Original Article

EPISIOTOMY AT A TERTIARY HOSPITAL IN SOUTH-SOUTH, NIGERIA: A 3-YEAR REVIEW

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Abstract

Background: Routine episiotomy during the second stage of labour is no longer recommended. Instead, the World Health Organisation (WHO) recommends an episiotomy rate of 10 % of spontaneous vaginal deliveries. Assessment of hospital episiotomy practice is necessary to meet WHO recommendation.

Objectives: To determine episiotomy rate, the pattern of use of episiotomy in parturients, to make an evidence-based recommendation on the use of episiotomy and to provide a background for related studies at the Federal Medical Centre, Yenagoa.

Materials and Methods: This is a 3-year retrospective descriptive study of vaginal deliveries at Federal Medical Centre, Yenagoa, from 1st January 2015 to 31st December 2017. Relevant data were extracted from the labour ward register, including parity, gestational age at delivery, administration of episiotomy, state of perineum after delivery and birth weight. Analysis was done using IBM SPSS version 20.0. Frequencies and percentages of categorical variables are presented in tables.

Results: Of 2,347 women who had vaginal delivery during the study period, 210 had episiotomy, giving an episiotomy rate of 8.9 %. All the episiotomies were medio-lateral. Fifty-one (25.9%), 158 (8.2%) and 1 (0.4%) of nulliparous, multiparous and grandmultiparous women respectively had episiotomy. Episiotomy was given in 47 (31.8 %) and 206 (10 %) of parturients with macrosomic babies (birth weight ≥ 4kg) and term babies respectively and in 4 (1.3%) of parturients with preterm babies. Perineal tear rate was 26.3%; limited to 1st and 2nd degree tears.

Conclusion: The episiotomy rate at the Federal Medical Centre, Yenagoa is much lower than rates recorded in other hospitals in Nigeria. More episiotomies were performed in nulliparous women and during delivery of macrosomic babies. Low episiotomy rate may result in more perineal tears; however, it can achieve a low overall incidence of perineal trauma without an increased incidence of 3rd and 4th degree perineal tears.

Keywords: Episiotomy, Perineal tear, Episiotomy rate, medio-lateral episiotomy, Midline episiotomy, J-shaped episiotomy.

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INTRODUCTION

Episiotomy is one of the most common surgical procedures performed on women.[1] It is more common in hospital delivery and among primigravidae.[2] It is a surgical incision that is made on the perineum to increase the diameter of the vaginal outlet during the last part of the second stage of labour, in order to facilitate vaginal delivery.[3] An episiotomy is usually performed when the perineum has been stretched by the fetal presenting part and it is deemed necessary.[4] The term "episiotomy" was coined by Carl Braun and was introduced as an obstetric procedure more than 200 years ago.[3,5]

Episiotomy is indicated when delivery needs to be expedited, e.g., for a fetal bradycardia with fetal presenting part at the perineum.[4,6] Other indications for episiotomy include assisted vaginal breech delivery, vaginal delivery of a macrosomic baby, vaginal delivery in occipitoposterior position of the head, manoeuvre for shoulder dystocia, instrumental vaginal delivery, vaginal

delivery following previous history of repair of a severe perineal tear (3rd and 4th degree perineal tear) and previous pelvic floor repair etc.[3,5,6-8] The incision is made before significant tissue devitalization and bruising occur and tearing of the perineum becomes imminent.[5] Prior to performing episiotomy, adequate analgesia is achieved by local infiltration with 10 ml of 1 % plain xylocaine.[3,5]

The medio-lateral episiotomy is more widely performed.[9] The incision begins at the centre of the fourchette and is directed at an angle of 45° towards the ischial tuberosity. It relatively precludes rectal involvement, and can be extended to suit manipulative deliveries.[10] Although, it is a relatively safer method, it is more difficult to repair and is associated with more blood loss, dyspareunia and pain. Tissue apposition and good healing takes more to achieve.[5,10]

