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PERINEAL LACERATIONS DURING SPONTANEOUS VAGINAL DELIVERY

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Abstract

Introduction *A common postpartum complication is perineal tears. Affected women may experience ongoing physical discomfort psychological stress and social limitations despite the fact that it is frequently dismissed as a minor problem. Pain in the perineum can limit daily activities and hinder mobility. Local information on the prevalence of perineal lacerations during spontaneous vaginal delivery is scarce. In order to improve preventive measures and raise the standard of care for impacted women this study was carried out to assess the frequency of perineal lacerations.*

Objective *to ascertain the prevalence of perineal lacerations among nulliparous women who visit a tertiary care facility during spontaneous vaginal delivery.*

Setting The study was conducted between January 28 and July 28. Department of Obstetrics and Gynecology, Civil Hospital Karachi.

Design *The studys descriptive cross-sectional methodology involved the recruitment of 139 nulliparous women who had singleton pregnancies. Every patient was evaluated for perineal cuts. A proforma created specifically for this purpose was used to gather all the data.*

Results *The average age of the female participants was 30. 50±4. 50 years. Among nulliparous women the frequency of perineal lacerations during spontaneous vaginal birth was 38. 85 percent (54/139).*

Conclusion *Perineal cuts during spontaneous vaginal delivery were common among nulliparous women in the current study. Significant post-natal morbidity is caused by perineal tears. To reduce the risk of perineal trauma and morbidity it is advised to identify risk factors have senior doctors closely monitor and supervise difficult or instrumental deliveries and provide adequate perineal support.*

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INTRODUCTION

One of the most frequent birth complications is perineal lacerations. Women with perineal lacerations may have persistent physical psychological and social issues despite the fact that they are typically regarded as a minor complication [1]. Perineal pain limits everyday activities and interferes with free movement. According to Hirayama F et al. [2] regardless of episiotomy roughly 42 percent 19 percent and 7 percent of women experience pain for 0 to 13 days 8 weeks and 2 to 18 months following spontaneous vaginal birth. Vaginal tears cervical lacerations and severe perineal lacerations are among the complications that can occasionally accompany vaginal birth. Based on the anatomical structures involved there are four categories for perineal injuries. According to the National Institute for Health and Care Excellence fourth-degree lacerations reach the rectal mucosa and reveal the intestinal lumen while third-degree lacerations affect the anal sphincter complex (including its internal and external components) [3]. Although cuts can happen anywhere third- and fourth-degree perineal cuts involving an anal sphincter injury are the most clinically significant and receive the most attention because they are associated with both short-term and long-term fecal incontinence [4]. In the United States 6. 4 percent of tears are of the third or fourth degree [5]. Severe perineal tearing has varying effects on the quality of life following surgery. Fitzpatrick & Associates. Up to 25% of women with severe perineal tearing have temporary changes in fecal continence and 4% have ongoing issues according to a review [6]. There is currently no evidence to support the superiority of a specific repair technique (overlapping repair versus simple approximation of the anal sphincter) although careful primary repair is crucial for the postpartum course [7]. Regardless of whether they gave birth at home in a hospital or in a freestanding midwifery unit about half of primiparous women in the UK had perineal lacerations of the first degree or more according to a prospective study. Additionally this study revealed that perineal lacerations were less common in home births (36. 2%) and midwifery units (43. 6%) among multiparous women than in hospital births (53. 1%). First-degree or greater lacerations have been reported to occur in 25. 7% to 62. 5% of hospital births 21. 3% to 60. 1% of midwife-led births (hospital or birth center) and 35. 3% to 45. 6% of home births [8]. According to a different study 36. 2 percent of women had perineal lacerations during spontaneous vaginal delivery (18. 1 percent had first-degree 15. 2 percent had second-degree and 2. 9 percent had third-degree perineal tears). CL is less than 0. 5 cm long and rarely needs to be repaired despite occurring in more than half of vaginal deliveries [9]. The prevalence of perineal lacerations during spontaneous vaginal deliveries is not well documented in the current literature. Many women suffer from perineal pain and its aftereffects but there is little local research in this field. Therefore the purpose of this study is to determine how frequently perineal lacerations occur during spontaneous vaginal delivery. The findings of this study will contribute fresh tangible statistical and clinical data to the body of existing literature which may have an impact on clinical practice and patient outcomes in our communitys spontaneous vaginal birth population. Furthermore in order to improve the standard of care we give these patients it is imperative that we treat them effectively and develop strategies for future research in this area. Additionally my research will contribute to the body of existing literature in addition to offering local and current statistics.

to determine how often nulliparous women who visit a tertiary care hospital sustain perineal lacerations during spontaneous vaginal delivery. A natural method of childbirth that took place without the use of any kind of obstetrical equipment was referred to as spontaneous vaginal delivery. The term perineal laceration refers to trauma to the perineum during delivery that involves the anal sphincter complex which includes the internal and external anal sphincters as well as the anal epithelium. This was determined by clinical evaluation and documented as positive. The body mass index was computed using the standard formula which is weight in kilograms divided by height in meters squared. Asian body mass index criteria classified women as obese if their score was higher than 27 and non-obese if their score was lower. A weighing machine was used to determine body weight and a stadiometer was used to measure height.

