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Research Article

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

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Abstract:

Objective: To ascertain the occurrence of perineal tears in primigravidas delivered without episiotomy at a tertiary care hospital. **Setting:** Department of Obstetrics and Gynecology at Mayo Hospital, Lahore. **Duration of Study:** Six month from January 2021 to June 2021.

Study Design: Randomized control trial. **Subject and Methods:** 100 primigravida with singleton pregnancy and cephalic presentation and no other risk factors were included in the study. The subjects were kept under observation in labor room till the commencement of second stage of labour. Two groups containing 50 subjects each were assigned as groups (A and B). In Group-A, patients a right mediolateral incision was made for episiotomy under local anesthesia at the time of crowing. In Group B no episiotomy was given. After delivery, the subjects were observed for any extension of episiotomy mark in Group A and 3rd and 4th degree perineal tear in both groups. **Results:** Mean age was 25.71±5.29 years in group A and 27.44±4.56 years in group B (p=0.424). Mean gestational age was 37.09±1.91 weeks was in group A and 37.33±1.67 weeks in group B (p=0.546). The rate of 3rd and 4th degree perineal tear stood significantly higher in group A as compared to group B [69% vs. 49% p=0.022] and [59% vs. 39% p=0.017] respectively. **Conclusion:** Episiotomy incision was found to be an independent risk factor for the creation and extension of the perineal trauma in terms of tears and lacerations. Therefore it is always wise to perform only where it is life saving and highly indicated like unyielding perineum, android pelvis, forceps assisted delivery, obstructed labor and shoulder dystocia.

Keywords: Perineal tear; pregnancy; episiotomy; primigravida; obstructed labor; spontaneous vaginal delivery; perineal trauma

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INTRODUCTION:

Episiotomy is one of the routinely performed procedure in the labour room. Episiotomy involves giving a surgical incision in the mediolateral aspect of the perineum that enlarges the vaginal opening during the second stage of labour when the head of the newborn starts descending [1,2]. Incision usually traverses through the perineal body, transverse perineal muscles and bulbocavernous muscle but a larger nick may also ruptures pubo-rectalis muscle, pubo-coccygeous muscles and ischioanal fossa [3]. UK has a rate of 20% for the creation of the episiotomy scars. Episiotomy rates vary diversely as per individual surgical practices and hospital framework. Different countries host different trends e.g. 8% in Netherlands, 14% in England, 50% in USA in this surgical procedure. [4]. Pakistan has shown varied rates depending on the patient presentation in underdeveloped and developed areas. Most deliveries carried out in the rural settings by midwives are free of episiotomy whereas according to the published data the rate of episiotomy in primigravida in teaching hospitals like lady Willingdon Lahore in 1990s was about 93% [5] Recent study has seconded that episiotomy has no protective mechanism against perineal lacerations. The prevalence of 3rd & 4th degree perineal trauma was observed to be 0.4% without episiotomy and 4.8% with episiotomy [6,7]. Episiotomy usually develops into perineal discomfort and post coital pain as a complication [8,9].

Episiotomy is more associated with perineal damage and painful intercourse than 2nd degree spontaneous perineal tear [8]. Multiple evidence based studies have established that routine episiotomy is associated with increased occurrence of tears, postpartum haemorrhage, postpartum distress and painful sexual intercourse as compared to those delivered with first and second degree spontaneous tears [10]. Other than these there are increased chances of contracting a surgical site infection, slow wound healing, wound rupture, fibrosis and scarring and need for a stronger analgesia in patients delivered by episiotomy incision [11] Although being commonly practiced there is a high risk of associated morbidity and is less beneficial in the long term in the primigravida [12]. Current studies have equipped the clinicians in performing a painless episiotomy incision and in the prevention of unwanted trauma to the perineum [13]. On the contrary some studies nullified the fact that repetitive perineal nicks are not linked to decrease incidence of related traumas, and further research is warranted to

confirm this phenomenon [7]. Taking into consideration the above observations and findings this study has been undertaken to ascertain the relationship of perineal tears in spontaneous vaginal delivery of primigravida without episiotomy versus episiotomy, to establish the beneficial aspects of episiotomy in primigravida, to discuss latest modifications in clinical practice and to check the complications in primiparous associated with spontaneous vaginal delivery without episiotomy.