The incision for midline or central episiotomy; widely used in the United States, commences at the centre of the fourchette and extends posteriorly along the midline towards the anus. This type of episiotomy is usually easier to repair, has quicker wound healing, less blood loss, less pain in the postpartum period and reduced incidence of dyspareunia.[3,5,10] This however is not without some demerits, such as more than six-fold risk of extending to involve the anal sphincter.[3] Its use is thus selective, it is not suitable for manipulative deliveries and cases of abnormal presentation or position.[10] The J-shaped incision is not widely performed,[9] as apposition is not perfect and the repaired wound tends to be puckered.[10] The lateral episiotomy is not also recommended because it has a chance of injury to the bartholin's duct.[9,10] To prevent various complications such as increased blood loss, wound breakdown, asymmetry, perineal pain and infection, episiotomy should be repaired immediately after delivery.[8]

Restrictive episiotomy involves performing an episiotomy only when there is an indication, it was advocated for due to the problems associated with routine episiotomy.[9] It is associated with less posterior perineal trauma, hence, less suturing, less perineal pain, fewer healing complications and reduced long-term complications. It is however associated with an increased risk of anterior perineal trauma.[11,12] Evidence suggests that the incidence of episiotomy and perineal trauma may be reduced further by antenatal perineal massage and warm compresses on the vulva in labour.[13,14] Recent study suggests that other perineal protection techniques like Ritgen's manoeuvre during the second stage of labour are not backed by evidence.[14] Other documented ways of avoiding episiotomy and perineal trauma include adopting the kneeling, all fours or upright positions during labour, presence of a caring companion and use of vacuum extractor instead of forceps.[9]

Episiotomy rates in the United Kingdom (U.K) now approximate the World Health Organization (WHO) recommendation of 10 % of spontaneous vaginal deliveries.[4] However, there are considerable international variations (rates are 50 % in the USA and 99 % in Eastern Europe).[4] An episiotomy rate of 17.4 % was reported in Ghana.[15] In Nigeria, episiotomy rates have been reported as follows: 34.3 % in Ogbomosho,[16] 39.6 % in Enugu,[6] 34.5 % in Benin,[7] 35.6 % in Zaria[8] and 39.1 % in Port Harcourt.[17]

Episiotomy rate has not been previously studied and documented at the Federal medical Centre, Yenagoa. The objectives of this study were to determine the episiotomy rate, the pattern of use of episiotomy in parturients, to make an evidence-based recommendation on the use of episiotomy and to provide a background for related studies at the Federal Medical Centre, Yenagoa.

MATERIALS AND METHODS

This is a retrospective review of all vaginal deliveries conducted over a period of three years, from 1st January, 2015 to 31st December, 2017 in the department of Obstetrics and Gynaecology at the Federal Medical Centre, Yenagoa, Bayelsa State, Nigeria. The hospital is a tertiary health care facility that receives patients majorly from within Bayelsa State and also from nearby areas of Rivers and Delta states. The labour ward record was used to determine the total number of vaginal deliveries as well as retrieve other information including; parity, gestational age at delivery, birth weight and state of perineum after delivery. Data extracted from the labour ward registers were cleaned and analyzed using Statistical Package for Social Science version 20.0. Categorical data were presented as simple percentages and frequency tables.

This review is retrospective, and the data was completely anonymised such that the information was not attributable to any of the study participants. Institutional research board approval was therefore not required.

RESULTS

As shown in Table 1, there were 2,347 vaginal deliveries and 210 of them had episiotomy, giving an episiotomy rate of 8.9%. All the episiotomies were mediolateral. Table 2 shows that nulliparity was more associated with episiotomies (25.9%) than multiparity (8.2%). Grandmultiparous parturient had the lowest episiotomy rate (0.4%). Episiotomy was performed in one-tenth of women with term babies (10%), compared to slightly above one in hundred women with preterm babies (1.3%). Episiotomy was also associated with fetal macrosomia; 3 out of every ten parturient with macrosomic babies had episiotomy (31.8%). Slightly above 2 in 10 women had perineal tears (26.3%); limited to 1st and 2nd degree tears.

