DOI: 10.5455/msm.2014.26.188-190
Received: 14 April 2014; Accepted: 25 May 2014
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Published online: 21/06/2014
Published print: 06/2014

ORIGINAL PAPER Mater Sociomed. 2014 Jun; 26(3): 188-190

Rates and Indicators for Episiotomy in Modern Obstetrics – a study from Saudi Arabia

Zaheera Saadia[1,2]

Qassim University, College of medicine, Buraidah, Saudi Arabia[1]
Department of Obstetrics and Gynecology, Qassim College of Medicine, Buraidah, Saudi Arabia[2]

Corresponding author: Zaheera Saadia, MBBS, FCPS. Department for Obstetrics and Gynecology, Qassim University, Buraidah, Saudi Arabia. Phone: +966 558690574; E-mail: zaheerasaadia@hotmail.com

ABSTRACT

Background: This observational study aimed to describe the rates and indicators for practice of episiotomy during normal labour and to compare them between women who have had one pregnancy (PG) and women who have already delivered two or more children (G2 and above). **Methods:** The study was conducted at Mother and Child Hospital, Buraidah from October- December 2013 as a descriptive cross sectional study. **Results:** Overall rate of Episiotomy was 51.20%. Amongst the Primigravidas all went through episiotomies however in G2 and above only 7 patients (4.69%) delivered with episiotomy. Proportions tests revealed that there were significant differences between gravidity groups on two indications of episiotomy (vaginal breech p <0 .001 and previous history of perineal tear p < 0.001). G2 and above had episiotomy for breech delivery (1 of 7 = 14.29%) significantly more often than PG participants (0 of 142 = 0.0%). And G2 and above participants experienced episiotomy for previous perineal tear (2 of 7 = 28.5% as compared to none in PG No other significant differences were found on indications of episiotomy. **Conclusion:** Episiotomy is a very common obstetric intervention (51.20%). The PG experience episiotomy significantly more often than G2 and above women. Efforts should be made to reduce its rates. This can be done by reviewing the indications and rates at repeated intervals and setting guidelines for these indications.

Key words: Episiotomy, Primigravida, labour, Saudi Arabia.

1. INTRODUCTION

Episiotomy is a commonly used obstetric intervention (1). It's defined as a surgical incision in the perineum to enlarge the introitus during the second stage of labour (2). It can be median or mediolateral and was introduced as a prophylactic measure to prevent perineal tears (2).

The procedure was routinely performed on all Primigravidas with the background that a clean surgical incision is better to heal as compared to irregular perineal tears and that routine episiotomy will reduce the incidence of perineal tears (3).

However literature review indicates that episiotomy is not free from complications of increased blood loss, infection rate and even increased incidence of third and fourth degree perineal tears (4, 5, 6).

After several years of practicing routine episiotomy to all Primigravidas, Countries like United Kingdom have recommended that routine episiotomy should not be performed in all Primigravidas (7). In accordance with Argentine episiotomy trial episiotomy rates for Primigravida should not exceed 40% and for multigravidas above 30% (8). Literature is sparse about the rates of episiotomies from Saudi Arabia. This study tries to describe the rates and indicators for practice of episiotomy during normal labour and to compare them between women who have had one pregnancy (PG) and women who have already delivered two or more children (G2 and above).

2. PATIENTS AND METHODS

It was a descriptive cross sectional study conducted over a period of 3 months from September - November 2013. A self-structured pro form was used to collect data.

The study was conducted at Mother Child Hospital, Buraidah which is a major tertiary care facility in the region with annual delivery rate of 10,000. Seventy percent of them deliver normally however 30% undergo cesarean section.

All women undergoing normal vaginal delivery between 37-40 weeks of gestation were included in the study and episiotomy was considered as an obstetrical intervention. Sample size of 291 women had a 95% confidence level and a confidence interval of 5. The study aimed to find out the rates of episiotomy in the study population, along with their indications. The intervention rates were compared between Primigravidas and Gravida two or above. Data was kept anonymous for privacy.

3. STATISTICAL ANALYSIS

The Statistical Package for the Social Sciences (SPSS) 22 was used to conduct proportion z-tests to determine if any significant differences existed between women who have had one pregnancy (PG) and women who have already delivered two or more children (G2 and above) as regards indications of episiotomy. That is, for each intervention, several indicators were examined to determine if the frequency of occurrence was different between gravidity groups. P values less than 0.05 was considered as significant.

4. RESULTS

Most of the participants 132 (45.36%) were above 35 years of age, Seventy six (26.02%) had no formal education and 142 (48.7% were Primigravidas (Table 1).

Variable	Level	Frequency N=291	Percent
Age	Below 20	57	19.5
	20-35	102	35.05
	Above 35	132	45.36
Education	No formal education	76	26.02
	Primary education	110	37.80
	Secondary or above	105	35.95
Gravidity	Primigravida	142	48.79
	Gravida 2 and Above	149	51.20
Instrumental deliveries	Primigravidas	39	13.4
	G2 and above	2	0.68
Breech deliveries	Primigravidas	0	0
	G2 and above	1	0.343

Table 1. Demographic and obstetric characteristics of the study population

Indications of Episiotomy

Proportion z-tests were used to determine if differences existed between gravidity groups (PG and G2 and above) in terms of indications of episiotomy. The indications of episiotomy included forceps delivery, concerns with FHR, ventouse delivery, vaginal breech, face to pubes, previous history (H/O) of perineal tear, maternal exhaustion, rigid perineum, good size baby, and no specific reason. Since this analysis examines indications of episiotomy, participants that reported not receiving an episiotomy were removed from the study. Thus, there were a total of 142 PG participants and 7 G2 and above participants that reported receiving an episiotomy.

