Original Article

The Effect of Episiotomy on The Postpartum Comfort Level: A Case-Control Study

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Abstract

Background: Episiotomy, which is one of the interventions frequently performed during childbirth, may affect the comfort level of women after childbirth.
Aim: This study was conducted to determine the effect of episiotomy application on the postpartum comfort level of women.
Methodology: The study was conducted in a case-control design with two groups, including women who underwent and who did not undergo an episiotomy. STROBE was used in the planning, implementation, and reporting of the study design. The study was carried out in the postpartum ward of an Education and Research Hospital in Istanbul between April and July 2018. A total of 360 women were enrolled in the study. The data were obtained using the "Sociodemographic and Obstetric Information Questionnaire" and "Postpartum Comfort Questionnaire (PPCQ)." The questionnaires were filled in by the face-to-face interview method.
Results: The mean age of the women was 28.65±5.60 (min:18 max:42) years, the mean number of pregnancies was 2.75±1.23 (min:1, max:7), and the mean number of children was 1.3±0.97 (min:1, max:4). It was determined that the total PPCQ mean score of postpartum women was 107.69±16.87 (min:77, max:150). When the PPCQ mean scores of women undergoing and not undergoing an episiotomy were compared, a significant difference was found between them ($p>0.05$).
Conclusion: The application of episiotomy during childbirth did not affect the postpartum comfort level of women.

Keywords: Episiotomy, Postpartum Care, Patient Comfort, Postpartum Comfort Questionnaire

Introduction

Episiotomy involves making a controlled incision to the perineal region to enlarge the vaginal opening in order to facilitate difficult childbirths. Thus, it is assumed that an easily repairable incision will be obtained compared to an uncontrolled vaginal tear (Kalis et al. 2012;
Goh et al. 2018; Khresheh and Barclay 2020). In the literature, it is reported that episiotomy facilitates giving birth smoothly and protects women from urogenital complications in subsequent pregnancies, when it is applied correctly and carefully, especially in conditions requiring operative vaginal delivery such as fetal macrosomia, breech deliveries, and shoulder dystocia (Cam et al. 2012; Stedenfeldt et al. 2012). However, recently, the benefits of routine episiotomy have been discussed, and many studies have provided contradictory results (Murpfy et al. 2008; de Leeuw et al. 2008; de Vogel et al. 2012). Some international studies (Carroli and Mignini,

2009; Jiang et al. 2017; Simic et al. 2017) have shown that routine episiotomy adversely affects the pelvic floor function and causes impaired sexual performance, perineal pain, increased blood loss, and negativities in the quality of life by affecting postpartum comfort (Chayachinda et al. 2015).

While the World Health Organization (WHO, 2018) recommends that the rate of episiotomy should be around 10%, the current rate of episiotomy is between 21% and 91%. This rate is above 80% in Turkey. The mode of delivery and interventions performed during childbirth (especially episiotomy application) adversely affect the comfort of mothers (Kolcaba 2003; Karakaplan and Yildiz, 2010; Çapık et al. 2014; Melo et al. 2014). Kolcaba (1991) expressed comfort as "an expected result with a complex structure within the social, physical, environmental, and psychological integrity regarding help, providing peace, and overcoming problems related to an individual's needs." However, it is reported that interventions performed during childbirth adversely affect the comfort of mothers (Kolcaba 2003; Karakaplan and Yildiz, 2010; Capik et al. 2014; Melo et al. 2014, Buyukkal 2019). Therefore, this study was conducted to determine the effect of episiotomy, which is one of the interventions performed during childbirth, on the comfort level.

Methodology

Design of the study: The STROBE (The Strengthening the Reporting of Observational Studies in Epidemiology) statement was used in the planning, implementation, and reporting of the study design (Karacam et al. 2014). The study was conducted in a case-control design with two groups, including women undergoing and not undergoing an episiotomy.

Place and participants of the study: The population of the study consisted of women in the postpartum ward of an Education and Research Hospital in Istanbul between 1 April 2018 – 1 July 2018. Based on the study carried out by Pınar et al. (2009) on postpartum comfort, the minimum sample size required for the study was obtained to be 356 by calculating it according to 5% type I error probability and 95% confidence interval. A total of 360 women, undergoing (179 women) and not undergoing (181 women) an episiotomy, who met the inclusion criteria, were included in the sample of the study.

Inclusion criteria for the study: The criteria for inclusion in the study for both groups are being aged between 18-45 years, having had a vaginal delivery, being in the first 24 hours postpartum, not having developed a pregnancy-related risky condition (such as hypertension, diabetes, and depression) and postpartum complications, and volunteering to participate in the study. Women who did not speak Turkish and had multiple pregnancies were excluded from the study.

