

# Third degree tears and episiotomy

Awad S. Shihadeh, Jordanian Board, Ashraf N. Nawafleh, Jordanian Board.

---

## ABSTRACT

**Objective:** To investigate the relation of episiotomy to third degree perineal tears, and to detect the rate, indications and risk factors of both episiotomy and third degree perineal tears.

**Methods:** Between 1994 and 1999, 17,559 singleton vaginal deliveries were retrospectively investigated to find frequency, risk factors and relation of episiotomy to third degree Perineal tears. To avoid the affect of confounding factors, we analyzed a sub-sample that included only vertex presentation with spontaneous occipito-anterior vaginal deliveries.

**Results:** The incidence of episiotomy was 39%. Third degree tears occurred in 1% of the deliveries with

episiotomy in 0.2% of the deliveries without episiotomy. Third degree tears were more commonly occurred in primiparae, instrumental deliveries, episiotomy, and birth weight more than 4 kg. After stratification for birth weight and parity, no relation between episiotomy and third degree tear was found.

**Conclusion:** In uncomplicated deliveries, no significant relation between third degree perineal tear and episiotomy was found.

**Keywords:** Episiotomy, thrid degree, perineal, tears.

Saudi Medical Journal 2001; Vol. 22 (3): 272-275

---

The role of episiotomy in obstetric practice has become increasingly controversial as recent studies have questioned the benefit of the operation.<sup>1</sup> Many benefits claimed for episiotomy are not sufficiently proven. In recent literature some of them are questioned and some have been disproved.<sup>2</sup> There is little evidence in favor of the routine use of episiotomy in uncomplicated deliveries, and obstetricians should not routinely perform the procedure but rather determine the need for episiotomy on a case-by-case basis.<sup>3</sup> In 1979 the overall frequency at vaginal deliveries in Denmark rate was 38% compared with 62% in the USA. Recently the rate of episiotomy in the routine practice was 46%.<sup>5</sup> The aim of our study is to investigate the relation of episiotomy to third degree tear and to determine the rate, indications, and risk factors for episiotomy and third perineal tear.

**Methods.** Between 1994 and 1999, 17559 singleton deliveries were retrospectively investigated at Prince Hashim Military Hospital using a common perinatal records and files. Frequency of episiotomy according to parity, mode of delivery and birth weight was investigated Table 1. The risk factors associated with third degree vaginal tears in all vaginal deliveries were analyzed in Table 2. To avoid the effect of confounding factors we analyzed a sub-sample that included only occipito-anterior vertex vaginal deliveries, this sample was stratified into 3 groups according to birth weight (< 2kg; 2-4 kg and > 4 kg) Table 3. Such a division provided a sufficient number of patients in each group, and had more clinical meaning than grouping by centile. Primiparae and multiparae were analyzed separately. Chi-squared test was used for statistical analysis of all data.

---

From the Department of Obstetrics and Gynecology, King Hussein Medical Center, Al-Shemisani, Amman, Jordan.

Received 29th August 2000. Accepted for publication in final form 31st October 2000.

Address correspondence and reprint request to: Dr. Awad Shihadeh, Department of obstetrics and Gynecology, King Hussein Medical Center, PO Box 941649, Al-Shemisani, Amman, Jordan. Tel. +79519880.

**Table 1** - Frequency of episiotomy according to parity, mode of delivery, and birth weight.

Characteristics	With episiotomy (6920) n (%)	Without episiotomy (10639) n (%)	X <sup>2</sup>	p value
Parity				
Primiparae	3782 (98)	93 (2)	7058.45	<0.01
Multiparae	3138 (23)	10546 (77)		
Vacuum extraction	620 (74)	220 (26)	436.97	<0.01
Forceps Delivery	192 (86)	32 (14)	203.72	<0.01
Breech Presentation	399 (55)	320 (44.5)	8.14	<0.01
Occipitoposterior position	201 (57)	150 (43)	1.65	>0.20
Birth weight				
>4kg	690 (77)	210 (23)	316.97	<0.01
2-4kg	558 (35)	10262 (65)		
< 2kg	642 (79)	167 (21)		
Significant: P<0.05				

**Table 2** - Frequency of third degree tears according to parity, episiotomy, mode of delivery, and birth weight.

Variable	N	Third degree vaginal tear n (%)	X <sup>2</sup>	p value
Parity				
Primipara	3875	46 (1)	33.54	<0.01
Multipara	13684	54 (0.39)		
Vacuum extraction	840	11 (1)	8.77	<0.01
Forceps Delivery	224	11 (5)	75.51	<0.01
Breech Presentation	719	4 (0.56)	0.09	>0.5
Occipitoposterior position	351	4 (1.14)	2.05	>0.20
Birth weight >4kg	900	27 (3)	98.97	<0.01
<b>Episiotomy</b>				
With episiotomy	6920	77 (1.11)	59.5	<0.01
Without episiotomy		23 (0.21)		
Significant: P<0.05				

**Table 3** - Third degree tears in spontaneous vaginal occipito-anterior vertex delivery.

Birth weight (gram)	Parity Primiparae	Episiotomy	Third degree tear		X <sup>2</sup>	P value
			Yes	No		
>4000	Multiparae	Yes	8	140	0.99	>0.5
		No	0	0		
	Primiparae	Yes	10	275	0.5	>0.5
		No	6	239		
2000-4000	Multiparae	Yes	24	3133	0.63	>0.5
		No	1	74		
	Primiparae	Yes	5	1812	1.57	>0.5
		No	16	8923		
<2000	Primiparae	Yes	0	50	0	>0.5
		No	0	110		
	Multiparae	Yes	0	45	0	>0.5
		No	0	554		