Indications of Episiotomy	PG	G2 and above	Total
Forceps delivery	22	1	23
Concerns with FHR	20	0	20
Ventouse delivery	17	1	18
Vaginal breech	0	1	1
Face to pubes	7	1	8
Previous H/O perineal tear	0	2	2
Maternal exhaustion	12	0	12
Rigid perinium	24	0	24
Good size baby	20	1	21
No specific reason	20	0	20
Total	142	7	149

Table 2. Cross Tabulation of Gravidity Groups and Indications of Episiotomy

As displayed in Table 2, the most frequent indication of episiotomy was rigid perineum for PG participants (n = 24) and the most frequent indication for G2 and above participants was previous H/O perineal tear (n = 2). The lowest frequencies of indication of episiotomy for PG were vaginal breech (n = 0), previous H/O perineal tear (n = 0) and pubes to face (n = 7). See Table 2 for details of the cross tabulation of gravidity groups and indications of episiotomy.

Results from the proportions tests revealed that there were significant differences between gravidity groups on two indications of episiotomy (vaginal breech p < .001 and previous H/O perineal tear p < .001). That is, G2 and above participants experienced vaginal breech (1 of 7 = 14.29%) significantly more often than PG participants (0 of 142 = 0.00%). And, G2 and above participants experienced a previous H/O perineal tear (2 of 7 = 28.57%) more often than PG participants. No other significant differences were found on indications of episiotomy. A summary of the proportions z-tests is displayed in Table 3.

5. DISCUSSION

Overall rate of Episiotomy was 51.20%. Amongst the Primigravidas all went through episiotomies however amongst G2 and above only 7 patients (4.69%) delivered with episiotomy. The reported rates for episiotomies are variable from different parts of the world. Argentine collaborative trial has reported 83% rates, Kaufman from USA reported 50% and Rockner from Sweden reported 30% rates of episiotomy (8, 9, 10). France has managed to reduce the episiotomy rates from 55.7% to 13.3% from 2004 to 2009 without significantly increasing the perineal trauma (11). England by setting the policy of avoiding routine episiotomies has managed to reduce the rates to 20% (12). Episiotomy is not totally free from complications like perineal pain, wound dehiscence and increased bleeding (13). Routine episiotomy to all women to avoid third and fourth degree perineal tears has been a practice in many developing countries (13). World Health Organization (WHO) has clear guidelines stating that liberal use of episiotomy has failed to reduce the rates of perineal tears (14).

The indications in PG and G2 and above were similar except for two indications of episiotomy (Vaginal breech p <0 .001 and previous H/O perineal tear p < 0.001). That is, G2 experienced episiotomy for breech delivery (1 of 7 = 14.29%) significantly more often than PG participants (0 of 142 = 0.0%). And G2 and above participants experienced episiotomy for previous perineal tear (2 of 7 = 28.5%) more often than PG participants. This indication cannot be compared between two groups as Primigravidas do not have previous obstetric history thus perineal tears does not exist in this group. Babies with occipito-posterior position deliver as face to pubes and increase the risk of perineal injury and instrumental delivery because second stage of labour is prolonged. So it's justified to recommend episiotomy in this case (15). However there was no significant difference between two studied groups as regard this indication. Maternal exhaustion is said to occur when the mother fails to push after more than 2 hours of efforts. It has been observed that mothers are asked to push down for a long period of time from early second

	Proportions				
Indications of Episiotomy	PG (I)	G2 and above (J)	Difference (I-J)	Z	Probability (2-tailed)
Forceps delivery	15.49	14.29	1.21	0.086	0.928
Concerns with FHR	14.08	0.00	14.08	1.067	0.285
Ventouse delivery	11.97	14.29	-2.31	-0.183	0.857
Vaginal breech	0.00	14.29	-14.29	-4.519	< 0.001
Face to pubes	4.93	14.29	-9.36	-1.072	0.285
Previous H/O perineal tear	0.00	28.57	-28.57	-6.413	< 0.001
Maternal exhaustion	8.45	0.00	8.45	0.802	0.424
Rigid perinium	16.90	0.00	16.90	1.188	0.234
Good size baby	14.08	14.29	-0.20	-0.015	0.992
No specific reason	14.08	0.00	14.08	1.067	0.285

Table 3. Summary of Proportion z-Tests on Indications of ARM by Gravidity Groups

stage and this leads to maternal exhaustion (16). This practice also needs re-evaluation and training of concerned staff. Mothers should not be forced for this action until late in second stage when she has a desire of bearing down, this can also reduce the rates for episiotomy for this indication. Significant efforts are thus required to reduce the rates of episiotomy especially in Primigravidas.

Acknowledgement

Author is grateful to the MCH staff and administration for their support.

CONFLICT OF INTEREST: NONE DECLARED.

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