

Retrospective Analysis of Episiotomy Rate in Erciyes University

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OBJECTIVE: The purpose of the study was to assess the episiotomy rate and perineal outcome in women delivered in 2013-2014.

STUDY DESIGN: Birth data and perineal outcome of women delivering singleton, live-born infant weighting more than 1000 gram in 2013- 2014 in Erciyes University Department of Obstetrics and Gynecology were evaluated retrospectively.

RESULTS: A total of 580 birth occurred in our clinics in 2013- 2014. The mean maternal age 27.6 ± 6.2 (min- max: 16-46 years), parity 1.17 ± 1.2 (min- max: 0-14), birth weight 3033.1 ± 610 (min- max: 1070-4580 gram). The episiotomy rate for whole population was 19.4%. The episiotomy rate for multiparous and nulliparous were 6.1%, and 43.1% respectively. No cases of third and/or fourth degree perineal trauma were detected during the study period. The most common episiotomy indication was unfavorable pelvic examination (n: 35, 31.2%).

CONCLUSION: Restrictive episiotomy application does not increase third and fourth degree perineal lacerations. With the increasing experiences and training, the episiotomy ratio can be further decreased in nulliparous women.

Key Words: Episiotomy, Routine episiotomy, Restrictive episiotomy, Perineal damage

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Introduction

Episiotomy is the surgical incision of the perineal body at the end of the second stage of labour.¹ Episiotomy can be performed for both maternal and fetal indications. Maternal indications includes; to decrease maternal effort by shortening the second stage of labor, and to prevent severe perineal trauma. Fetal reasons for episiotomy are to reduce fetal birth trauma, and provide rapid delivery in case of fetal distress. In Turkey, and other developing and underdeveloped countries as well, episiotomy has been routinely performed. However, presumed beneficial effects of episiotomy on the mother and fetus have recently been challenged. While evidence against beneficial effects of episiotomy on severe perineal and fetal trauma, and pelvic organ relaxation are accumulating, the supposed salutary effect on postpartum pain, bleeding, wound healing are

being refuted. In addition, debate regarding the medicalisation of human birth by means of routine episiotomy application which is thought to breach female genital organ integrity is markedly increasing, especially in developing countries.²⁻⁶

Within this theoretical framework, routine episiotomy application was abandoned at 2012-2013 in Erciyes University, Faculty of Medicine Department of Obstetrics and Gynecology and our experiences with regard to demographic characteristic, and perineal outcomes, as well as comparison of these data between routine episiotomy group and selective episiotomy group were reported before.⁷ In the present study, we evaluate the effect of experience gained in the first year of transition from routine to selective episiotomy for further reduction of episiotomy rate in our clinic based on our data recorded in 2013-2014. In addition, we discussed the indication of episiotomy in our clinic with respect to current literature.

Material and Method

In this study, data of all live-birth, singleton deliveries, weighting more than 1000 gram were analyzed retrospectively with regard to demographic features, and perineal outcome. Informed consent was taken from all pregnant women applied for birth to our clinic. The anterior (para-urethral) traumas were defined as lacerations including anterior vaginal wall, labials, and clitoris. The posterior (fourchette) traumas were classified as:

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1. Degree: Perineal skin and vaginal mucosa
2. Degree: Perineal skin and muscles
3. Degree: Anal sphincter complex
4. Degree: Anal sphincter complex and rectal mucosa

Maternal age, gravity, parity, episiotomy rate, perineal laceration rate were evaluated at the end of the 2013. The study was approved by the Ethical Committee for Clinical Research at Erciyes University, Faculty of Medicine.

In the statistical analysis, continuous variables were expressed as median, minimum, maximum. Categorical variables were given as numerical and percentage. Mann-Whitney U and Chi - square tests were used to compare the variables between groups. The p value for statistical significance was set at 0.05 ($p < 0.05$).

