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Research Article

FREQUENCY OF PERINEAL TEARS IN PRIMIGRAVIDA DELIVERED WITHOUT EPISIOTOMY AT A TERTIARY CARE HOSPITAL

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Abstract:

Objective: To establish the frequency of perineal tears (3rd and 4th degree) in primigravidas delivered without episiotomy at a tertiary care hospital. **Setting:** Department of Obstetrics and Gynecology at Lady Willingdon Hospital, Lahore. **Duration of Study:** Six month from June 2020 to December 2020.

Study Design: Randomized control trial. **Subject and Methods:** 200 primigravida women with singleton pregnancy and cephalic presentation and no other comorbidities were included in the study. The subjects were observed in labor room till the second stage of labour. Two equal groups (A and B) of 100 each subjects were assigned. In Groups-A, right mediolateral episiotomy was performed under local anesthesia at the time of crowing. In Group B no episiotomy incision was given. After deliver, the subjects were looked for any extension of episiotomy in Group A and 3rd and 4th degree perineal tear in both groups. **Results:** Mean age was 26.73±4.27 years in group A and 26.54±4.46 years in group B (p=0.624). Mean gestational age was 37.27±1.73 weeks was in group A and 37.11±1.89 weeks in group B (p=0.646). The rate of 3rd and 4th degree perineal tear was significantly higher in group A as compare to group B [62% vs. 46% p=0.022] and [58% vs. 38% p=0.017] respectively. **Conclusion:** Episiotomy incision was found to be an important trigger for the occurrence and extension of the perineal tear. Therefore it should always be performed only where it is inevitable and highly indicated like rigid perineum, forceps assisted delivery, obstructed labor and shoulder dystocia.

Keywords: Perineal tear; episiotomy; primigravida; labor; spontaneous vaginal delivery.

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1. INTRODUCTION

Episiotomy is a commonly performed procedure. Episiotomy involves a surgical nick in the mediolateral aspect of the perineum that enlarges the vaginal opening during the second stage of labour when the crowning has occurred [1,2]. Incision usually cut through the perineal body, Transverse perineal muscles and bulbocavernous muscle but a larger nick may also traverse pubo-rectalis muscle, pubo-coccygeous muscles and ischioanal fossa [3]. In UK the rate of creating the episiotomy scar is around 20%. Episiotomy rates may vary considerably according to individual surgeon practices and policies of the hospitals. Different countries have shown varied trends ranges from 8% in Netherlands, 14% in England, 50% in USA in this surgical procedure. [4]. Pakistan have shown variation in the rates of episiotomy depending on the patient influx in rural and urban areas. Most deliveries carried out in the underdeveloped areas by midwives are without episiotomy whereas according to the data the rate of episiotomy in primigravida in teaching hospital like lady Willingdon Lahore in 1990s was about 93% [5] Recent study has endorsed that episiotomy has no protective significance against perineal trauma. The prevalence of 3rd & 4th degree perineal tear was observed to be 0.4% without episiotomy and 4.8% with episiotomy [6,7]. Episiotomy usually leads to perineal discomfort and post coital pain as a sequelae [8,9].

Episiotomy causes more perineal trauma and dyspareunia than 2nd degree spontaneous perineal tear [8]. Multiple evidence based studies have suggested that day to day practice of episiotomy is associated with increased incidence of tears, postpartum bleeding, postpartum pain and pain after sexual intercourse as compared to those delivered with first and second degree spontaneous tears [10]. Other than these there are increased chances of catching a surgical site infection, delayed wound healing, wound dehiscence and demand for potent analgesic/ anesthesia cover in patients delivered by episiotomy incision [11] Although it is known that episiotomy is common among primigravida, there is a high prevalence of associated morbidity and is often less beneficial in the long term [12]. Advance studies have streamlined and guided the clinicians for a painless episiotomy incision to prevent unnecessary trauma to the perineal structures [13]. On the contrary some studies nullified the fact that repetitive perineal incisions are not linked to decreased vaginal/perineal traumas, and further probing is required to establish this phenomenon [7]. Taking into consideration the above-mentioned diversified observations and

findings this study has been undertaken to assess the relationship of perineal tear in spontaneous vaginal delivery of primigravida without episiotomy versus episiotomy, establish the beneficial effects of episiotomy in primigravida, to suggest the essential modifications in clinical practice of episiotomy and to lessen the complications associated with spontaneous vaginal delivery in primiparous without episiotomy.