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Methodology

Over the course of six months from January 28 to July 28 the Department of Obstetrics and Gynecology at Civil Hospital in Karachi conducted a descriptive cross-sectional study. The WHO sample size calculator was used to determine the sample size which was based on a 95 percent confidence interval an expected perineal laceration frequency of 36. 2 percent and an 8 percent margin of error. A total of 139 participants were enrolled. Consecutive sampling without probability was used. Women between the ages of 18 and 40 who had a gestational age between 37 and 41 weeks were nulliparous had a singleton pregnancy confirmed by ultrasonography and were either booking or required an instrumental or cesarean delivery had multiple pregnancies were multiparous had pregnancy-induced hypertension with blood pressure greater than 160/110 mmHg or had gestational diabetes were not included. The College of Physicians and Surgeons Pakistan gave its approval before data collection began and all eligible participants provided written informed consent. All women were clinically examined for perineal lacerations under the supervision of an experienced consultant and demographic and clinical data such as age height weight and residential status were recorded. SPSS version 23. 0 was used to analyze the data. Quantitative variables were expressed as mean and standard deviation and categorical variables were presented as frequencies and percentages. Potential confounders were controlled using stratification and the appropriate statistical tests with a p-value of less than 0. 05 being considered statistically significant.

RESULTS The study included 139 nulliparous women who had singleton pregnancies. The average age of the participants was 30. 50 ± 4. 50 years. Table 1 also displays the participants demographic details. Figure 10 shows that 102 out of 139 women or 73. 38 percent were not scheduled. The distribution of women living in rural and urban areas was almost equal (Figure 11). As shown in Figure 12 38. 85 percent (54/139) of nulliparous women experienced perineal lacerations during spontaneous vaginal delivery. Table 2 illustrates that there was no statistically significant correlation between age groups and the rate of perineal lacerations during spontaneous vaginal delivery (p = 0. 916). Similarly as shown in Tables 3 to 6 there was no statistically significant correlation found between perineal lacerations and gestational age obesity antenatal status or booking status.

Table 1 Demographic Characteristics Of Patients

variables	Mean	Standard deviation
Age (years)	30.50	4.50
Gestational age (weeks)	37.87	0.83
Weight (kg)	70.25	11.76
Height (cm)	157 6.06	6.06
BMI (kg/m^2)	28.57	5.02

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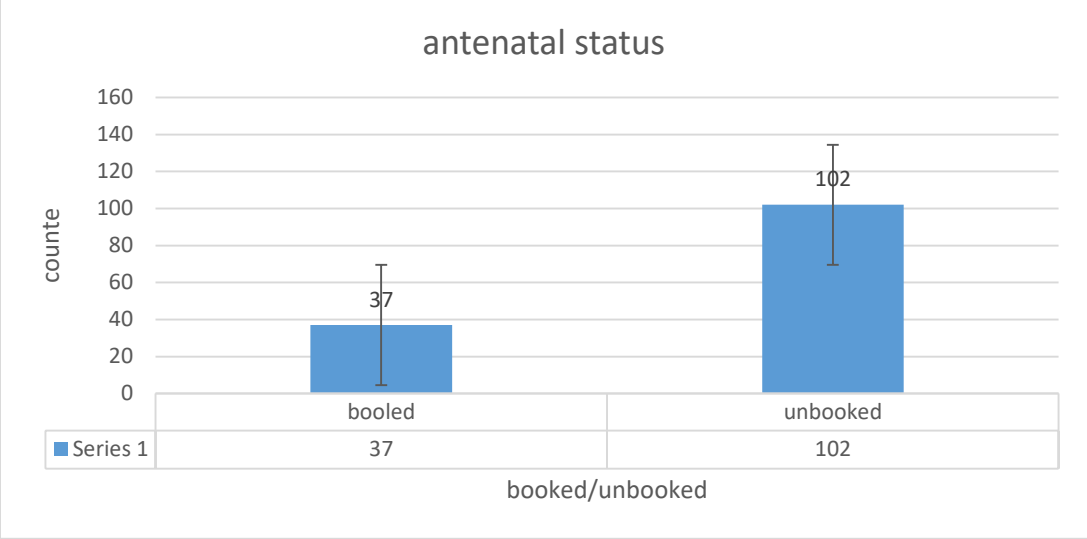

Figure 1 Antenatal Status Of Patients N= 139

Figure 2 Frequency of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women N= 139

Table 2 Frequency of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women By Age Groups.