Results

A total of 710 delivery occurred in our clinics between 2013- 2014. Forty cases which demised in- utero and ninety cases weighting lower than 1000 gram were excluded from the study. A total of 580 deliveries were included for the final analysis. The mean maternal age 27.6 ± 6.2 (min- max: 16-46 years), gravidity 2.6 ± 1.6 (min-max: 1-15), parity 1.17 (min-max: 0-14), birth weight 3033.1 ± 610 gram (min- max: 1070–4580 gram). The episiotomy rate for the whole population was 19.4% (Table 1).

Table 1: Comparison of demographic data and perineal outcomes in women (n:580) between 2013-2014

	Mean \pm Std. Deviation (min-max)	
Age	27.6 \pm 6.2 (16-46)	
Gravida	2.6 \pm 1.6 (1-15)	
Parity	1.17 \pm 1.2 (0-14)	
Birth_weight	3033.1 \pm 610 (1070-4580)	
	%	n
First degree laceration	16.2	94
Second degree laceration	7.6	44
Parauretral laceration	2.9	17

The episiotomy rate for nulliparous and multiparous were 43.1% and 6.1%, respectively. Comparison of birth data of last three years showed that overall episiotomy rate and episiotomy rate in nulliparous women were decreased steady. However, the rate decreased abruptly in multiparous women in 2012- 2013 and no further statistically significant decrease was observed from 2013 to 2014 (Figure 1). The comparison of demographic data and perineal results of both multiparous and nulliparous in the last three years in our clinic were shown separately in Table 2, Table 3, respectively.

In the study period, seventeen cases of para-urethral trauma were seen (2.9%). The first and second degree lacera-

Table 2: Comparison of demographic data and perineal outcomes in multiparous women between 2011-2014

Years	2011-2012a (Routine episiotomy)	2012-2013b (Restrictive episiotomy)	2013-2014c (Restrictive episiotomy)	p
Maternal Age	30.3 \pm 5.8	30.3 \pm 5.8	29.9 \pm 5.7	0.745
Total Birth	651	619	580	0.557
Gravida	3.4 \pm 1.4	3.4 \pm 1.4	3.3 \pm 1.5	0.532
Parity	1.8 \pm 1.0	1.9 \pm 1.1	1.8 \pm 1.1	0.875
Birth Weight	3026.0 \pm 606.1	3031.4 \pm 600.5	3085.2 \pm 622.6	0.350
Episiotomy rate	87.7% (307)	6.8% (24)	6.1% (23)	a-b <0.001 b-c =0.937 a-c <0.001

Table 3: Comparison of demographic data and perineal outcomes in nulliparous women between 2011-2014

Years	2011-2012a (Routine Episiotomy)	2012-2013b (Restrictive Episiotomy)	2013-2014c (Restrictive Episiotomy)	p
Maternal Age	24.7 \pm 4.8	23.9 \pm 4.6	23.5 \pm 4.8	0.246
Total Birth	651	619	580	0.557
Gravida	1.2 \pm 0.6	1.2 \pm 0.5	1.2 \pm 0.7	0.819
Birth Weight	2798.1 \pm 668.0	2837.6 \pm 638.3	2942.9 \pm 577.3	0.038
Episiotomy rate	89.7% (270)	55.4% (149)	43.1% (90)	a-b <0.001 a-c <0.001 b-c <0.001

tion rates were 16%, 2% and 7.6%. No case of third or fourth degree laceration was seen in the study period. The most common indication for episiotomy in our clinic was unfavorable pelvic examination (contracted pelvis) which constitutes 31.2% of all cases. The distribution of episiotomy indication is presented at Table 4.

