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ABSTRACT

Background: Given considerable evidence that routine episiotomy increases maternal morbidity and without evidence to support maternal or neonatal benefit, has episiotomy use changed among health care providers? To date, very limited information exists relating to the past and current practice of episiotomy in many developing countries.

Objective: To determine the prevalence of episiotomy at Aba in South Eastern Nigeria, examine factors influencing the performance of episiotomy and document complications associated with the procedure.

Design: A hospital based retrospective study.

Setting: The Abia State University Teaching Hospital (ABSUTH), Aba in South Eastern Nigeria, from January 2001 to December 2005.

Subjects: Four thousand, one hundred and seventy two mothers who delivered vaginally within the study period.

Results: There were 1877 episiotomies, for an episiotomy rate of 45%. Ninety per cent of the primigravid parturients had episiotomy. Women undergoing episiotomy were younger (mean age 24.7 years; range 16-37) than women without episiotomy (mean age 28.5 years, range 20-43). When controlled for parity and maternal age, other risk factors were occipito-posterior position, vacuum extraction, forceps delivery, vaginal breech delivery, and a history of Caesarean section. Episiotomy use was also associated with major perineal lacerations and increased length of hospital stay.

Conclusion: The episiotomy rate of 45 per 100 vaginal deliveries in this study is obviously higher than evidence-based recommendations for optimal patient care. A policy of systematic reduction in the incidence of episiotomy can be pursued in this hospital. Greater attention needs to be paid to selection of women to undergo episiotomy.

INTRODUCTION

The surgical incision made into the perineum- the region between the vagina and the anus- to widen the vaginal opening for delivery was introduced as an obstetric procedure in the eighteenth century (1,2). By the 1970s, episiotomy rates were as high as 80% in various parts of the world (1-3). Although rates

of episiotomy in parts of the world have decreased in recent years, it is still one of the most commonly performed procedures in obstetrics (1-6).

Historically, the procedure has been indicated in circumstances such as abnormal labour progression, non-reassuring foetal heart rate pattern, vacuum or forceps-assisted vaginal delivery, and shoulder dystocia (1,7). It also was believed to hasten the

second stage of labour and reduce the risk of spontaneous perineal tearing, subsequent pelvic floor dysfunction, urinary and faecal incontinence, and sexual dysfunction (1,7). On the other hand, studies carried out over the last 20 years show that common indications for episiotomy were based on limited data (1-6). Additionally, there was a general underestimation of potential adverse consequences associated with the procedure, including extension to a third or fourth degree tear, unsatisfactory anatomical results, increased blood loss, anal sphincter dysfunction, perineal pain and painful sex (1-6). Records suggest that women who have an episiotomy do not have significantly improved labour, delivery, and recovery compared with those who do not have one (3-5). Unfortunately, by traditional obstetric practice, women are not necessarily informed of the specific risks and benefits associated with performing episiotomy, and rarely is written consent obtained, somehow abrogating the standard set for every other surgical procedure. Recent reviews have therefore conclusively determined that the routine use of episiotomy should be abandoned and that perineal trauma is decreased when episiotomy is not performed (6,8). Nonetheless, the optimal rate of episiotomy for maximising maternal and foetal well-being is not known. The objectives of the present study were as follows: (i) to determine the rate of episiotomy among women delivering at the Abia State University Teaching Hospital, Aba in Nigeria; (ii) to examine the risk factors for episiotomy in the women; (iii) to document some complications associated with episiotomy in the women. We believe that the results would prove valuable for making recommendations regarding the appropriate use of episiotomy during vaginal delivery.

MATERIALS AND METHODS

A retrospective review was performed on all vaginal deliveries at the maternity unit of the Abia State University Teaching Hospital (ABSUTH) between January 2001 and December 2005. All cases of Caesarean deliveries, and laparotomy following uterine rupture were excluded.

During the period, the hospital had no clear policy on episiotomy; most accoucheurs who conducted deliveries gave episiotomy if they considered that the perineum was too tight or for other obstetric reasons. Midwives performed most

deliveries and episiotomies, but the repairs were done by physicians usually of the cadre of a house officer or a junior resident (less than two years in training). Episiotomy in this study refers to a mediolateral episiotomy as this is the type offered by midwives and physicians in this institution.

The case notes of the patients were obtained from the medical records department and analysed to determine the proportion of parturients that had episiotomy, the documented indications for the episiotomy, and the documented complications of the episiotomy. Also analysed were the risk factors for episiotomy such as parity, maternal age, instrumental delivery, breech delivery, occipito-posterior position, and a history of Caesarean section.

