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Brief Communication

Relative frequency and predictors of episiotomy in Ogbomoso, Nigeria

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ABSTRACT: Episiotomy is the commonest obstetric surgical operation performed to increase the diameter of the vulval outlet during the last part of the second stage of labour in order to facilitate vaginal delivery. The rate of episiotomy is on the decline in developed countries but still remains high in developing countries. The objectives of this study are to determine the rate and risk factors for episiotomies at the Baptist Medical Centre, Ogbomoso, Nigeria. This retrospective study extracted information on age, occupation, parity, type of vaginal delivery, birth weight of the newborn, and episiotomy status from the case notes of 280 patients and analysed it using the Statistical Package for Social Sciences version 13. The episiotomy rate was 34.3% in the present study. The rate of episiotomy decreased with parity, with the nulliparous having the highest rate (62.2%). The rate was higher among those who had assisted delivery (80.0%) than spontaneous vertex delivery. The episiotomy rate at this centre is high (34.3%) in comparison to the recommended 10% by the World Health Organization. Nulliparity and assisted vaginal delivery appear to be the risk factors for episiotomy in this centre.

KEY WORDS: ***Episiotomy; Nulliparity; Assisted vaginal delivery; Ogbomoso; Nigeria***

INTRODUCTION

Episiotomy is the commonest obstetric surgical operation[1] and it is performed to increase the diameter of the vulval outlet during the last part of the second stage of labour in order to facilitate vaginal delivery.[2,3] 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.[4] Restrictive use of episiotomy is associated with less posterior perineal tear, less need for suturing and fewer complications associated with healing. The rate of episiotomy is on the decline in developed countries but still remains high in developing countries. In England for example, episiotomies were performed on over half of all women delivering in 1980, falling to 37% in 1985 with a dramatic fall to about 20% in 1994 to 1995.[5] There is relatively sparse data on episiotomy and perineal trauma from the developing world as compared to developed countries. A study in Burkina Faso[6] showed that, in primary care facilities, 43% of primigravidas received episiotomies while another study in Botswana[7] revealed that 1 in 3 mothers having a normal delivery had an episiotomy. The rate of episiotomies found in Port-Harcourt[3] Nigeria was 39.1% in 2000, higher than the 10% recommended by the World Health Organisation.[8, 9] Aiming surgically to cut all women delivering vaginally has no demonstrable benefit for infant or mother but causes the woman unnecessary pain and may be associated with potential short-term (pain, haemorrhage and infection) and long-term (dyspareunia, incontinence of flatus and faeces) complications.[5] It is important to review the rate and obstetric predictors of episiotomy because such a review will guide towards more informed discussions about the level of unnecessary interventions and episiotomies.

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The objectives of this study were to determine the relative frequency and risk factors for episiotomies at the Baptist Medical Centre, Ogbomoso, Nigeria.

METHODOLOGY

Study area

Ogbomoso is located about 100 km north of Ibadan, capital of the Oyo State in South-west Nigeria. The indigenous people belong to the Yoruba ethnic group, who engage mostly in farming or trading. There are two renowned academic institutions in Ogbomoso (Ladoke Akintola University of Technology and the Nigerian Baptist Theological Seminary), both of which attract people from other ethnic groups to the city. A government-owned general hospital, Baptist Medical Centre, Ogbomoso, a few primary health care centres and an increasing number of private hospitals meet the health needs of the people.

Methods

Approval was obtained from the Ethics Committee of the Baptist Medical Centre, Ogbomoso before the commencement of the study. The study was a retrospective review of the files of 280 subjects who had vaginal deliveries at the Maternity Centre of the Baptist Medical Centre, Ogbomoso (now Bowen University Teaching Hospital) between September 2008 and February 2009. The hospital is a 200-bed mission hospital which renders primary and secondary health care. It is the referral centre for all other hospitals in Ogbomoso and its environs.

The case notes of all subjects who had vaginal delivery within the study period were retrieved and reviewed. Information on age, occupation, parity, assisted vaginal delivery, birth weight of the newborn, and presence or absence of episiotomy was extracted from the case notes of the subjects. The subjects who had incomplete records were excluded from the study.

Data were analyzed using the Statistical Package for Social Sciences (SPSS version 13).

RESULTS

There were 280 subjects who entered the study. The overwhelming majority of the subjects were in the age group 19-35 years (85.4%) while 13.2% and 1.4% were from the age groups > 35 years and <19 years respectively. More than one-half of the subjects (59.3%) had 1 to 4 babies previously. One-third of the study subjects (39.6%) were nulliparous while 1.1% was grandmultiparous. (**Table 1**) The overwhelming majority of the subjects (98.2%) had spontaneous vertex delivery while 1.8% had assisted vaginal delivery with suction. The birth weight of most of the babies delivered (84.0%) ranged from 2.50kg to 3.99kg. Fifty-one babies (14.6%) had birth weight of 2.49kg or less while 1.4% had birth weight of 4kg and above. (**Table 1**)

