



Comparing the Rate of Perineal Tears with and Without Episiotomy in Primigravida Women

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Authors' contributions

This work was carried out in collaboration among all authors. Author Neelam designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors KB and SK managed the analyses of the study. Authors KF, AN and TAD managed the literature searches and contribution in manuscript writing. All authors read and approved the final manuscript.

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ABSTRACT

Objective: To compare the frequency of perineal tears (3rd and 4th degree) with and without episiotomy in primigravida women.

Setting: Department of Obstetrics and Gynecology at peoples Medical College Hospital (PMCH) Nawabshah.

Duration of Study: Six month from March 2015 to September 2015.

Study Design: Randomized control trial.

Subject and Methods: In this study 322 primigravida women with singleton pregnancy and cephalic presentation were included. The patients were kept in labour room till the second stage of labour. The patients were divided into two groups equally. In Groups-A, right mediolateral episiotomy was performed after infiltration with local anaesthesia at the time of crowing. The Group B in which episiotomy was not given. After delivery, patients were examined for extension of episiotomy in Group A and 3rd and 4th degree perineal tear in both groups.

Results: Mean age was 27.83±6.27 years in group A and 27.60±4.93 years in group B (p=0.724).

Mean gestational age was 38.17 ± 1.25 weeks was in group A and 38.11 ± 1.19 weeks in group B ($p=0.644$). The rate of 3rd and 4th degree perineal tear was significantly higher in group A as compare to group B [60.87% vs. 47.83% $p=0.019$] and [39.13% vs. 26.09% $p=0.013$] respectively.

Conclusion: Episiotomy was found to be an important risk factor for extension of the perineal tear. It should be practiced only where it is indicated like rigid perineum, any instrumental delivery and shoulder dystocia.

Keywords: Perineal tears; episiotomy; primigravida; vaginal delivery.

1. INTRODUCTION

Episiotomy is a frequently conducted procedure. Episiotomy is a surgical procedure that enlarges the vaginal orifice by making a perineum incision in the course of second stage of labour, soon before the fetus is delivered [1,2]. Incision given usually involves perineal body. Transvers perineal muscles and bulbocavernosus muscle but a large incision may also involve pubo-rectalis muscle, pubo-coccygeous muscles and ischioanal fossa [3]. Currently the rate in UK is around 20%. Episiotomy rates may considerably according to individual practice and policies of staff and hospitals. The overall rate in different countries ranges from 8% in Netherlands, 14% in England, 50% in USA [4]. The rate in Pakistan varies from rural to urban areas. Most rural deliveries carried out by midwives are without episiotomy. The rate of episiotomy in primigravida in teaching hospital like lady Wallington Lahore in 1990s was about 93% [5] Latest research showed that episiotomy is not protective against tears. The prevalence of 3rd & 4th degree perineal tear was 0.4% without episiotomy and 4.8% with episiotomy [6,7]. Episiotomy can cause perineal pain and superficial dyspareunia in the long run [8,9]. Episiotomy causes more superficial dyspareunia and perineal pain than a 2nd degree spontaneous perineal tear [8]. Many trial have showed that routine use of episiotomy is correlated with raised risk of trauma, postpartum blood loss, postpartum pain, dyspareunia than those delivered with first and second degree spontaneous tears [10]. Apart from all these there is increased risk of infection, longer healing period, increased chance of gapped wound and increased need for analgesia in patients delivering with episiotomy [11] recently it was stated that While episiotomy is common among primiparous women, higher rates are linked to increased morbidity and a limited benefits [12]. A recent research, on the other hand, suggested that episiotomy should be performed with caution and that clinicians should be using perineal protection strategies to mitigate the incidence of perineal pain as well as provide higher comfort

zone to the female [13]. However others recently reported that current evidence does not support the idea that repetitive episiotomy decreases vaginal/perineal traumas, and further research is needed [7]. After taking above controversial findings this study has been planned to determine the association of perineal tear in normal vaginal delivery of primigravida without episiotomy and with episiotomy, to determine the beneficial effects of episiotomy in primigravida and also to bring about change in routine practice of episiotomy and also reduce the burden of complications, which occur in normal vaginal delivery of primigravida without episiotomy.

