Original Article

Pattern of perineal tears during vaginal delivery at a public sector University Hospital of Sindh

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ABSTRACT

Objective: To determine the pattern of perineal tears during vaginal delivery in a tertiary healthcare facility.

Methodology: It is a descriptive study done in the Department of Obstetrics and Gynaecology Unit-I at Liaquat University Hospital Hyderabad, Pakistan from 1st September 2004 to 31st August 2005. Women with full term singleton pregnancy either primi or multigravida, in active labour were selected for the study. An informed consent was taken from all the participants. Twin pregnancy and ante-partum haemorrhage were excluded Age, parity, type and degree of tear, mode of delivery, birth weight of baby, birth attendant, risk factors and complications were noted.

Results: There were 2563 deliveries, 256 patients had some degree of perineal injury giving a frequency of 9.9%. Out of them, 100 patients were selected, 37(37.0%) of multiparous and 63(63.0%) of primiparous sustained some degree of perineal injury. A higher incidence of first and second degree tears were noted and incidence was found to be more when vaginal delivery was conducted without episiotomy and fetal weight was more than 4kg. However duration of labour, perineal support, presence of perineal edema and experience of the birth attendant were important risk factors.

Conclusion: Obstetric perineal tears are common as depicted by the high frequency in this study. Lack of perineal care, poor socio-economic conditions, poor intra-partum care with lack of experience were found to be contributing factors in the occurrence of perineal tears.

KEY WORDS: Perineal tears, Vaginal, Delivery.

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INTRODUCTION

Genital tract trauma is one of the most common obstetric morbidity after vaginal delivery.[1] Long term perineal morbidity is associated with failure to recognize or to repair perineal tears adequately, as well as trauma to the external anal sphincter can lead to major physical, psychological and social problems.[2] There is a wide variety in the reported incidence of anal sphincter muscle injury from childbirth, with the true incidence likely to be approximately 11% of postpartum women.[3] As far as risk factors are concerned both mother and fetus are being blamed for it. Maternal causes are: Nulliparity, short mother, small genital hiatus and short perineal body.[4] In addition to these, larger infants an infant in occipito-posterior position, or having had an episiotomy or

operative delivery may be the cause.[5] A study done by Mackenzie et al[6], suggests that 30-35% of women are afflicted with anal incontinence, fecal urgency, dyspareunia and perineal pain once they sustain a third or fourth degree obstetric anal sphincter injury and this pain is described as worse than the pain of childbirth.[7]

Attention should be focused on improvement of obstetric practice to minimize perineal trauma as anal sphincter damage following delivery is significantly associated with subsequent anorectal complaints.[8] Recent evidence links sphincter tears with fecal incontinence, which has a significant negative impact on quality of life.[9] The incidence of worse bowel control is nearly 10 times higher in women with fourth degree lacerations compared with women with third degree lacerations[10], and unfortunately, normal function is not always assured even with correct and complete surgical repair.

The purpose of this study was to focus on the occurrence of perineal tears during vaginal delivery in a tertiary care hospital which draws a large number of patients almost from all of interior Sindh. This study is the first of its kind in our location in which perineal injuries are being highlighted and further information will be gained through this study on how to reduce this preventable injury in women.

METHODOLOGY

This descriptive study was conducted in the Department of Obstetrics & Gynaecology Unit-I, Liaquat University Hospital, Hyderabad from 1st September 2004 to 31st August 2005. A total number of 100 patients were selected for the study. All participants were given information about the study and an informed consent was taken from the participants. Inclusion criteria were women with full term singelton pregnancy in active labour, primi and multigravida. Patients with ante-partum haemorrhage and twin pregnancy were excluded.

Vast majority of patients in this study were unbooked but few had regular antenatal care. On arrival of the patient in the labour room, a detailed history was taken. All baseline and relevant investigations were performed. Labour was managed according to a standard protocol. Instrumental deliveries and episiotomies were performed where needed. Once the third stage of labour was over, vulva, vagina and cervix were examined for any tears or lacerations and managed accordingly.

Data analysis: The data analysis was by SPSS statistical program version 11.0. Qualitative data (Frequency and percentages) were presented as n(%).