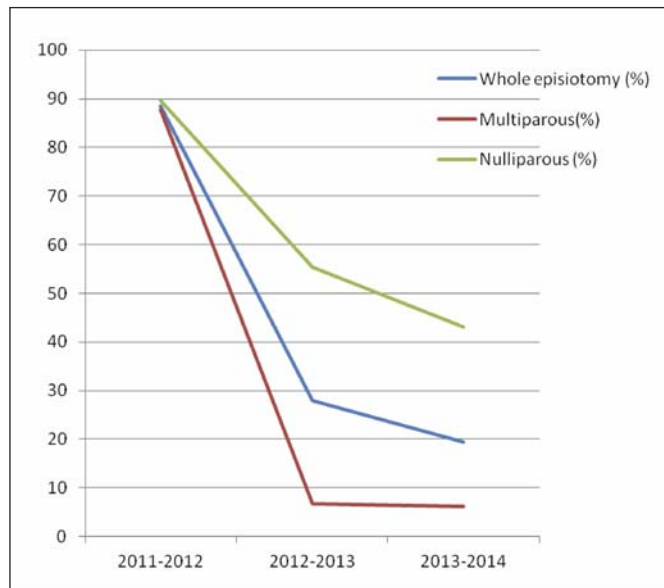


Figure 1: The schematic diagram of the episiotomy trend in our clinic between 2011 and 2014.

Table 4: Episiotomy indications in 2013- 2014

Indication	(%)	n
Short Perineum	6.2	7
Fetal distress	25	28
History of perianal disease	0.9	1
Poor maternal compliance	11.6	13
Elective	18.7	21
In vitro fertilisation	0.9	1
Unfavourable pelvic examination	31.2	35
Shoulder Dystosia	0.9	1
Macrosomia	3.6	4
Prematurity	0.9	1

Discussion

Episiotomy are usually applied for shortening the duration of second stage of labor in cases of fetal distress, prolonged second stage of labor, and for preventing third and fourth degree perineal lacerations, pelvic relaxation, and for ensuring more space for maneuvering in operative vaginal delivery.^{1,2} However, current literature suggests that episiotomy increases 3th, and 4th degree perineal laceration, bleeding, and has no role in reducing pelvic relaxation, and urinary incontinence.⁹⁻¹² Current guidelines recommend that routine episiotomy ap-

plication including operative vaginal delivery should be abandoned.¹³

The prevalence of episiotomy varies between countries, and even different rates may be reported from different regions of the same country.¹⁴ While the lowest episiotomy rates was reported from North European countries (Sweden 9.7%, Denmark 13.9%), the highest ratios were reported from far east (Taiwan 100%, China 82%). The episiotomy rates are 32.7%, and 23.8% in the America, and Canada, respectively.¹⁴ Though no national statistics was reported for Turkey, the current rate in Turkey is reported as 65% in the international literature.¹⁴ Şahin et al. reported that episiotomy was performed in 65% of all deliveries, and 90% of primiparous.¹⁵ In another study, Sayiner et al, reported the episiotomy rate of 96.7% in primigravidas, and 51.8% in multiparous women.¹⁶ Our data regarding 2011- 2012 in which routine episiotomy has been applied are similar to those of other data reported from Turkey^{14,15}.

In our clinic, routine episiotomy application was abandoned first in 2012-2013, and selective episiotomy application was adopted. In the first year of transition, the episiotomy rates were reduced from 87, 7% to 6.8% in multiparous, and from 89.7% to 55.4% in nulliparous.⁷ In the present study, we primarily focused on the effect of experience of resident gained during the transition period. Within this frame, we observed that episiotomy rate was significantly reduced in multiparous women in the first year after abandoning routine episiotomy application 87,7% vs. 6.8%. Whereas, further decline in the episiotomy rate in multiparous women was not observed in the second year (6.8% vs. 6.1%). In the nulliparous women, episiotomy rates significantly decreased at first and second years 89,7%^a vs., 55.4%^b vs. 43,1%^c (a-b<0.001, a-c<0.001, b-c<0.001). Our data suggest that episiotomy rate can be easily reduced in multiparous. However, reducing episiotomy rate in nulliparous women needs longer time in order to change clinical habits, and to increase the experiences and practical capabilities of the residents.

