

Research Article

Factors associated with episiotomy among parturients delivering in a tertiary care centre in Nigeria

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ABSTRACT

Background: The use of routine episiotomy is now less favoured among obstetricians. Given considerable evidence, its use increases maternal morbidity without evidence to support maternal or neonatal benefit. Objectives: To determine the current rate of episiotomy among parturients delivering at Federal Medical Centre, Owo, Ondo State, Nigeria and to identify factors associated with episiotomy.

Methods: The retrospective study was conducted using the delivery records between 1st January 2012 and 31st December 2012. Information was obtained from the delivery register and medical records. There were 802 booked patients who had singleton vaginal deliveries between the studied periods. A total of 728 of these patients' case records were obtained for analysis using SPSS 17.

Results: The incidence of episiotomy was 9.3%. Those age <20 years, nulliparous, those who had assisted breech and instrumental deliveries had more episiotomy ($P < 0.0001$). All the instrumental deliveries and most assisted breech deliveries (67%) were taken by the doctors. Episiotomies were more common when doctors took deliveries (Doctor vs. Nurses: 28.6% vs. 5.8%) ($P < 0.0001$).

Conclusion: While this study has identified factors associated with episiotomy, the episiotomy rate remains within normal rate at the studied centre. It is pertinent that health care providers always bear in mind the standard indications for episiotomy. This will go a long way in reducing the episiotomy rate and maintaining the recommended WHO rate of 10%.

Keywords: Episiotomy, Delivery, Parturients, Records, Instrumental deliveries

INTRODUCTION

Episiotomy is defined as surgical incision of the perineum to facilitate delivery.¹ 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,² was first reported as far back as 1741.³ The complications of perineal trauma following childbirth include hemorrhage, haematoma and abscess formation, perineal pain and discomfort, fistula formation,

dyspareunia and anal incontinence. In addition, there has been an increase in litigation related to the complications of perineal trauma following childbirth.¹

It is a well-documented fact that episiotomy is the most commonly performed procedure in obstetrics.^{1,4-6}

A policy of routine episiotomy was widely practiced at the turn of 20th century. This policy led to high rates of episiotomy in many countries, reaching 30% in Europe,⁷ 62.5% in the USA,⁸ 80% in Argentina⁹ and about 100%

in Taiwan.¹⁰ The routine use of episiotomy results in high episiotomy rates where it is practiced. However the World Health Organization recommends restrictive use over routine use.^{9,11}

Indeed, the World Health Organization recommendation against routine episiotomy has started to show measurable decline in the rates of episiotomy in the developed countries. Reports from England indicated that episiotomy was performed on over half of all women delivering in 1980, falling to 37% in 1985 and to 20% in 1994.¹² In the United States, between 1983 and 2000, the overall episiotomy rate fell from 69.9% of all births to 19.4% of vaginal deliveries.¹³

However, in the developing countries the rate of episiotomy still remains high. A study in Burkina Faso¹⁴ showed that, in primary care facilities, 43% of primigravidas received episiotomies while another study in Botswana revealed that 1 in 3 mothers having a normal delivery had an episiotomy.^{4,15}

In Nigeria, different reported rate of episiotomies include 40.4% at Enugu/Port Harcourt,¹⁶ 46.4% at Benin³ and 54.9% in Lagos¹⁷ which are higher than the 10% recommended by the World Health Organization.^{10,19}

Historically, the procedure episiotomy has been indicated in circumstances such as abnormal labour progression, non-reassurance fetal heart rate pattern, vacuum delivery and shoulder dystocia.^{2,18} It is also 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.² On the other hand, however recent studies have shown that common indications for episiotomy were based on limited data.^{1-3,18}

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.^{1-3,18}

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 evidenced based techniques that reduce the risk of perineal trauma during childbirth should be embraced.^{18,20}