Table 1: Selected demographic characteristics of study group

Variables	Frequency	Percentage
Age of parturient (yrs)		
< 19	4	1.4
19 – 35	239	85.4
> 35	37	13.4
Parity		
Para 0	111	39.6
Para 1 - 4	116	59.3
Para 5 & above	3	1.1
Baby's birth weight (Kg)		
< 2.49	51	14.6
2.50 – 3.99	235	84.0
≥ 4.0	4	1.4
Episiotomy		
Yes	96	34.3
No	184	65.7
Mode of delivery		
Spontaneous vertex	275	98.2
Assisted vaginal	5	1.8

Out of 280 subjects who had vaginal delivery, 96 (34.3%) had episiotomy. The rate of episiotomy decreased with parity, the nulliparas had the highest rate (62.2%) while none of the grandmultiparas had episiotomy during the study period. The rate of episiotomy was highest (39.3%) among the subjects who belonged to the age range 19-35 years while none of the younger subjects had episiotomy. The episiotomy rate among the subjects who underwent assisted vaginal delivery was 80.0% as against 33.5% among those who had spontaneous vertex delivery (**Table 2**). The subjects whose babies weighed 2.50 to 3.99kg had the highest rate of episiotomy (36.6%) while it was 22.0%. when birth weights were 2.49kg or less. (**Table 2**)

Table 2: Association between episiotomy, parity, age of parturient, baby's birth weight and mode of delivery

Variables	Episiotomy		Total N
	Yes N (%)	No N (%)	
Parity			
Para 0	69 (62.2)	42 (37.8)	111
Para 1 - 4	27 (16.3)	139 (83.7)	166
Para 5 & above	--	3 (100.0)	3
Age of parturient (yrs)			
< 19	--	4 (100.0)	4
19 – 35	94 (39.3)	145 (60.7)	239
> 35	2 (5.4)	35 (94.6)	37
Baby's birth weight (Kg)			
< 2.49	9 (22.0)	32 (78.0)	41
2.50 – 3.99	86 (36.6)	149 (63.4)	235
≥ 4.0	1 (25.0)	3 (75.0)	4
Mode of delivery			
Spontaneous vertex	92 (33.5)	183 (66.5)	275
Assisted vaginal	4 (80.0)	1 (20.0)	5

DISCUSSION

The rate of episiotomy varies from one region to another. The rate of episiotomy is on the decline in developed countries but still remains high in developing countries. In this context the present study investigated the relative frequency and determinants of episiotomy in one hospital in Nigeria. The episiotomy rate found in this study was 34.3% which was over three times the recommended value by the World Heath Organization.[9] But it is very close to the finding in Zaria[10] Nigeria in 2003 (35.6%) and slightly lower than the values found in Port Harcourt[3] (39.1%) in 2000, Abia[11] (45%) in 2005, Benin[12] (46.6%) in 1998, and Lagos[13] (54.9%) all in Nigeria.

The rate of episiotomy fell with increase in parity in this study, with the nulliparous having the rate of 62.2% whereas there was none among the grandmultiparous. This finding is not surprising probably because many of the midwives still practise the policy of preventing uncontrolled perineal tears by performing episiotomies on nulliparous subjects in many parts of this country. This finding is similar to what Enyindah et al[3] found in Port-Harcourt, Nigeria. They found the highest rate (77.1%) of episiotomy among the primigravidae and the least among the grandmultiparous (9.7%). Routine episiotomy in primigravidae to prevent third degree perineal tear was the reason given for the high rate of episiotomy in Port-Harcourt. They also discovered that some episiotomies were performed to allow midwifery and medical students the opportunity to practise the procedure.

It is surprising that the episiotomy rate among the subjects whose babies weighed 4kg or more was 25%, and this finding may be as a result of low representation of this group which contributed just four subjects to the total sample size.

It was discovered from this study that the assisted vaginal delivery is associated with a higher risk of episiotomy in Ogbomoso. The episiotomy rate among the subjects who had assisted vaginal delivery was 80% while it was 33.5% among those who had spontaneous vertex delivery. This finding is expected because of the tradition of routine episiotomy during assisted vaginal deliveries and this finding is similar to what was found in Port-Harcourt,[3] Nigeria where they found that instrumental delivery was a high risk factor for performing episiotomy.

The rate of episiotomy decreased with increase in the age of the subjects from 19 years upwards. This may be as a result of a more selective use of episiotomy in multigravida and older women at this centre. However, it is surprising that none of the subjects younger than 19 years of age had episiotomy and a low representation of this age group in the study population may be one of the factors that were responsible for this finding. Adolescents have been found to have a 74% higher risk for episiotomy[14], supposedly due to their tenser musculature than adult women, leading to an increase in release period for the cephalic pole inducing the caregiver to perform episiotomy.

CONCLUSION

The episiotomy rate of 34.3% at this centre is high in comparison to the 10% recommended by the World Health Organization nulliparity and assisted vaginal delivery being the risk factors. The information may direct that a formal policy of selective episiotomy based on clear indications aimed at reducing the institution's episiotomy rate should be adopted and communicated to the maternity centre staff. However a well designed prospective study will further elucidate the need for episiotomy in the patient population in the area.

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