MATERIALS AND METHODS:

This Randomized control trial was undertaken in the Obstetrics and Gynecology department of Mayo Hospital Lahore after due ethical approval from the concerned bodies. Study was conducted for a period of six months from January 2021 to June 2021. Convenient sampling method was used. All the primigravida with age 20 to 40 years, in the active stage of labor between 32 weeks to 40 weeks of gestation, singleton pregnancy and cephalic presentation confirmed via ultrasound were included in the study. All the patients undergoing forceps assisted delivery having shoulder dystocia according to clinical assessment, breech presentation and aborted/intrauterine deaths as confirmed by ultrasound and fetal cardiac tocography were excluded from the study After taking informed written consent detailed history and complete general physical examination, confirmation 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 50 each. In Groups-A, right mediolateral episiotomy was performed under local anesthesia after engagement of the head. In Group B episiotomy was not given. Subjects 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 and transcribed 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.

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 ($p=0.029$) 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 26 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 28 to 30 years and 38 to 42 years as shown in Table 2. Whereas In Table 3, frequency of 4th degree perianal tear was significantly high in group A than group B only for the cases of the ages below 26 years cases while no significant difference was observed between groups for 28-30 years, 32-35 years and 37-40 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=100

Variables	Group A	Group B	P-value
Age (Years)	25.71±5.29	27.44±4.56	($p=0.424$).
Gestational Age (Weeks)	37.09±1.91	37.33±1.66	($p=0.546$)

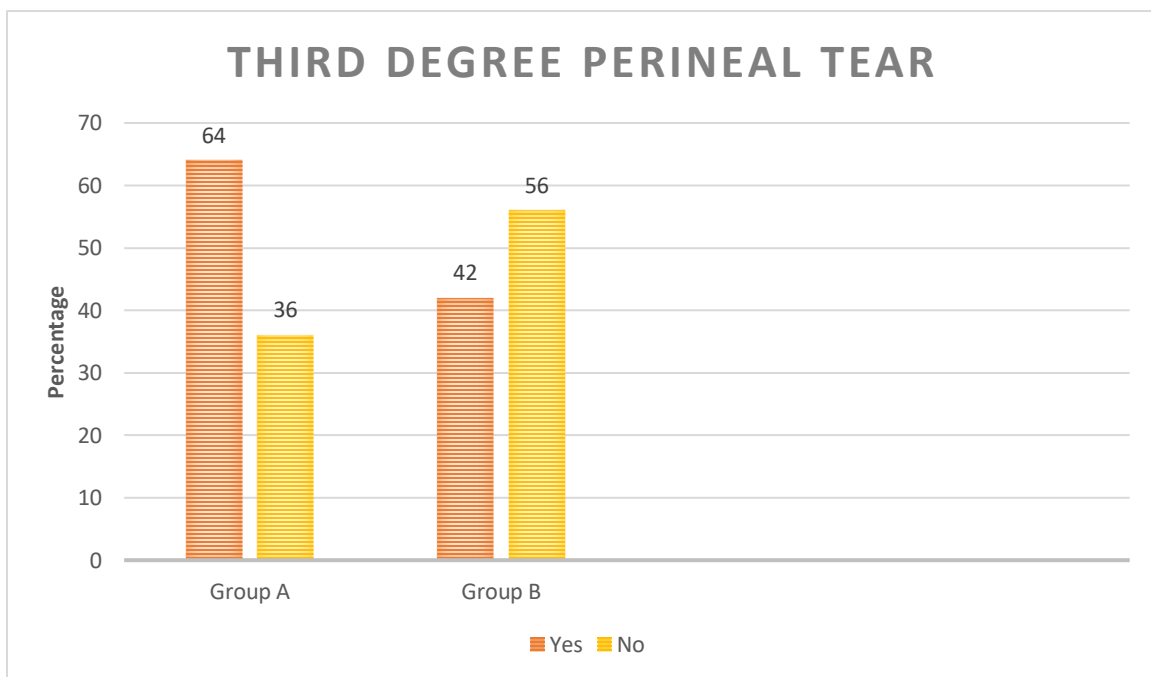


Fig. 1. Comparison of the frequency of third degree perineal tear between groups A and B n= 100

**Table 2. Comparison of the frequency of 3rd degree perineal tear between groups with respect to age groups
n= 100**

Age (Years)	3 rd Degree	Group A	Group B	P-value
18-22	Yes	11	10	0.031
	No	10	12	
23-27	Yes	09	08	0.040
	No	06	07	
28-32	Yes	05	04	0.35
	No	03	03	
33-37	Yes	03	03	0.37
	No	01	02	
38-42	Yes	02	01	0.31
	No	00	00	

**Table 3. Comparison of the frequency of 4th degree perineal tear between groups with respect to age groups
n= 100**

Age (Years)	4 th Degree	Group A	Group B	P-value
18-22	Yes	13	10	0.021
	No	11	13	
23-27	Yes	09	06	0.029
	No	06	09	
28-32	Yes	03	03	0.25
	No	04	05	
33-37	Yes	02	01	0.28
	No	01	02	
38-42	Yes	01	01	0.22
	No	00	00	