Episiotomy is still advocated when anterior tears with bleeding or multiple perineal tears appear. If the delivery process is delayed and it is thought to be due to a rigid perineum, an episiotomy may facilitate delivery. Those women who have had a previous pelvic floor or perineal

surgery may benefit from an episiotomy. Whenever vaginal manipulations are needed such as in some assisted breech deliveries and in cases of shoulder dystocia, an episiotomy may be useful. It facilitates instrumental vaginal deliveries, although the need for an episiotomy is less with ventouse deliveries and a distensible perineum.²¹ Determining when not to give an episiotomy requires a lot of surgical judgment and may be tasking for large number of health care personnel who attend to parturient in labour.¹⁶

Nonetheless, the optimal rate of episiotomy for maximising maternal and fetal well-being is not known. The objectives of this present study were to determine the current rate of episiotomy among parturients at delivery and to determine the risk factors for parturient receiving episiotomy.

METHODS

This was a hospital based retrospective study of consecutive singleton vaginal deliveries by patients at Federal medical centre Owo from 1st January 2012 to 31st December 2012.

A total of 802 booked patients had singleton vaginal deliveries. All had information recorded in the delivery register. Of this number, only 728 available case records were accessible from the medical records department for review.

Relevant data extracted from the delivery register included patients age, parity, gestational age at delivery, birth weight, accoucher, mode of delivery (spontaneous vaginal delivery, instrumental delivery or assisted breech delivery) and whether the patient had an episiotomy and its indication, and if the perineum was intact after delivery.

Data were encoded and analyzed using the statistical package for social Science (SPSS version 17). Descriptive statistics were done, reported and presented as tables with simple percentages using Microsoft Word.

Associations between maternal and delivery variables and use of episiotomy was done with Chi square and level of significance was set at P value of <0.05.

RESULTS

A total of 728 booked patients had singleton vaginal deliveries. Table 1 shows socio-demographic characteristics of the patients sampled. They were aged between 17 and 46 years, with a modal age between 20-35 years of 81%, the patients' parity ranged from 0 to more than 5. The condition of the perineum following childbirth; 9.3% of parturient received an episiotomy, but there were poor documentation of indications for the episiotomy.

The gestational age at delivery ranged from 28-43 weeks while 83% of babies weighed between 2.51 and 4.0 kg, 15.1% and 1.9% were low birth weight and macrosomic respectively.

The birth weight ranged from 0.85-4.75 kg, with a mean of 3.2 ± 0.3 kg (Table 1).

Most women had spontaneous vaginal deliveries (94.2%), and in 84.6% of cases, the accoucher was a nurse, while only 15.4% of deliveries were taken by a doctor (Table 1).

Table 1: Socio-demographic characteristics.

Variables	Frequency	Percentage	Cumulative percentage
Age (years)			
<20	25	3.3	3.3
20-35	590	81.0	84.3
>35	113	15.7	100.0
Parity			
0	212	29.1	29.1
1	212	29.1	58.2
2	132	18.1	76.4
3	96	13.2	89.6
4	48	6.8	96.2
≥5	28	3.8	100.0
Gestational age			
<37 weeks	74	10.2	10.2
37-41 weeks	630	86.5	96.7
>41 weeks	24	3.3	100.0
Birth weight			
<2.5 kg	110	15.1	15.1
2.5-4.0 kg	604	83.0	98.1
>4.0kg	14	1.9	100.0
Mode of delivery			
SVD	686	94.2	94.2
Breech	18	2.5	96.7
Instrumental	24	3.3	100.0
Accoucher			
Nurses	616	84.6	84.6
Doctors	112	15.4	100.0

Table 2 shows the association between age, birth weight, gestational age, accoucher and mode of delivery each with episiotomy. There were significant associations between age (<20 years), parity (nulliparity), accoucher, and mode of delivery (assisted breech and instrumental deliveries) with episiotomy.

There were more episiotomies given when doctors took deliveries. However no significant association between gestational age and birth weight with episiotomy (Table 2).

Table 2: Association between maternal and delivery variables and episiotomy.