Data Collection Procedure: After consent was obtained from the participants, the questionnaires were filled in by the face-to-face interview method. It took approximately 20 minutes to fill in the study questionnaires.

Data Collection Tools: The data were obtained using the "Sociodemographic and Obstetric Information Questionnaire" and "Postpartum Comfort Questionnaire (PPCQ)." The Sociodemographic and Obstetric Information Questionnaire was prepared as a result of the literature review (Arslan, 2001; Yılmaztürk, 2010) by the researchers and consists of a total of 18 questions including sociodemographic and obstetric variables such as age, education, place of residence, income level, number of pregnancies, number of births, number of children, episiotomy status during childbirth, the diet of the infant, care provided to the infant, and the social support system. The Postpartum Comfort Questionnaire (PPCQ) is a Likert-type scale consisting of 34 items and developed by Karakaplan and Yıldız (2010) to determine postpartum comfort. Each item is scored between "strongly agree" (5 points) and "strongly disagree" (1 point).

The statement of completely agree in positive sentences indicates the best comfort (5 points), while it indicates the lowest comfort (1 point) in negative sentences. Accordingly, the lowest score that can be obtained from the scale is 34, and the highest score is 170. The scale has three sub-dimensions "physical, psychospiritual, and sociocultural." The increase in the score obtained from the scale indicates that comfort increases. Cronbach's alpha value of the scale was determined to be .78 (Karakaplan and Yıldız, 2010). In this study, Cronbach's alpha value for the PPCQ was found to be .87.

Data Analysis: In the data analysis, the Statistical Package for the Social Sciences (SPSS, SPSS Inc., Chicago, IL, U.S.A.) version 20.0 was used. The

descriptive statistics of the sociodemographic and obstetric variables (mean, standard deviation, and frequency distributions) were presented. The chi-square test among nonparametric tests was used to evaluate differences between the sociodemographic and obstetric variables of women undergoing and not undergoing an episiotomy, while the Mann-Whitney U test among nonparametric tests was used to evaluate the relationship between episiotomy application and PPCQ mean scores. Finally, $p < 0.05$ was accepted to be significant.

Ethical issues: This study was approved by the Republic of Turkey Haliç University Non-Interventional Clinical Research Ethics Committee (30-25.04.2018). Written consent (16867222-604.01.01) was obtained from the unit to which the hospital where the study was conducted was affiliated. Written consent was obtained from Karakaplan, who developed the Postpartum Comfort Questionnaire (PPCQ) to be used in the study and women who volunteered to participate in the study.

Results

This study was conducted on two groups in the postpartum period, including 179 women undergoing an episiotomy and 181 women not undergoing an episiotomy. The mean age of the women was 28.65±5.60 (min:18, max:42) years, the mean number of pregnancies was 2.75±1.23 (min:1, max:7), and the mean number of children was 1.3±0.97 (min:1, max:4). When the women undergoing and not undergoing an episiotomy were compared in terms of sociodemographic and obstetric characteristics, a significant difference was found between the income level ($p=.006$, $p<0.05$) and parity ($p=.043$, $p<0.05$) variables. There was no significant difference between the other variables examined (Table 1).The distribution of postpartum women's PPCQ total score and sub-dimension mean scores is given in Table 2. The PPCQ overall total score average was found to be 107.69±16.87 (Table 2). When the PPCQ mean scores of women undergoing and undergoing an episiotomy were compared, no significant difference between the two groups was found ($p=0.427$, $p>0.05$). When the groups were compared in terms of the PPCQ sub-dimension mean scores, no significant difference ($p>0.05$) was found between the status of episiotomy application and the physical comfort sub-dimension and sociocultural comfort sub-dimension. There was a significant difference ($p=0.003$, $p<0.05$) between the status of episiotomy application and the psychospiritual comfort sub-dimension mean score (Table 3).

Discussion

Having a healthy and comfortable postpartum period is an important part of women's life and the mother-infant relationship. This study was conducted to determine the effect of the status of episiotomy application on the postpartum comfort level. The World Health Organization recommends the limited use of episiotomy (Clesse et al. 2018; Liljestrand, 2015). It is reported that posterior perineal trauma, the need for sutures, and complications decrease with the limited, indicated use of episiotomy, and it has a positive effect on the postpartum quality of life (Clesse et al. 2018; Liljestrand, 2015). Despite all pieces of evidence supporting the limited use of episiotomy, exact indications for episiotomy are still unclear.

In this study, the two groups undergoing and not undergoing an episiotomy were generally similar in terms of sociodemographic and obstetric characteristics. There was a difference between the groups only in terms of income level and parity.