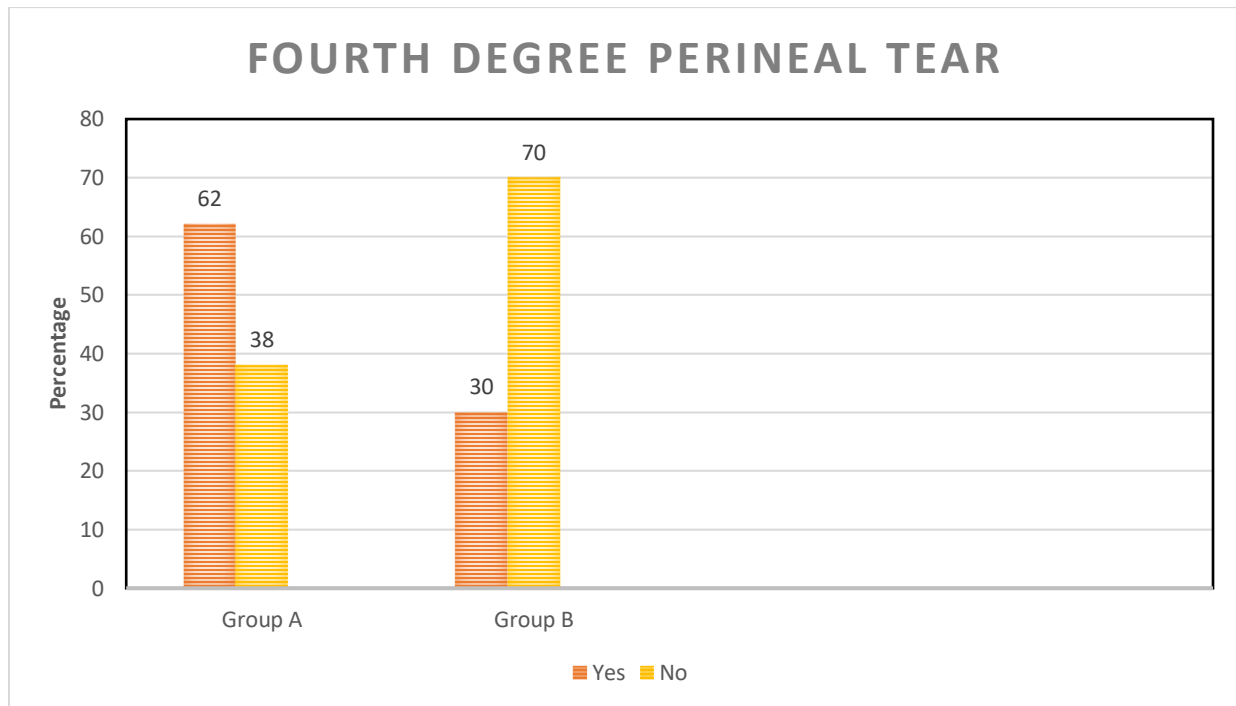


Fig. 2. Comparison of the frequency of fourth degree perineal tear between groups A and B n=100

DISCUSSION:

Perineal tear relates to the damage delivered to the soft tissues and underlying muscles of pelvic floor during a vaginal delivery.

The prevalence of such tears is about 75% in Asian population, which is comparable to the other underdeveloped nations. Primigravida women make the high risk population for attaining 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. ($p=0.029$). In contrast to our results, study conducted by Al Ghamdi DS *et al.* [14] revealed 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 more than 60% of these episiotomies were performed in primigravida women. Previous surgical scar, nulliparity, and a prolonged occipitoposterior presentation of the baby head/obstructed labor were the most common risk 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 exist slight controversy about whether episiotomy would be a risk factor of OASIS [16]. Randomized controlled trials could not establish a substantial decrease in OASIS among females who had an episiotomy than those without episiotomy [17]. A case-control study highlighted 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 favorable clinical outcome with a lower risk of OASIS [18]. Another study conducted by Mazeau PC *et al.* [19] reported that there were fewer post episiotomy conversions into anal sphincter and mucosal tears ($p < 0.0001$). Episiotomy has a proven clinical basis with goal oriented results yet its efficacy is still debatable by researchers in some parts of the world. The distress 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 regulated 2nd

stage of labor, and support, cushion and warm compresses at the time of delivery.

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 trauma and damage to the pelvic floor structures. Therefore, it should always be preferred only when it is in the patient interest or highly indicated like rigid perineum, instrumental delivery, obstructed labor and shoulder dystocia.

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