

# The effect of postpartum perineal trauma on the frequencies perineal pain, urinary incontinence and dyspareunia

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## Abstract

**Aim:** To evaluate the effect of postpartum perineal trauma to the frequencies of perineal pain, of urinary incontinence, and of dyspareunia. **Material-Methods:** This cross sectional study was done between April 1<sup>st</sup> and July 31<sup>st</sup> 2005 in Eskisehir. Study group was occurred from 1500 women. The women's first deliveries are vaginal, only one fetus, vertex presentation, term, and normal childbirth weight. Prepared in accordance with the literature a questionnaire was applied with face to face method. **Results:** Urinary incontinence, perineal pain, and dyspareunia frequencies were higher in women with perineal trauma than women without perineal trauma in their first childbirth (for each one  $p < 0.05$ ). **Conclusion:** This study has shown that the effect of postpartum perineal trauma urinary incontinence, perineal pain and dyspareunia frequencies increases.

## INTRODUCTION

Perineal trauma at childbirth is a common occurrence and can result from episiotomy or spontaneous lacerations (1). It is the most common operation in obstetrics, with 85% of vaginal births in the United Kingdom still accompanied by episiotomy (2). Episiotomy is a traditional practice, and it often occurs with the first time deliveries with an aim to facilitate childbirth and avoid perineal-vaginal tears (3).

Obstetric perineal lacerations are classified as first to fourth degree, depending on their depth. The first degree as only skin and mucosa lacerations, and the second degree as first degree + profound skin stratum and superficial perineum muscle lacerations, and the third degree as second degree + anus mucosa and anal sphincter muscle lacerations, and the fourth degree as third degree + anal and mucosa lacerations (4).

Sequelae of obstetric lacerations include chronic perineal pain, dyspareunia, urinary incontinence, and fecal incontinence (5).

The aim of this retrospective study was to evaluate the effect of postpartum perineal trauma to the frequencies of perineal pain, of urinary incontinence, and of dyspareunia

## MATERIAL-METHODS

### SETTING

Eskisehir is a semi-rural province situated in the western part of Turkey. It has a population of 706 750 (356 571 of which are female). The socio-economical level of the city is average compared to other cities in the country. There are significant disparities in the socio-economic characteristics between the quarters of the city. It includes two universities, five hospitals, and also has a cosmopolitan structure.

### INSTRUMENT

Prepared in accordance with the literature (5–9), a questionnaire was applied with face to face method. The questionnaire included some sociodemographic characteristics such as the women's age, first delivery age, educational level, and job. And it included information among the perineal pain, urinary incontinence, and dyspareunia.

### SUBJECT

This cross-sectional study was done from April 1<sup>st</sup> to July 31<sup>st</sup> 2005 in Eskisehir. Participants' were 1500 women, visited the Eskisehir Women, Childbirth and Pediatric Diseases Hospital in the study period. The women's characteristics are their first deliveries are vaginal, only one

fetus, vertex presentation, term (38.-42. weeks), and normal childbirth weight (2500-4000 grams).

The women were assured of the confidentiality of their responses and provided informed verbal consent. The assent was obtained from all the women.

## PROCEDURES

Eskişehir Osmangazi University Health High School's 6 students were trained about the purpose of study and questionnaire was applied with face to face method. The duration for completing the questionnaire was between 5 to 10 minutes.

## DEFINITIONS

Perineal trauma was defined as any damage to the genitalia occurring during first childbirth, either spontaneously or because of episiotomy (10). Perineal trauma was defined as two types: Episiotomy and spontaneous laceration. Episiotomy was defined as the surgical incision in the perineum to enlarge the vaginal opening for birth. Spontaneous laceration was defined as the laceration in various degrees in genital region during childbirth (1).

Postpartum 1st day, women who reported pain in the perineal region perineal pain was considered to be positive (11).

Postpartum 3<sup>rd</sup> months, reported urinary incontinence women were regarded as positive urinary incontinence (12). Urinary incontinence was defined as any leakage or involuntary loss of urine and it was not classified (9).

Postpartum 3<sup>rd</sup> months, reported dyspareunia women were regarded as positive dyspareunia (6).

## STATISTICAL ANALYSIS

The data were analyzed using the computer software Statistical Package for Social Sciences (SPSS, Chicago, II, USA) for Windows version 15.0. Statistical analysis was made using the chi-square test. A value of  $p < 0.05$  was considered statistically significant.

## RESULTS

The mean age of study group was  $34.0 \pm 7.9$  years, and minimum-maximum age was 18-49 years respectively. The mean first delivery age was  $21.7 \pm 3.5$  years, and ages were changed 17 to 32 years. In the study group, 53.4% of women ( $n=802$ ) had first school and under educational level, and 79.9% of women ( $n=1198$ ) were housewives.

Some sociodemographic characters of study group were presented in Table 1.

**Figure 1**

Table 1. Some sociodemographic characters of study group

Some sociodemographic characters	n (%)
<b>Age (year)</b>	
18-19	23 (1.5)
20-29	486 (32.4)
30-39	629 (41.9)
40-49	362 (24.1)
<b>Age in first delivery (year)</b>	
17-19	519 (34.6)
20-29	944 (62.9)
30-32	37 (2.5)
<b>Educational level</b>	
Illiterate	68 (4.5)
First school	734 (48.9)
Second school	231 (15.4)
High school	326 (21.7)
University	141 (9.4)
<b>Job</b>	
Yes	302 (20.1)
No (Housewife)	1198 (79.9)
<b>Total</b>	<b>1500 (100.0)</b>

In this study, 1050 women (70.0%) reported using episiotomy in their first childbirth. And 103 women (6.9%) reported occurring spontaneous laceration. So perineal trauma frequency was 76.9% ( $n=1153$ ).