2. MATERIALS AND METHODS

This Randomized control trial took place in the Obstetrics and Gynecology department, at peoples Medical College Hospital (PMCH) Nawabshah after taking ethical approval. Study duration was six months from March 2015 to September 2015. Non-Probability consecutive sampling method was used. All the primigravida women with age 17 to 42 years, labouring primigravida between 27 weeks to 40 weeks of gestation by ultrasound, singleton pregnancy and cephalic presentation by ultrasound were included. All the patients underwent instrument delivery having shoulder dystocia according to clinical assessment, breech presentation and died malformed fetus by ultrasound were excluded. After taking written consent detailed history and complete general physical examination for lie presentation and estimated fetal weight was done. The patients were kept in labour room till the second stage of labour. The patients were grouped into two categories equally. In Groups-A, right mediolateral episiotomy was performed after infiltration with local anaesthesia at the time of crowing. The Group B in which episiotomy was not given. Patients were shifted to delivery table and delivery was conducted by the consultant Gynecologists. In half of the patients at time of delivery episiotomy was given. After delivery, patients were examined for perineal tears of 3rd

and 4th degree in both groups. Perineal tear was defined as; injury to perineum at the time of delivery of baby. Third degree was assessed as positive when tear involving the sphincter but not the anal mucosa and when also involves anal mucosa it was assessed labeled as 4th degree. All the data was recorded in study proforma. Data was entered into SPSS version 20 and analyzed accordingly. Numerical variable were computed in the form of mean and standard deviation. Frequency and percentage were computed for categorical variables. T-test and Chi-square test were applied and a p-value ≤ 0.05 was considered as significant.

3. RESULTS

In this study 322 primigravida women with singleton pregnancy and cephalic presentation were studied. The average age and gestational age of the patients was insignificant between both groups as illustrated in Table 1.

The frequency of 3rd and 4th degree perineal tear in group A was significantly high than in group B ($p=0.019$) Figs. 1 & 2.

Stratification analysis was performed and observed that there are no difference between groups in frequency of 3rd degree perineal tear for below and equal to 25 years and 36 to 40 years of age women, while in group A patients it was significantly higher than in group B for 26 to 30 years and 36 to 40 years of age as shown in Table 2. In Table 3, frequency of 4th degree perianal tear was significantly high in group A than group B only for below 25 years of age cases while no significant difference was observed between groups for 26-30 years, 31-35 years and 36-40 years of age groups.

Regarding stratification of gestational age, frequency of 3rd degree 4th degree perineal tear was high in group A than group B for 37 to 38 weeks of gestation ($p<0.05$).

4. DISCUSSION

Perineal trauma, which involves damage to the soft tissues and muscles of pelvic floor,

commonly occurs in vaginal childbirth. Perineal trauma occurs at a rate of 75% in population of Asia, which is comparable to other underdeveloped countries. Nulliparity is one of the most common causes of perineal trauma. Results of our study had showed that the frequency of 3rd and 4th degree perineal tear was significantly high in patients who had received episiotomy as compare to those who had not received episiotomy. ($p=0.019$). In comparison to our results, study conducted by Al Ghamdi DS et al. [14] reported that out of 19374 (0.4%) vaginal delivery patients, 81 patients had perineal tears of 3rd-degree and 4 patients had perineal tears of 4th degree. The episiotomies were all mediolateral, and >60% of these episiotomies were undertaken in primiparous women. An episiotomy, being primiparous, and a constant occipitoposterior location of head were all frequent predisposing factors in perineal tears. However, in contrast to our study, Singh S et al. [15] reported that when comparing nullipara who underwent episiotomy (0.13%) to those who did not (0.62%), the combined incidence of perineal tears of 3rd and 4th degree was found to be significantly lesser ($p0.001$). There is some disagreement about whether episiotomy would be a risk factor of OASIS [16]. Randomized controlled trials, on the other hand, could not show a substantial decrease in OASIS among females who had an episiotomy than those without episiotomy [17]. A case-control analysis revealed that a scared episiotomy with a depth of >16mm, a length > 17mm, lateral incision >9mm, and with a 30-60 degree of angle is significantly correlated with a lower risk of OASIS [18]. Another study conducted by Mazeau PC et al. [19] reported that following episiotomy, there were slightly fewer anal sphincter obstetric injuries ($p 0.0001$). Episiotomy has been passed down through the generations through tradition, and it is still used even though its efficacy has been challenged by researchers. Episiotomy could be prevented by taking some precautions pre and post childbirth, such as proper nutrition, perineal massage for improving elasticity, and kegel exercises, a slowly regulated 2nd stage, and support and warm compresses during a delivery.

Table 1. Comparison of age and gestational age between groups n=118

Variables	Group A	Group B	P-Value
Age (Years)	27.83±6.27	27.60±4.93	0.724
Gestational age (Weeks)	38.17±1.25	38.11±1.19	0.644