In this study, it was detected that the rate of episiotomy increased in low-income women. When evidence-based practices are reviewed, it is observed that the highest episiotomy rates are in middle-income countries (Miller et al. 2016). It is stated that this may be due to increased interventions performed to prevent maternal deaths and the widespread obstetric medicalization (Chaves et al. 2015). In a meta-analysis involving twelve episiotomy studies, it is observed that seven of the studies were conducted in low-income countries (Jiang et al. 2017). The result of this study is similar to the literature in terms of income level. Although it is stated that episiotomy is performed to facilitate difficult childbirths, the indication states are multifactorial (Correa Junior and Passini Júnior, 2016). One of these indications is the number of pregnancies. In a study conducted in France, it was reported that nulliparity was an important criterion among the reasons for gynecologists to apply an episiotomy (Gachon et al. 2019).

Table 1. Comparison of the groups in terms of sociodemographic and obstetric characteristics (N= 360)

	Undergoing an episiotomy (n= 179)		Not undergoing an episiotomy (n= 181)			
Variables	n	%	n	%	X^2*	p**
Education level						
University under	158	88.3	154	85.1	3.814	.149
University and above	21	11.7	27	14.9		
Employment condition						
Employed	31	17.3	33	18.2	.051	.891
Unemployed	148	82.7	148	81.8		
Family type						
Nuclear family	127	70.9	129	71.3	.005	.946
Extended family	52	29.1	52	28.7		
Income						
Low/Middle	154	86.0	135	74.6	7.450	**.006**
High	25	14.0	46	25.4		
Parity						
Primiparous	49	27.4	23	12.7	12.100	**.000**
Multiparous	130	72.6	158	87.3		
Number of living children	161	89.9	163	90.1	.001	.972
1-2	18	10.1	18	9.9		
3 and above						
Miscarriage						
Yes	65	36.3	76	42.0	1.217	.270
No	114	63.7	105	58.0		
Abortion						
Yes	28	15.6	32	17.7	.269	.604
No	151	84.4	149	82.3		
Planned pregnancy						
Yes	117	65.4	117	64.6	.021	.886
No	62	34.6	64	35.4		
Infant's diet						
Breast milk	121	67.6	123	68.0	.005	.942
Breast milk+formula	58	32.4	58	32.0		
Status of receiving postpartum support						
Yes	150	83.8	156	86.2	.403	.526
No	29	16.2	25	13.8		

* Chi-square Test **p<0.05

Table 2. Distribution of Postpartum Women's PPCQ Total Score and Sub-dimension Mean Scores (N= 360)

PPCQ Sub-dimensions	Mean ± sd	Min-Max
Physical comfort	39.66±8.67	24-64
Psychospiritual comfort	40.38±5.34	29-50
Sociocultural comfort	27.65±5.56	18-42

Total	107.69±16.87	77-150

Table 3. Comparison of the PPCQ Mean Scores of Women Undergoing and Not Undergoing an Episiotomy (N= 360)

PPCQ Sub-dimensions	Undergoing an episiotomy (n= 179)	Not undergoing an episiotomy (n= 181)		
	Mean±sd	Mean±sd	Z*	p**
Physical comfort	38.89±8.58	40.43±8.72	-1.597	.110
Psychospiritual comfort	41.24±4.85	39.52±5.66	-2.963	**.003**
Sociocultural comfort	28.44±5.18	26.88±5.83	-2.683	.007
Total	108.57±15.67	106.82±17.99	-.794	.427

*Mann-Whitney U Test **p<0.05

According to a meta-analysis, obstetricians and midwives stated that they thought that episiotomy provided a safer, easier, and manageable delivery in terms of preventing lacerations in primigravid women (Kettle et al. 2017). In the study carried out by Amorim et al. (2017), it was determined that more than half of women undergoing an episiotomy were primiparous. In a meta-analysis, the episiotomy application rate was reported to be higher in nulliparous women (Jiang et al. 2017). Schantz et al. (2015) reported in their study that nulliparous women underwent an episiotomy more than multiparous women. Baghurst and Antoniou (2012), Trinh et al. (2013) also found in their studies that parity was associated with episiotomy, and the rate of episiotomy increased in primiparous women. This is thought to be due to protecting from pelvic floor damage that may occur in nulliparous women. However, in the current study, the rate of episiotomy in multiparous women was found to be higher compared to primiparous women. In the study conducted by Shmueli et al. (2017), the parity status was not considered to be a risk factor and did not affect the episiotomy rate (Shmueli et al. 2017). As is seen, no clear line in terms of parity is reported in the literature. However, the high rate of episiotomy application in multiparous women in the current study suggests that episiotomy has been performed in previous childbirths and there may be women undergoing a recurrent episiotomy due to scar tissue. The postpartum period, which is one of the critical periods for women, is a period in which physical, psychological, and social stressors are the most intense, and women should deal with these stressors, otherwise, it is a crisis period. During the postpartum period, determining the needs of mothers, increasing their comfort, understanding and eliminating their problems are very important (Kolcaba 2003; Karakaplan and Yıldız, 2010; Çapık et al. 2014). In our study, it was found that all the women included in the study had moderate postpartum comfort in the postpartum period. In the literature, there are studies that are parallel to the results of the current study (Çapık et al. 2014; Akgun 2016).