Urinary incontinence frequency and perineal pain frequency were 62.8% ( $n=910$ ), and 56.8% ( $n=852$ ) respectively.

Eighty women (5.3%) did not respond to the question about dyspareunia. And 682 of 1420 responded women (48.0%) were dyspareunia positive.

Distribution of postpartum urinary incontinence, perineal pain, and dyspareunia by perineal trauma in the study group was presented in Table 2.

**Figure 2**

Table 2. Distribution of postpartum urinary incontinence, and perineal pain, and dyspareunia by perineal trauma in study group

Postpartum Events	Perineal trauma		Statistical analyses
	Var n %	Yok n %	$X^2$ ; $p$
Urinary incontinence			
Yes	773 (67.0)	137 (39.5)	84.909; <b>0.000</b>
No	380 (33.0)	210 (60.5)	
Perineal pain			
Yes	737 (63.9)	115 (33.1)	102,978; <b>0.000</b>
No	416 (36.1)	232 (66.9)	
Dyspareunia*			
Yes	607 (55.1)	75 (23.5)	99.076; <b>0.000</b>
No	494 (44.9)	244 (76.5)	

\* Eighty women did not response

Distribution of postpartum urinary incontinence, perineal pain, and dyspareunia by perineal trauma types in the women with perineal trauma was presented in Table 3.

**Figure 3**

Table 3. Distribution of postpartum urinary incontinence, and perineal pain, and dyspareunia by perineal trauma types in women with perineal trauma

Postpartum Events	Perineal trauma types		Statistical analyses
	Episiotomy n %	Spontaneous laceration n %	
Urinary incontinence			X <sup>2</sup> ; <i>p</i>
Yes	713 (67.9)	60 (58.3)	
No	337 (32.1)	43 (41.7)	
Perineal pain			3.955; <b>0.047</b>
Yes	674 (64.2)	63 (61.2)	
No	376 (35.8)	40 (38.8)	
Dyspareunia*			0.372; 0.542
Yes	569 (56.6)	38 (39.6)	
No	436 (43.4)	58 (60.4)	

\* Fifty two women with perineal trauma did not response

## DISCUSSION

In our study, seven in ten women reported using episiotomy in their first childbirth. Various studies were reported that episiotomy frequency is from 39% to 77.1% (11, 13, 14, 15, 16). Our result is similar to the results of other studies can be accepted.

Some studies (11, 14) were reported that approximately one in three women occurring spontaneous laceration in the first

childbirth. Spontaneous laceration frequency was found in 6.9% in this study. This result is very low according to the results of other studies. A cause of this result, the study group may have a high frequency of episiotomy in the first childbirth.

Urinary incontinence is a classical sign of the childbirth-related perineal trauma, the prevalence of which is estimated, depending on age, at between 27.5% and 49.5% (17, 18).

In our study, postpartum urinary incontinence frequency was found in 62.8%, and was higher than other studies. That's because, in our study, urinary incontinence can be questioned for the first childbirth after.

In this study, urinary incontinence frequency was higher in the women with perineal trauma than the women without perineal trauma ( $p<0.05$ ) (Table 2). Addition, in the women with perineal trauma, urinary incontinence frequency was higher in the women with episiotomy than the women with spontaneous laceration ( $p<0.05$ ) (Table 3). Baydock et al. (19) reported results similar to our study results.

Approximately six in ten women found perineal pain in postpartum 3<sup>rd</sup> months. This result is similar to the results of the other studies (11, 20).

In our study, perineal pain frequency was higher in the women with perineal trauma than the women without perineal trauma ( $p<0.05$ ) (Table 2). Addition, in the women with perineal trauma, we could not find any significantly difference between the women with episiotomy (64.2%) and the women with spontaneous laceration (35.8%) by perineal pain frequency ( $p>0.05$ ) (Table 3). Imarengiaye et al. (11) reported results similar to our study results.

It is difficult to estimate the true frequency of dyspareunia following childbirth. Furthermore, when comparing the findings of research studies, consideration must be given to both the obstetric and clinical variables of the population being studied, as these will affect the frequencies of dyspareunia reported (21). Barrett et al. (22) reported a higher frequency of dyspareunia: 62% of women in their study experienced dyspareunia at some time during the first three months postpartum. In our study, almost half of women had dyspareunia in postpartum 3<sup>rd</sup> months.

In this study, dyspareunia frequency was higher in the women with perineal trauma than the women without

perineal trauma ( $p < 0.05$ ) (Table 2). Addition, in the women with perineal trauma, dyspareunia frequency was higher in the women with episiotomy than the women with spontaneous laceration ( $p < 0.05$ ) (Table 3). In some studies (11, 23) reported similar results to our result.

## LIMITATIONS

In this study, recall bias that may be. Moreover, the degree of perineal tears, and the type and severity of urinary incontinence could not be assessed. This study is not population based and is performed in the only one hospital. Therefore, prevalence rates could not be calculated.

## CONCLUSION

This study has shown that the effect of postpartum perineal trauma urinary incontinence, perineal pain and dyspareunia frequencies increases. And urinary incontinence and dyspareunia frequencies are influenced more by the episiotomy from the laceration. According to these results to reduce the negative effect of postpartum perineal trauma should decrease episiotomy application.

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