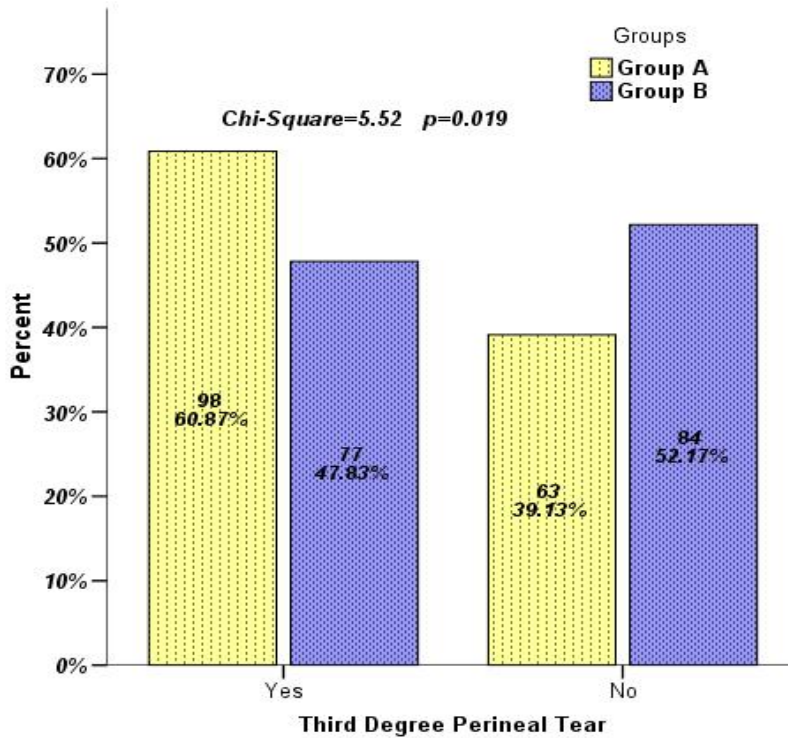


Fig. 1. Comparison the frequency of third degree perineal tear between groups n= 322

Table 2. Comparison of the frequency of 3rd perineal tear between groups with respect to age groups n= 322

Age Groups	3 rd Degree	Group A	Group B	P-Value
≤ 25Years	Yes	31(50%)	33(52.4%)	0.79
	No	31(50%)	30(47.6%)	
26 to 30 Years	Yes	30(68.2%)	24(39.3%)	0.004
	No	14(31.8%)	37(60.7%)	
31 to 35 Years	Yes	28(62.2%)	18(60%)	0.845
	No	17(37.8%)	12(40%)	
36 to 40 Years	Yes	9(90%)	2(28.6%)	0.035
	No	1(10%)	5(71.4%)	

Table 3. Comparison of the frequency of 4th perineal tear between groups with respect to age groups n= 322

Age Groups	4 th Degree	Group A	Group B	P-Value
≤ 25Years	Yes	31(50%)	14(22.2%)	0.001
	No	31(50%)	49(77.8%)	
26 to 30 Years	Yes	14(31.8%)	21(34.4%)	0.78
	No	30(38.2%)	40(65.5%)	
31 to 35 Years	Yes	17(37.8%)	6(20%)	0.10
	No	28(62.2%)	24(80%)	
36 to 40 Years	Yes	1(10%)	1(14.3%)	0.78
	No	9(90%)	6(85.7%)	

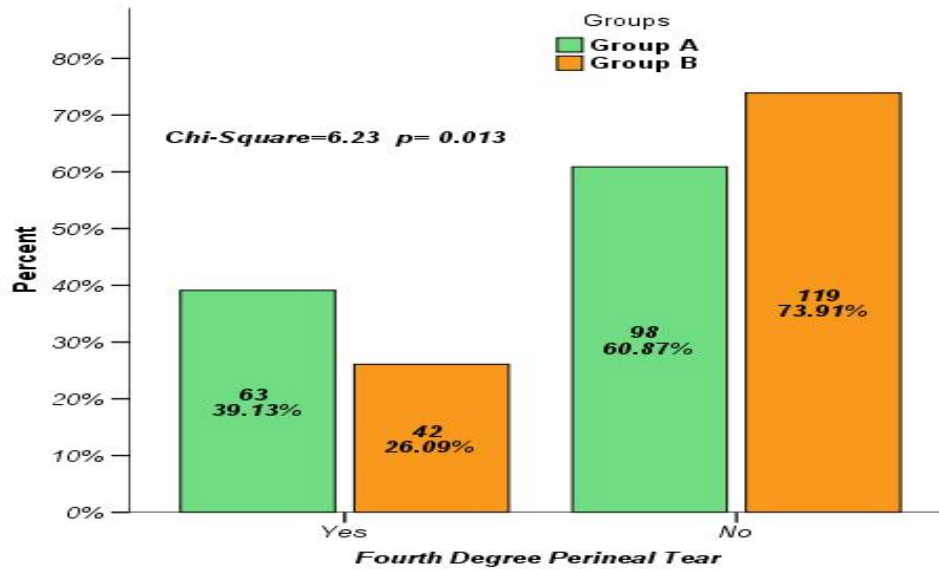


Fig. 2. Compare the frequency of fourth degree perineal tear between groups n= 322

5. CONCLUSION

There are more chances of 3rd and 4th degree perianal tears in primigravida women with episiotomy as compared to without episiotomy. However episiotomy found to be an important risk factor for extension of the perineal tear. It should be practiced only where it is indicated like rigid perineum, any instrumental delivery and shoulder dystocia.

CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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