Table 1: Maternal and fetal characteristics and state of the perineum after delivery.

VARIABLE	FREQUENCY	PERCENTAGES
Parity		
Nulliparous	197	8.4
Multiparous	1,926	82.0
Grandmultiparous	226	9.6
Gestational Age at delivery		
Preterm	306	13.0
Term	2,030	86.5
Post-term	11	0.5
State of Perineum at delivery		
Episiotomy	210	8.9
Perineal tear	617	26.3
Intact perineum	1,520	64.8
Type of episiotomy given		
Medio-lateral	210	100.0
Midline	0	0.0
J-shaped	0	0.0
Extent of Perineal tear		
1st and 2nd degree	617	100.0
3rd and 4th degree	0	0.0

Table 2: Episiotomy rate analysed by parity, gestational age at delivery and birth weight.

	EPISIOTOMY YES (%)	EPISIOTOMY NO (%)	TOTAL
Parity			
Nullipara	51 (25.9)	146 (74.1)	197
Multipara	158 (8.2)	1,766 (91.8)	1,924
Parity >4	1 (0.4)	225 (99.6)	226
Gestational Age at Delivery			
Preterm	4 (1.3)	302 (98.7)	306
Term	206 (10.0)	1,824 (90.0)	2,030
GA ≥42 weeks	0 (0.0)	11 (100.0)	11
Birth Weight			
< 4kg	163 (7.4)	2,036 (92.6)	2,199
≥ 4Kg	47 (31.8)	101 (68.2)	148

DISCUSSION

The episiotomy rate was 8.9% in this study. This rate was low compared to other centres in other parts of Nigeria such as Enugu, Port Harcourt, Benin, Lagos and Kano where the episiotomy rates were 39.6%,[6] 39.1%,[17] 34.5%,[7] 54.9%,[18] and 41.4%[9] respectively. Although the episiotomy rate in this study was in consonance with the recommended rate of 10% by the WHO,[4] the wide variation from the rates recorded in studies done in other centres in Nigeria, may be because of the low proportion of nulliparous parturients (5.1%) seen in this study compared with other Nigerian studies, e.g., 26% in Enugu.[6] The low episiotomy rate recorded in this study may also indicate a practice of restrictive episiotomy.

In this study, episiotomy rate was highest among nulliparous women and lowest among grand multiparous women. This shows that the rate of episiotomy decreases with increasing parity, similar to findings in Kano,[9] Ogbomoso[16] and Ghana.[15] The episiotomy rate recorded among nulliparous women in this study was lower than 79.4% in Kano,[9] 79.1% in Enugu,[6] 77.1% in Port Harcourt,[17] 90.4% in Lagos,[18] 31.4% in Ghana[15] and 88.5% in Zaria,[2] but higher than 6.5% in Zambia.[19] Episiotomy was more associated with term births than preterm births in this study. This is similar to the findings at Enugu,[6] Benin[7] and Port Harcourt,[17] and understandable, as preterm babies are small and are not capable of straining the perineum to cause a perineal tear. The role of episiotomy in preterm delivery is for better control of the head to avoid sudden delivery and associated complications and it should not be withheld when deemed necessary.[20]

Fetal macrosomia is a risk factor for severe perineal tear. As identified from this study and similar to findings from other studies,[6,7,9,17] it is one of the leading contributors to episiotomy rates. In this study, while episiotomy was performed in just 6.7% of parturients with babies weighing < 4 kg, it was performed in 31.8% of parturients with babies > 4 kg. However, the episiotomy rate of 31.8% among parturients with macrosomic babies is lower than 86.9% recorded in Kano,[9] and 86.0% in Enugu.[6]

