=8.98, 13.28)]. Similarly, macrosomia (birth weight >4kg) significantly increases the risk of episiotomy[OR=0.096(95%CI=0.06, 0.15)]. Instrumental/destructive vaginal deliveries are significantly associated with higher risk of episiotomy than spontaneous vaginal deliveries [OR=0.13 (95%CI=0.07, 0.26)] (Table 2). Postpartum blood loss was significantly higher in women who received episiotomy than those who did not [t=42.161, p<0.0001] (Table 3).

Table 1: Trends of Episiotomy at UNTH

Year	Vaginal Deliveries	Number of Episiotomies	Episiotomy Rate
2000	728	282	38.7
2001	634	238	37.5
2002	438	145	33.1
2003	687	258	37.67
2004	545	178	32.7
5 years	3032	1201	39.6

Table 3: Postpartum Blood Loss; Episiotomy Versus No Episiotomy

	Episiotomy	No Episiotomy
Mean	349.000	328.00
SD	14.300	12.800
SEM	0.413	0.299
N	1201	1831

t = 42.1607; df = 3030; SE = 0.498; P< 0.0001 (significant)

Table 2: Determinants of Episiotomy at UNTH, Enugu

Parity	Episiotomy	No Episiotomy	Total	X^2	P-value
Primigravidae (Para 0)	624 (79.1%)	165(20.9%)	789		
Multigravidae (Para >1)	577(25.7%)	1666 (74.3%)	2243		
Total	1201	1831	3032	692.610	0.001
Birth Weight					
< 4kg	1072(37.2%)	1810 (62.8%)	2882		
> 4kg	129 (86.0%)	21 (14%)	150		
Total	1201	1831	3032	139.934	<0.0001
Mode of vaginal delivery					
Spontaneous vaginal delivery (SVD)	1149	1820	2969		
Instrumental/Destructive vaginal delivery	52	11	63		
Total	1201	1831	3032	47.750	<0.0001

DISCUSSION

The episiotomy rate in this study is as high as 39.6%. This is comparable to the 30% recorded in Europe[14], 39.1% reported from Port Harcourt[13], 46.6% reported from Benin[17], 54.9% reported from Lagos[18] and 35.6% reported from Zaria[19]. It is higher than the 10% recommended by world Health Organization[20], and the 10 30% rate found in a recent survey of maternity units in the United Kingdom[21].

In this study, episiotomy was more frequently performed in primigravidae (79.1%) and this finding is comparable to results from Port Harcourt (77.1%)[13], Lagos[18], Zaria[22] all in Nigeria.

The mediolateral episiotomy has been favoured and practiced in this centre. This is similar to that reported in Ibadan, Port Harcourt and Benin city studies, all in Nigeria[13,18]. The departmental protocol at the maternity complex of the UNTH was restrictive episiotomy. The high episiotomy rate obtained in primigravidae may suggest that midwives may likely be performing episiotomy in this group of paturients liberally rather than indicated, contrary to the hospital's labour ward protocol. Nevertheless, primigravidae obviously have certain associated factors that may increase the risk of episiotomy in them such as the rigidity of the perineum and the likely inevitability of the perineum to tear and the fact that the perineum has not been tested before in this group of women.

Besides primigravidity, macrosomia was also identified as a significant risk factor for episiotomy in Enugu. This could have resulted from the fact that a large fetal size may likely be associated with a large fetal head which could overdistend the perineum during 2nd stage of labour with consequent impending perineal tear, indicating an episiotomy. Since macrosomia significantly predicts episiotomy, it then implies that midwives and residents that attend to deliveries should be adequately prepared and ready for episiotomy in paturients with macrosomia allowed vaginal deliveries. This finding is in agreement with a previous study from this centre[7].

Instrumental/destructive vaginal deliveries in this study were also identified risk factors for performing episiotomy. There is an old tradition in this centre of routine episiotomy in all instrumental and destructive vaginal deliveries. The parturients who had episiotomy during vaginal delivery had significantly higher postpartum blood loss than those who did not have episiotomy. There may be need to find out if there were delays before episiotomy repair in the centre, as this could have accounted for significantly higher blood loss. The technique for the procedure may also need to be appraised too. Thus a prospective design in this direction may help unravel the cause of the significantly higher blood loss. However, it is important from this finding that anaemia should be watched out for and excluded in women who received episiotomy before they are discharged.

The limitation of this study is the retrospective approach to the study. A properly designed prospective study is needed to adequately evaluate episiotomy rates in our centre since other factors may influence the practice of episiotomy in our centre.

CONCLUSION

The rate of episiotomy in UNTH, Enugu is high. The high rate has consistently been sustained in the hospital. Primigravidity, macrosomia and instrumental/destructive vaginal deliveries were identified risk factors for episiotomy in the hospital. Medical education about these risk factors will assist in predicting and administering episiotomy to paturients in labour.

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