2. MATERIALS AND METHODS:

This Randomized control trial was undertaken in the Obstetrics and Gynecology department, at Lady Willingdon Hospital Lahore after due ethical approval from the concerned bodies. Study was conducted for a period of six months from June 2020 to December 2020. Convenient sampling method was used. All the primigravida with age 18 to 40 years, in the active stage of labor between 28 weeks to 40 weeks of gestation, singleton pregnancy and cephalic presentation confirmed via ultrasound were included in the study. All the patients undergoing instrument delivery having shoulder dystocia according to clinical assessment, breech presentation and aborted/intrauterine deaths as confirmed by ultrasound and fetal tocography were excluded. After taking informed written consent detailed history and complete general physical examination for the lie, presentation, liquor and estimated fetal weight was done. The patients were observed in the labor room till crowning had occurred. The patients were grouped into two divisions of 100 each. In Groups-A, right mediolateral episiotomy was performed under local anesthesia after engagement of the head. In Group B episiotomy was not given. Patients delivered under the supervision of the consultant Gynecologists. After delivery, patients were observed for the perineal tears of 3rd and 4th degree according to the involvement of the anal sphincter and anal mucosa respectively. All the data was recorded in the performa format, fed and analyzed by SPSS version 20. Mean, standard deviation, frequency and percentages were computed for the continuous and categorical variables. T-test and Chi-square test were performed and p-value ≤ 0.05 was considered as significant.

3. RESULTS:

During this study 100 primigravida women with singleton pregnancy and cephalic presentation were studied. The average age and gestational age of the patients was comparable in 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 ($p=0.026$) Figures. 1 & 2.

Stratification analysis was performed and found that that there was no difference between groups in incidence of 3rd degree perineal tear for ages below and equal to 27 years and 38 to 42 years of age women, while in group A patients it was significantly higher than in group B for the ages 27 to 30 years and 38 to 42 years as shown in Table 2. Whereas In Table 3, frequency of 4th degree perineal tear was significantly

high in group A than group B only for the cases of the ages below 27 years cases while no significant difference was observed between groups for 27-30 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 higher in group A than in group B for 35 to 38 weeks of gestation ($p < 0.05$).

Table 1. Comparison of age and gestational age between Group A and Group B n=200

Variables	Group A	Group B	P-value
Age (Years)	26.73±4.27	26.54±4.46	(p=0.624).
Gestational Age (Weeks)	37.27±1.73	37.11±1.89	(p=0.646)