Maternal and delivery variables	Use of episiotomy		X ²	P value
	No episiotomy	Had episiotomy		
Age				
<20 years	16 (66.7%)	8 (33.3%)	20.9	<0.0001
20-35 years	534 (90.5%)	56 (9.5%)		
>35 years	110 (96.5%)	4 (3.5%)		
Parity				
0	168 (%)	44 (20.8%)	49.1	<0.00001
1	202 (%)	10 (4.7%)		
2	130 (%)	2 (1.5%)		
3	88 (%)	8 (8.3%)		
4	46 (%)	2 (4.2%)		
≥5	26 (%)	2 (7.1%)		
Birth weight				
<2.5 kg	100 (90.9%)	10 (9.1%)	0.42	0.812
2.5-4.0 kg	548 (90.7%)	56 (9.3%)		
>4.0 kg	12 (85.7%)	2 (14.3%)		
Gestational age				
<37 weeks	71 (95.9%)	3 (4.1%)	5.62	0.060
37-41 weeks	565 (89.7%)	65 (10.3%)		
>41 weeks	24 (100%)	0		
Mode of delivery				
SVD	648 (94.5%)	38 (5.5%)	212.0	<0.0001
Breech	8 (44.4%)	10 (55.5%)		
Instrumental	4 (16.7%)	20 (83.3%)		
Accoucher				
Nurses	580 (%)	36 (5.8%)	57.8	<0.0001
Doctors	80 (%)	32 (28.6%)		

DISCUSSION

The incidence of episiotomy in this study was 9.3%. This is lower than the rate of 40.4% reported from a joint study carried out at the University of Nigeria Teaching Hospital (UNTH), Enugu and the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt.¹⁶ It was also lower than the reported rate of 46.6% at the University of Benin Teaching Hospital (UBTH),³ and the rate of 54.9% and 34.3% obtained at the Lagos University Teaching Hospital (LUTH)¹⁷ in 2002 and Ogbomoso⁴ Nigeria respectively. The other studies were earlier studies and this lower rate reflects a conscious attempt to restrict the use of episiotomy in the study centre. The incidence in this study is comparable to 7.5% obtained in Iran in 2008⁶ in a restrictive episiotomy group. The rate of 10% recommended by the World Health Organization^{10,19} is obtainable especially with restrictive episiotomy.

Nulliparity is a significantly associated with episiotomy in this study. Nulliparity has the highest incidence compare to multiparity. This risk factor has been identified in other studies in Nigeria and outside the country.^{3,10,16,22} The rate of episiotomy among nulliparous women in this study (20.8%) is lower than that reported at Kumasi, Ghana, where 31.7% of the nulliparous women had episiotomy.²² These values however are

lower than previous studies with increasing consciousness about restrictive episiotomy even in nullipara. The lower incidence of episiotomy with higher parity also suggests a selective use of episiotomy in multiparous women.

The birth weight was not a significant factor for episiotomy. Surprisingly, fewer women with macrosomic babies had episiotomies when compare with those with small or average sized babies. This could be because most of the macrosomic babies (90%) were delivered by women who were multiparous. The gestational age at delivery was not a significant factor for episiotomy. Similar to findings at UBTH,³ instrumental deliveries was a significant factor for receiving episiotomy. Instrumental deliveries, especially with forceps, remain a time-honoured indication for episiotomy which has remained unchanged in many countries. Episiotomies were more common in women with assisted breech deliveries than in spontaneous vaginal deliveries. This is similar to the findings in Ogbomoso Nigeria.⁴ Although episiotomies were more common when doctors took deliveries, this is because all the instrumental deliveries and most assisted breech deliveries (67%) were taken by the doctors. Similar findings were also observed at Enugu/Port Harcourt.¹⁶

In conclusion, episiotomy still remains a common procedure in obstetrics although the incidence is on the decrease. While this study has identified certain factors associated with episiotomy, it is essential that health providers always bear in mind the standard indications for episiotomy and restrictive use of it. This will further reduce the incidence of episiotomy and over medicalisation of the delivery process.

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