Significant: P<0.05

**Results.** The episiotomy rate was 39% (6920). The incidence was 98% in primiparae and 22% in Multiparae Table 1. Third degree tears occurred in 77 (1%) of 6920 deliveries with episiotomy and in 23 (0.2%) of 10639 deliveries without episiotomy ( $X^2 = 59.5$ ,  $P < 0.01$ ). Table 1 shows that episiotomy was more frequently occurred in primiparae, vacuum extraction, forceps delivery, breech presentation and birth weight > 4kg with significant statistical difference ( $P < 0.01$ ). It was more commonly performed in occipito-posterior position but without significant difference ( $X^2 = 1.65$ ,  $P > 0.20$ ). Third degree tear was more commonly occurred in primiparae (46, 1%) than in multiparae (54, 0.39%) with significant statistical difference ( $X^2 = 33.54$ ,  $P < 0.01$ ), it was more frequently performed in instrumental deliveries (vacuum and forceps), episiotomy and birth weight > 4kg ( $P < 0.01$ ) (Table 2). Table 3 shows analysis of the sub-sample of 15,425 deliveries that included only vertex presentation with spontaneous occipito anterior vaginal deliveries, in this sample the total number of deliveries was 15,425, episiotomy was performed in 5508 (36%) deliveries. Third degree tears occurred in 47 (0.85%) with episiotomy and in 23 (0.23%) deliveries without episiotomy ( $X^2 = 49$ ,  $P < 0.01$ ). After stratification of the data for birth weight and parity (Table 3), no significant difference in the rate of 3rd-degree tear between the group with episiotomy and the group without episiotomy ( $P > 0.5$ ) (Table 3).

**Discussion.** The episiotomy rate observed in the present study is very similar to that observed by Williams FL et al<sup>6</sup> who reported an incidence of 40%

of all vaginal deliveries. Several factors including primigravity, breech presentation, and instrumental deliveries. High birth weight and premature births were reported to increase the rate of episiotomy; rate of episiotomy was reported to be 77% in nulliparae, 61% in birth weight more than 4 kg and 65% in premature birth.<sup>7</sup> Our present study shows that episiotomy is commonly associated with primiparae, vacuum and forceps deliveries, breech presentation, high birth weight > 4 kg, and low birth weight < 2 kg. These potential confounding factors were taken into account by restricting our sample to spontaneous vaginal vertex deliveries and by stratification for parity (Table 3). This focussed our study on the effect of episiotomy on third degree tears in uncomplicated deliveries, i.e.: the deliveries in which routine use of episiotomy is the most questionable. As birth weight was a potential effect modifier,<sup>7</sup> it was also taken into account, analysis of this sample failed to show any significant relation between third degree tears and episiotomy. All of the episiotomies in our study were mediolateral. Third degree tears are less frequently associated with mediolateral than with median episiotomy.<sup>2,3,8</sup> In the present study the rates of third degree tears in the women who had an episiotomy would probably have been higher if they had had a median episiotomy. Therefore, in our study third degree tears were not more frequent in deliveries without episiotomy. Our data is thus in agreement with the suggestion of Meyer's et al, and Hirsch AA<sup>2,3</sup> that obstetricians should not routinely perform the procedure in uncomplicated deliveries but rather determine the need for episiotomy on a case-by-case basis.

## References

1. Labrecque M, Baillargeon L, Dallaire M, Tremblay A, Pinault JJ, Gingras S. Association between median episiotomy and severe perineal lacerations in primiparous women. *CMAJ* 1997; 156: 797-802.
2. Hirsch HA. Episiotomy and its complications. *Z Geburtshilfe Neonatol* 1997; 201: 55-62.
3. Myers Helfgott MG, Helfgott AW. Routine use of Episiotomy in modern obstetrics, should it be performed? *Obstet Gynecol Clin North Am* 1999; 26: 305-325.
4. Thackers SB, Banta D. Benefits and risks of episiotomy: an interpretative review of English Language literature 1960-1980. *Obstet Gynecol Surv* 1983; 38: 322-338.
5. Dimitrov A, Nikolov A, Nalbanski B, Stamenov G, Dimitrov I, Lazarova L et al. The results of the limited use of episiotomy in managing the second stage of labour. *Akush Gineko* 1997; 36: 3-4.
6. Williams FL, du V Florey C, Mires GJ, Ogston SA. Episiotomy and perineal tears in low-risk primigravidae. *J Public Health Med*; 1998, 20: 422-427.
7. Dimitrov A, Nalbanski B, Niolov A, Stamenov G, Dimitrov I, Lazarova L et al. An analysis of the indications for episiotomy in current Obstetrical practice. *Akush Ginekol* 1997; 36; 1-3.
8. Poen AC, Felt Bersma RJ, Dekker GA, Denville W, Cuesta MA, Meuwissen SG. Third degree obstetric perineal tears: Risk factors and the preventive role of mediolateral episiotomy. *Br J Obstet Gynaecol*, 1997; 104: 5: 563-566.