Age group (years)	Perineal tears (yes)	Perineal tears (no)	total	p-value
< 25.9	9 (42.9%	12(57.1%)	21	0.916
26-30	22(40.7%)	32(59.3%)	45	same
31-35	15(34.9%)	28(65.1%)	43	same
>35	8(38.1%)	13(61.9%).	21	same

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Table 3 Frequency of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women By Gestational Age

Gestational age (weeks)	PERINEAL LACERATIONS(yes)	PERINEAL LACERATIONS (no)	total	p-value
< 37-38	45(37.2%)	76(62.8%)	121	0.298
38-41	9(50%)	9(50%)	18	O.298

Table 4 Frequency Of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women By Obesity.

obesity	Perineal Tear (yes)	Perineal Tear(no)	total	p-value
yes	34(43.6%)	44(56.4%)	78	0.195
no	20(32.8%)	41(67.2%)	61	0.195

Table 5 Frequency Of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women By Booking Status

Antenatal	Perineal Tear (yes)	Perineal Tear (no)	total	p-value
Booked	15(40.5%)	22(59.2%)	37	0.805
Un-Booked	38(38.2%)	63(61.8%)	102	0.805

Table 6 Frequency Of Perineal Lacerations During Spontaneous Vaginal Delivery Among Nulliparous Women By Residential Area

Residential Area	PERINEAL LACERATIONS (yes)	PERINEAL LACERATIONS (no)	total	p-value
urban	26(35.1%)	48(64.9%)	74	0.338
rural	28(43.1%)	37(56.9%)	65	0.338

DISCUSSION

Nearly 90% of primigravidas experience perineal injuries during their first vaginal births which are occasionally associated with serious postnatal morbidity and mortality. In subsequent deliveries women who have experienced such trauma are more likely to experience severe perineal tears. Many people go on to experience anal incontinence and sexual dysfunction even after proper primary sphincter repair. After giving birth 3–4% of women have fecal incontinence as a result of an anal sphincter injury that is either missed or mistakenly identified as a second-degree tear [10]. Because females have lower maximal resting anal tone lower voluntary contraction pressure and greater perineal descent during straining than males they are anatomically more vulnerable to perineal damage. Reduced pudendal nerve conduction and perineal descent at rest are associated with aging. Anal squeeze pressure is lowered when anorectal sensation is compromised and resting anal tone is reduced [11]. Severe perineal tears have been linked to a number of factors including nulliparity prolonged labor fetal macrosomia episiotomy instrumental delivery labor induction and epidural analgesia [12]. Asian women appear to be at the highest risk of experiencing severe perineal trauma after vaginal delivery according to research [13]. The average age

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of participants in the current study was 30. 50±4. 50 years and 102 out of 139 women (73. 38%) were not scheduled. According to a local study [14] the average age was 28. 08 ± 7. 47 years (range 17–42) and most of them were unbooked. According to this study 38. 85 percent of nulliparous women experienced perineal lacerations during spontaneous vaginal delivery. In contrast to 53. 1 percent in hospital deliveries Browne et al. reported laceration rates of 36. 2 percent in home births and 43. 6 percent in midwifery units [15]. First-degree or greater perineal tears have been reported to occur in 25. 7% to 62. 5% of hospital births 21. 3% to 60. 1% of midwife-led births and 35. 3% to 45. 6% of home births [16]. According to a different study women giving birth spontaneously had a 36. 2 percent incidence of perineal lacerations which included 18. 1 percent first-degree 15. 2 percent second-degree and 2. 9 percent third-degree tears. Even though more than half of vaginal births result in cervical lacerations the majority are less than 0. 5 cm and rarely require repair. According to a number of reports Chinese and other Asian women are more likely to sustain severe perineal injuries. This could be because their perineas are shorter which limits stretch and increases feto-maternal disproportion. Neonatal birth weight to maternal body mass index is a better predictor of perineal injury than either factor alone according to Schwartz et al. [17]. This ratio was found to be a significant risk in primiparous women by univariate analysis however after controlling for confounders it was no longer an independent factor. Further univariate analysis revealed that labor duration assisted vaginal delivery epidural use neonatal birth weight and head size and the birth weight-to-BMI ratio were factors that contributed to severe perineal injury in primiparous women while prolonged labor and instrumental delivery had an impact on multiparous women. In primiparous women logistic regression analysis showed that second-stage labor duration neonatal head circumference and vacuum-assisted delivery were significant predictors in multiparous women vacuum-assisted delivery alone continued to be significant [18].

CONCLUSION Perineal tears during spontaneous vaginal birth were more common in first-time mothers in this study. Significant postpartum complications result from such injuries. To lower the risk of morbidity during complicated or instrumental births it is recommended to identify contributing risks provide close observation appropriate supervision by skilled clinicians and provide effective perineal support.

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