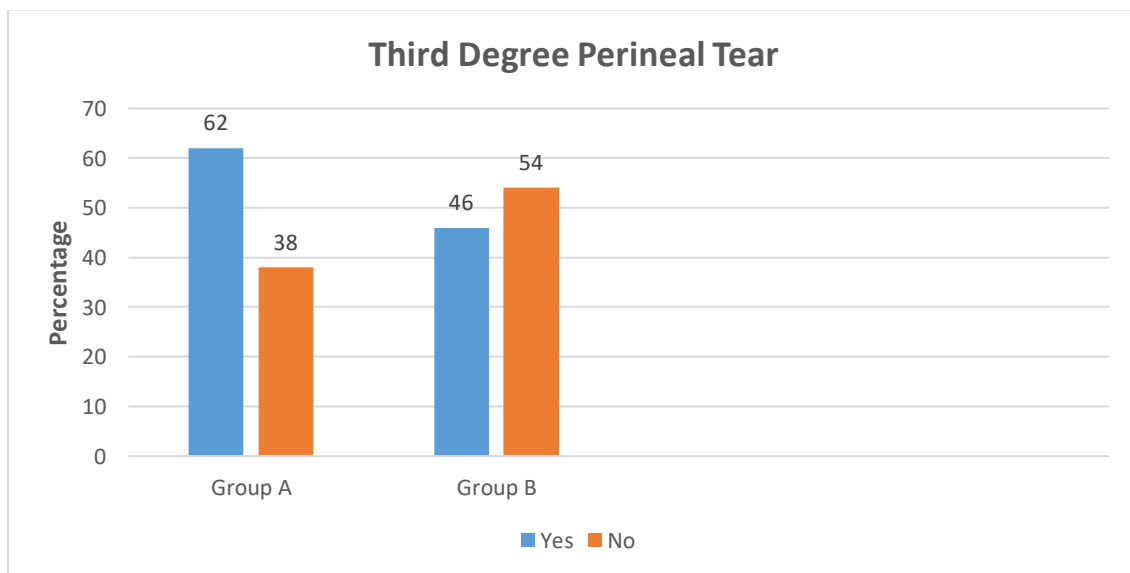


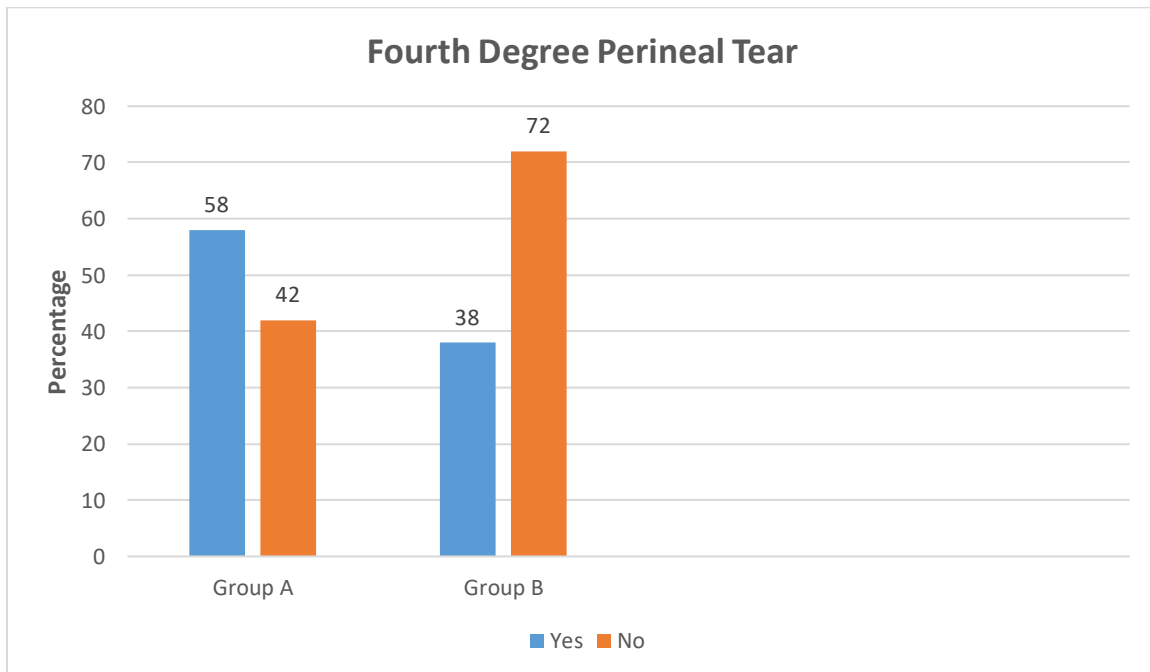
Fig. 1. Comparison of the frequency of third degree perineal tear between groups A and B n= 200

Table 2. Comparison of the frequency of 3rd degree perineal tear between groups with respect to age groups n= 200

Age (Years)	3 rd Degree	Group A	Group B	P-value
18-22	Yes	23	22	0.033
	No	22	23	
23-27	Yes	18	17	0.041
	No	12	13	
28-32	Yes	10	8	0.36
	No	6	8	
33-37	Yes	4	6	0.39
	No	3	1	
38-42	Yes	2	1	0.32
	No	0	1	

Table 3. Comparison of the frequency of 4th degree perineal tear between groups with respect to age groups n=200

Age (Years)	4 th Degree	Group A	Group B	P-value
18-22	Yes	23	20	0.023
	No	22	25	
23-27	Yes	18	13	0.030
	No	12	17	
28-32	Yes	6	5	0.27
	No	10	11	
33-37	Yes	3	2	0.30
	No	4	5	
38-42	Yes	1	1	0.23
	No	1	1	

**Fig. 2. Comparison of the frequency of fourth degree perineal tear between groups A and B n=200**

4. DISCUSSION:

Perineal tear refers to the trauma incurred to the soft tissues and muscles of pelvic floor during a vaginal delivery.

Such tears have a prevalence of about 75% in Asian population, which is comparable to the other underdeveloped nations. Nulliparous women are the most vulnerable group of developing perineal injuries. Results from our study had highlighted that the frequency of 3rd and 4th degree perineal tear was significantly higher in patients who had received episiotomy nick as compared to those who had not received episiotomy. ($p=0.026$). In contrast 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. All such episiotomies were of mediolateral type, and >60% of these episiotomies were undertaken in primigravida women. Surgically created space, previously nulliparous, and a constant occipitoposterior presentation of the baby head were the top predisposing factors for the perineal tears. On the contrary, Singh S *et al.* [15] established that the combined incidence of perineal tears of 3rd and 4th degree was found to be significantly lesser ($p<0.001$) in nulliparous who underwent episiotomy (0.13%) versus those who did not (0.62%). There is slight

controversy about whether episiotomy would be a risk factor of OASIS [16]. Randomized controlled trials, on the other hand, could not establish a substantial decrease in OASIS among females who had an episiotomy than those without episiotomy [17]. A case-control analysis revealed that a controlled episiotomy with a depth of greater than 16mm, a length greater than 17mm, lateral incision greater than 9mm, and with an angle of 30-60 degree had a better clinical outcome with a lower risk of OASIS [18]. Another study conducted by Mazeau PC et al. [19] reported that following episiotomy, there were lesser conversions into anal sphincter and mucosal injuries (p 0.0001). Episiotomy has a strong clinical history with time tested and targeted results yet its efficacy is still debatable by researchers in some parts of the world. The trauma associated with episiotomy can be managed by taking some peripartum and postpartum precautions, such as healthy eating habits, perineal massage, and kegel exercises to strengthen the pelvic floor muscles, and a well monitored and controlled 2nd stage of labor, and support, cushion and warm compresses during parturition.

5. CONCLUSION:

There is an increased risk of 3rd and 4th degree perineal tears involved in primigravida women undergoing episiotomy as compared to those with spontaneous vaginal delivery. Since episiotomy has a strong independent correlation for the extension of the perineal tear. Therefore it should always be performed only where it is inevitable and highly indicated like rigid perineum, forceps assisted delivery, obstructed labor and shoulder dystocia.

COMPETING INTERESTS

Authors declare no competing interests exist in the above study.

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