Using Epi Info version 6, statistical comparisons were made using the Chi square test with Yates correction or Fisher's exact test as appropriate. P-value of < 0.05 was considered significant.

Ethical approval was sought and obtained from the research and ethics committee of Abia State University Teaching Hospital.

RESULTS

The episiotomy rate in this series was 45 per 100 patients. The results of the analysis of factors influencing the performance of episiotomy in the women are presented (Table 1). Ninety per cent of primigravid women had episiotomy. Nulliparity was a significant risk factor for episiotomy ($p < 0.001$). Women undergoing episiotomy were younger (mean age 24.7 years; range 16-37) than women without episiotomy (mean age 28.5 years; range 20-43). Breech delivery was associated with a significantly higher incidence of episiotomy compared to vertex delivery $p < 0.001$. Ten out of the eleven women who had forceps delivery had episiotomy. Similarly, vacuum delivery was associated with a higher incidence of episiotomy compared to vertex delivery. Episiotomy was performed in sixty three out of the eighty two women who had vaginal birth after a previous Caesarean section. The incidence of extended episiotomies creating third degree and fourth degree perineal tears was analysed. Forty two (2.2%) mothers had third degree tear, and 10 (0.5%) had fourth degree tear requiring referral to a consultant or senior registrar with experience for repair. Fifty two (2.8%) mothers had breakdown of episiotomy repairs, requiring secondary re-suturing.

Table 1

Factors influencing the practice of episiotomy

Variable	Had no episiotomy		Had episiotomy		RR (95% CI)	P-value
	No.	(%)	No.	(%)		
Mean age (mean range)	28.5 (20-43)		24.7 (16-37)			
Age in years						
<19	8	3.6	214	96.4		
20-24	100	8.3	1100	91.7		<0.001
25-29	1506	88.2	202	11.8		
30-34	572	76.3	178	23.7		
≥35	483	72.5	183	27.5		
Parity						
0	127	10.0	1150	90.0		<0.001
1-2	1115	64.2	623	35.8		
3-4	696	91.7	63	8.3		
≥5	359	89.8	41	10.2		
Obstetric factors						
Vertex delivery	2178	59.9	1460	40.1		
Breech delivery	26	40.0	39	60	1.50 (1.11-2.02)	<0.001
Occipito-posterior position	1	4.5	21	95.5	13.17 (1.94-89.40)	<0.001 Yates corrected
Vacuum extraction	71	15	284	85	2.99 (2.43-3.69)	<0.001
Forceps delivery	1	9.1	10	90.9	6.59 (1.02-42.68)	<0.001 Fisher's exact
Vaginal birth after a C-section	19	23.2	63	76.8	2.58 (1.74-3.84)	<0.001

Women with episiotomy had a slightly longer hospital length of stay on average (2.5 ± 2.3 days), compared with women without episiotomy (2.1 ± 2.5 days). This difference was not statistically significant ($p = 0.06$).

DISCUSSION

The strongest evidence-based support of the optimal rate of episiotomy that can be identified at present relies on studies that report well maternal and neonatal outcomes with very low rates of episiotomy of ten or less per 100 vaginal deliveries (4,5). On that basis, even though the "right" rate of episiotomy is unknown, it is appropriate to conclude that the episiotomy rate of 45 per 100 vaginal deliveries in this study is far higher than is supported by scientific evidence. Episiotomy rates were particularly high in our primigravidae and younger parturients. Higher rates have even been reported in other parts of Nigeria (9). The high rate of episiotomy in our primigravid women and younger women suggests that physicians and mid-wives in Nigeria still sub-consciously apply

a policy of routine episiotomy to these categories of women. By contrast, the declining incidence of episiotomy with increasing age and parity suggest a selective use of episiotomy in multigravid women and older women. The association of younger age with episiotomy may also reflect an interaction between younger age at first birth and a high rate of episiotomy at first birth, as other studies have reported (10,11). The other factors influencing the practice of episiotomy in this study were operative vaginal deliveries, breech vaginal delivery, occipito-posterior positioning of the foetal head, and vaginal birth after a previous Caesarean section. These are time honoured indications in many countries. Even so, recent studies from developed countries show a steady decrease in the percentage of episiotomy with operative deliveries as did episiotomy with spontaneous deliveries (12,13). One of the most serious consequences of episiotomy is its association with increased risk of anal sphincter damage as was observed in this study. Even when anal sphincter damage is recognised at delivery, current methods of surgical repair are inadequate. Persistent anal