At the beginning of 2000s, medical associations suggested selective episiotomy application as an evidence based practice, and initiate national programme for reducing episiotomy rates. In France, episiotomy rate has been reduced from 55.7% to 13% between 2004-2011.¹⁷ In Argentina, nationwide episiotomy reduction program decrease episiotomy rate from 82.6% to 30%.¹⁸ Nkwabong et al showed that it was possible to reduce episiotomy rate below 10% in Cameroon.¹⁹ The common message of all these studies is that the surveillance, and the epidemiologic feedback is essential in order to reduce episiotomy rate. In accordance with our results, the episiotomy rate was reduced earlier in multiparous than nulliparous in other studies.^{20,21}

Third and fourth degree perineal lacerations are the most

serious perineal complications of the vaginal delivery. The 3 and 4 degree perineal traumas complicates 0-2.3% of deliveries when episiotomy is performed, and 0.2- 9% when mediolateral episiotomy is performed, and this ratio increases to 3-2.4% when midline episiotomy is carried out.²² In our clinic, no cases of third or fourth degree perineal trauma occurred in 2013-2014. Interestingly, no severe perineal trauma complicated delivery between 2012-2014 years where selective episiotomy adopted. In contrast, two cases of third degree perineal trauma occurred in 2011-2012 where routine episiotomy applied. Hence, the prevalence of severe perineal trauma seems to be declined in the selective episiotomy group, however, the very small number of patients having severe perineal trauma (n:2) significantly reduce the power of statistical analysis.

Our data showed that the most common indication for episiotomy in our clinic was unfavorable pelvic examination. In our practice, we follow trial of labor²³ in the setting of unfavorable pelvic examination and suspected contracted pelvis with the exception of severe pelvic and vertebral deformity. In these cases, prophylactic episiotomy was thought to be performed for the anticipated prolonged second stage of labor, and severe perineal trauma. However, the value of prophylactic episiotomy in these cases in the absence of documented prolonged second stage or fetal distress has not been studied before, and is not evidence-based. The second most common group of episiotomy indication was 'elective'. The term 'elective' seems to be an umbrella term encompassing miscellaneous indication such as performance anxiety, pressure from senior colleagues, and staffs, and sense of insecurity in delivery without episiotomy. It is clear that this group of indication should be the target for achieving less episiotomy rate in our clinic.

In conclusion, traditionally attributed beneficial effect of episiotomy has recently been limited to certain indication, and therefore routine episiotomy application should be abandoned. Contrary to widespread belief, routine episiotomy can be easily replaced with selective episiotomy. However, collection of data, and continued education and feedback of results are essential to achieve targeted episiotomy rate.

Erciyes Üniversitesi'nde Epizyotomi Oranının Retrospektif Analizi

AMAÇ: Bu çalışmanın amacı, 2013-2014 senesinde kliniğimizdeki doğumlarda epizyotomi oranının ve perineal sonuçların incelenmesidir.

GEREÇ VE YÖNTEM: Erciyes Üniversitesi Tıp Fakültesi Kadın Hastalıkları ve Doğum Ana Bilim Dalı'nda, 2013-2014 senesinde 1000 gram üzerindeki canlı doğum yapan ve sınırlı epizyotomi uygulaması yapılan olgularda perineal sonuçlar retrospektif olarak değerlendirildi.

tomi uygulaması yapılan olgularda perineal sonuçlar retrospektif olarak değerlendirildi.

BULGULAR: 2013-2014 senesinde kliniğimizde toplam 580 doğum gerçekleşti. Ortalama anne yaşı 27,6±6,2 (min- max: 16-46 yıl), parite 1,17±1,2 (min- max: 0-14), doğum ağırlığı 3033,1±610 (min-max: 1070-4580 gram) olarak belirlendi. Tüm popülasyon için epizyotomi oranı %19,4 iken, bu oran multiparlarda %6,1, nulliparlarda %43,1 olarak bulundu. Çalışma süresince üçüncü veya dördüncü derece perine laserasyonu izlenmedi. En sık epizyotomi endikasyonu uygunsuz pelvik muayene olarak belirlendi (n:35, %31,2).

SONUÇ: Sınırlı epizyotomi uygulaması üçüncü ve dördüncü derece perine laserasyonu insidansını artırmamaktadır. Artan deneyim ve eğitim ile epizyotomi oranlarının nullipar olgularda daha da düşürülmesi mümkündür.

Anahtar Kelimeler: Epizyotomi, Rutin epizyotomi, Sınırlı epizyotomi, Perineal hasar

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