All the episiotomies administered in this study were mediolateral, just as it is practiced in Lagos,[18] and documented as more widely performed than other types of episiotomies.[9] Besides the overall low episiotomy rate of 8.9% in this study, the relatively low episiotomy rate within patient groups; 25.9% and 31.8% among nulliparous parturients and parturients with macrosomic babies respectively, suggests a restrictive episiotomy practice in the centre. Tight perineum was recorded as the most common indication for episiotomy from the study in Benin.[7] Beyond use of episiotomy for assisted vaginal breech delivery, manoeuvre for shoulder dystocia, instrumental vaginal delivery, vaginal delivery following previous history of repair of 3rd or 4th degree perineal tear or a pelvic floor repair and expending delivery for a fetal bradycardia with presenting part at the perineum, restricting episiotomy in parturients to those with rigid/tight perineum and imminent perineal tear can reduce episiotomy rates.

Apart from facilitating vaginal delivery in cases of fetal distress, the aim of episiotomy is to prevent severe perineal tear, where significant risk exists.[21] It is noteworthy that on the side of the low episiotomy rate recorded in this study is a perineal tear rate of 26.3%, which is more than 3 times higher than the episiotomy rate recorded in this study and higher than the 18.8%[18] recorded in Lagos. However, the incidence of perineal trauma (episiotomies and perineal tears) in this study was 35.2%; less than half of what would be recorded in the Lagos study (over 73%).[18] This outcome in our view is better in terms of protecting and preserving the perineum. Bhattacharjee[22] in a comparative study of maternal and fetal outcome of episiotomy versus perineal tear, concluded that episiotomy does more to protect against anterior perineal tear, does not protect against maternal anal sphincter injuries, pelvic muscle damage or incontinence and is associated with more blood loss, delayed wound healing and more postpartum pain. The commonest indication for episiotomy as reported by Ola et al,[18] which accounted for 80.7% of episiotomies in the Lagos study, was for "protecting the perineum from possible tears". The episiotomies may have been preemptive and may have accounted for the high rate recorded.

It is also noteworthy that all the perineal tears recorded in this study were limited to 1st and 2nd degree tears, similar to the finding in Lagos[18] where most of the tears were 1st degree. Severe perineal tears (3rd and 4th degree perineal tears) were not recorded among patients who did not have episiotomy in this study and in other studies. This, plus the finding by Bhattacharjee[22] that episiotomy is associated with more blood loss, delayed wound healing and more postpartum pain compared to a perineal tear suggests that, the notion that giving a parturient an episiotomy is better than allowing a perineal tear is questionable.

CONCLUSION

The episiotomy rate at the Federal medical centre, Yenagoa is much lower than rates recorded in other hospitals in Nigeria. More episiotomies are performed in nulliparous women and during delivery of macrosomic babies. Only medio-lateral episiotomy is practiced in the centre. Low episiotomy rate may result in more perineal tears; however, it can achieve a low overall incidence of perineal trauma without an increased incidence of 3rd and 4th degree perineal tears.

LIMITATIONS

The indications for the episiotomies administered were not determined in this study, preventing a suggestion of the most common indication for episiotomy in the study setting and a supporting evidence for a likely restrictive episiotomy practice. This is because the case records of the patients were not reviewed.

RECOMMENDATION

We recommended further studies that will seek to determine the indications for episiotomy at the Federal Medical Centre, Yenagoa and also seek to assess the maternal and fetal predictors of episiotomy and perineal tear using appropriate statistical methods. We also recommend a formal protocol on episiotomy for the Federal Medical Centre, Yenagoa, that, when there is no significant risk of severe perineal tear or need to facilitate delivery as in cases of fetal distress with presenting part at the perineum, episiotomy should be restricted to parturients with rigid/tight perineum and imminent perineal tear.

AUTHORS' CONTRIBUTION

Authors 1 and 2 conceptualized the research and came up with the study design. Author 1 conducted literature search, collected data and participated in data analysis. Authors 2 and 3 participated in literature search, data analysis and drafted the manuscript. All authors read the final manuscript.

COMPETING INTERESTS

There are no competing interests.

ETHICAL APPROVAL

Ethical clearance was not required for this study.

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