sphincter defects are present in up to 85% of women who sustain anal sphincter laceration and repair at the time of vaginal delivery (14,15). Especially because surgical repair cannot restore normal anatomy and function, it is critically important to prevent the initial damage at vaginal delivery. The study observed cases of breakdown of episiotomy repairs. This may be related to the skill and competence of the repairing surgeon, as the medio-lateral episiotomy which is routinely practiced in this institution is sometimes technically challenging to repair correctly. There is the need to improve the quality of care provided to patients who have had episiotomy in this hospital.

In conclusion, the episiotomy rate of 45 per 100 vaginal deliveries in this study is obviously higher than evidence-based recommendations for optimal care. Episiotomy rates were particularly high in our primigravid women and younger parturients. Episiotomy was also associated with a high rate of wound breakdown and increased rate of anal sphincter damage. A policy of systematic reduction of the incidence of episiotomy can be pursued in this hospital. Greater attention needs to be paid to selection of women to undergo episiotomy.

We recommend that a national hospital discharge survey to describe episiotomy usage in Nigeria need to be conducted.

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REFERENCES

- Johanson, R. Obstetric procedures. In: Edmonds KD (ed). Dewhurst' Textbook of Obstetrics and Gynecology for Postgraduates. 6th edn. Oxford, Blackwell Scientific Publications 1999; 308-329.
- Thacker, S.B. and Banta, H.D. Benefits and risks of episiotomy: an interpretive review of the English language literature 1860-1980. *Obstet. Gynecol. Surv.* 1983; **38**: 322-338. [Medline].
- Argentine Episiotomy Trial Collaborative Group. Routine versus selective episiotomy: a randomised controlled trial. *Lancet.* 1993; **342**: 1517-1518. [Medline].
- Blanchette, H. Comparison of obstetric outcome of a primary-care access clinic staffed by certified nurse-midwives and a private practice group of obstetricians in the same community. *Amer. J. Obstet. Gynecol.* 1995; **172**: 164-171.
- Bansal, R.K., Tan W.M., Ecker J.L., et al. Is there a benefit to episiotomy at spontaneous vaginal delivery? A natural experiment. *Amer. J. Obstet Gynecol.* 1996; **175**: 897-901 [Medline].
- Eason, E., Labrecque, M., Wells, G., et al. Preventing perineal trauma during childbirth; A systematic review. *Obstet. Gynecol.* 2000; **95**: 464-471.
- Delee, J.B. The prophylactic forceps operation. *Amer. J. Obstet. Gynecol.* 1920; **1**: 34-44.
- Carroli, C. and Belizan, J. Episiotomy for vaginal birth. *Cochrane Database Syst. Rev.* 2000; **1**: 1-9.
- Otoide, V.O., Ogbonmwan, S.M. and Okonofua F.E. Episiotomy in Nigeria. *Int. J. Gynecol. Obstet.* 2000; **68**: 13-17.
- Albers, L.L., Anderson, D., Cragin, L., et al. Factors related to perineal trauma in childbirth. *J. Nurse Midwifery.* 1996; **41**: 269-276 [Medline].
- Hueston, W.J. Factors associated with the use of episiotomy during vaginal delivery. *Obstet. Gynecol.* 1996; **87**: 1001-1005.
- Ecker, J.L., Tan, W.M., Bansal, R.K., et al. Is there a benefit to episiotomy at operative vaginal delivery? Observations over ten years in a stable population. *Amer. J. Obstet. Gynecol.* 1997; **176**: 411-414 [Medline].
- Goldberg, J., Holtz, D., Hyslop, T., et al. Has the use of routine episiotomy decreased? Examination of episiotomy rates from 1983 to 2000. *Obstet. Gynecol.* 2002; **99**: 395-400.
- Fitzpatrick, M., Behan, M., O'Connell, P.R., et al. A randomised clinical trial comparing primary overlap with approximation repair of third-degree obstetric tears. *Amer. J. Obstet. Gynecol.* 2000; **183**: 1220-1224.
- Sorensen, S.M., Bondesen, H., Istre, O., et al. Perineal rupture following vaginal delivery. Long-term consequences. *Acta. Obstet. Gynecol. Scand.* 1988; **67**: 315-318 [Medline].