In this study, no significant difference was found between the PPCG mean scores of women undergoing and not undergoing an episiotomy ($p<0.05$). In the study conducted by Akgun (2016) on the factors affecting postpartum comfort, no significant difference was found between the PPCQ mean scores of women undergoing and not undergoing an episiotomy. The current study is similar to the study carried out by Akgun (2016).

Physical comfort is the individual's perceptions of his/her body. It involves physiological factors such as resting, nutritional status, gastrointestinal functions, oxygenation status, and response to diseases. Any deterioration that may occur in these physiological functions may also affect a person's comfort (Kolcaba, 2003; Dimarco, 2005; Parker and Smith, 2010). The most common condition that

disturbs women at most and affects their physical comfort during the postpartum period is reported to be pain caused by an episiotomy incision (Jiang et al. 2017; Amorim et al. 2017; Melo et al. 2014; Kömürcü et al. 2008). In this study, it was observed that women who underwent an episiotomy had a lower physical comfort score than women who did not. However, there was no significant difference between them ($p>0.05$). Likewise, in the study conducted by Akgün (2016), the physical comfort score of women who underwent an episiotomy was observed to be lower compared to that of women who did not undergo an episiotomy. However, there was no significant difference between them. This may be the result of the good support of women who underwent an episiotomy in terms of physical support in the postpartum period.

Psychospiritual comfort is the comfort of spiritual, mental, and emotional components. When the elements that make up psychospiritual comfort are examined, they are observed to include emotions such as spiritual, mental and psychological components giving meaning to the individual's life, appreciation, self-concept, self-awareness, self-esteem, and sexuality (Kolcaba and Kolcaba, 1991). In this study, it was determined that women who underwent an episiotomy had higher psychospiritual comfort scores than women who did not undergo an episiotomy, and the difference between them was significant ($p<0.05$). In the study conducted by Akgün (2016), similarly to the results of this study, it was determined that the psychospiritual comfort means scores of women who underwent an episiotomy were significantly higher than those of women who did not undergo an episiotomy. This result may have emerged due to the fact that women received more psychospiritual support, which includes support and attention, due to having undergone an episiotomy.

Factors such as interpersonal communication, religious beliefs, traditions and customs of the family constitute sociocultural comfort (Kolcaba and Kolcaba, 1991; Kolcaba 1991). Providing care by taking into account the effects of social and interpersonal communication, lifestyle, individual's and family's traditions, beliefs, culture and values on a person's perceptions and values will increase the sociocultural comfort of the individual. Furthermore, insufficient social care to be given to the individual affects comfort adversely in factors such as not being able to meet the maintenance expenses (Kolcaba, 2003). In this study, it was observed that women undergoing an episiotomy had higher sociocultural comfort scores than women not undergoing an episiotomy. However, no significant difference was found between the episiotomy application status and the sociocultural comfort sub-dimension ($p>0.05$). This result suggests that the woman receives sociocultural support in a way that does not decrease her sociocultural comfort, whether or not an episiotomy is applied.

Conclusion: Episiotomy, which is among the most common interventions applied to women during vaginal delivery, is mostly used as a routine care policy. As a result of this study, it was determined that the application of episiotomy did not affect the postpartum comfort of women. However, it should not be ignored that all women, whether episiotomy is applied or not, have a medium level of comfort and should be supported in this regard.

Limitations and Strengths: The study has some limitations. Firstly, the study population is limited to covering the postpartum comfort of mothers in a single hospital only. Therefore, the findings of the study cannot be generalized to all women. Secondly, the PPCG is a self-report scale, and the data were accepted in line with the mothers' statement, not by observation, but by the face-to-face interview method. The third limitation may have prevented the evaluation of discomforts that will emerge at a later time since the results of the study were evaluated at 24 hours postpartum.

The strength of the study is that there are no studies conducted and published on the effect of episiotomy application on postpartum comfort. Therefore, the findings of the study may contribute to the information about the effect of episiotomy application on the postpartum comfort of women.

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