RESULTS

Out of 100 patients, there were 63 primiparous patients with ages ranging between 20-30 years and 37 multiparous patients with ages ranging between 30-44 years. Most of the patients were unbooked (93%) and only 7% of the patients were booked. The frequency of first and second degree tears was 47.6% in primi and 54% in multiparous women. The frequency of 3rd degree tear was more in primiparous (19%) as compared to 10% in multiparous women. (Table-I). The highest frequency of perineal tears (52%) was found in a group in which vaginal delivery without episiotomy was conducted (Table-II). Occurrence of perineal tear was found to be 29%, when the birth weight of the baby was in the range of 3-3.5 kg, 37% when > 3.5 kg and 19% when 4kg or more (Table-III). Sixty percent of patients complained about perineal pain, 52% developed hematoma and dyspaereunia occurred in 14% (Table-IV).

DISCUSSION

Anal sphincter injury during childbirth is associated with significant maternal morbidity including perineal pain, dyspareunia and anal incontinence. Anal incontinence affects women psychologically

Table-I: Frequency and distribution of first-fourth degree perineal tears in primiparous and multiparous Women (n=100).

S. No.	*Degree of Perineal Tear*	*No. and Percentage of Multiparous Patients*	*No. and Percentage of Primiparous Patients*
1.	First Degree	20 (54.05%)	30 (47.61%)
2.	Second Degree	12(32.43%)	20 (31.74%)
3.	Third Degree	4(10.81%)	12 (19.04%)
4.	Fourth Degree	1(2.70%)	1 (1.58%)
		37	63
	Total	100	

Table-II: Mode of delivery (n=100).

S. No.	Mode of Delivery	No. of Patients	Percentage %
1.	Normal Vaginal Delivery	52	52%
2.	Vaginal delivery with Episiotomy	26	26%
3.	Forcep Delivery	15	15%
4.	Vacuum Extraction	7	7%
	Total	100	100%

and physically.[11] Occurrence of obstetric perineal tears has almost disappeared in some parts of the world, but is still common in our community as depicted by the high frequency of 9.9% in our study. However, some European and American studies showed incidences of up to 25% and 16% respectively.[12,13] There are data to suggest that nulliparous women are at increased risk for tears compared with multiparous patients[14] and that correlates with our findings.

In our study we found women to have more tears when they had vaginal deliveries without episiotomy. A study by de Leeuw JW and associates,[15] found mediolateral episiotomy to be strongly protective against damage to the anal sphincter complex during delivery. Most previous trials comparing the obstetric forceps with vaccum extractor have shown that vacuum assisted deliveries result in lower rates of maternal genital tract lacerations (3% vs 4.7%)[16], and that correlates with our findings of 7% tears with vaccum and 15% with forceps assisted deliveries. On the other hand several studies have shown that birth weight of baby of over 4kg to be an increased risk

Table-IV: Complications and delivery conducted by (n=100).

S. No.	Birth Attendant	No. of Tears Occurred	Percentage %
1.	House Officer	60	60%
2.	Medical Officer	35	35%
3.	Registrar	5	5%
	Total	100	100%
Complications:			
1.	Perineal Pain	52	52%
2.	Dyspaereunia	14	14%
3.	Hematoma + Infection	26	26%
4.	Anal Incontinence	6	6%
5.	Recto Vaginal Fistula	2	2%
	Total	100	100%

Table-III: Birth weight of baby and perineal tears (n=100).

S. No.	Birth Wt. of Baby	No. of Patients	Percentage %
1.	Less than 2 kg	0	—
2.	2-2.5 kg	3	3%
3.	2.6-3 kg	12	12%
4.	3.1-3.5 kg	29	29%
5.	3.6-4.0 kg	37	37%
6.	> 4 kg	19	19%
	Total	100	100%

factor for traumatic injuries at birth.[17] In our study we found that when the weight of babies was in the range of 3.6-4 kg, 37% patients sustained some degree of perineal injury.

Zetterstrom et al[18], also found in their study that when the weight of babies was >4 kg, it was a significant risk factor for the occurrence of anal sphincter damage. In our study another important risk factor found was the high incidence of tears with occipito – anterior position when delivered by junior and in-experienced doctors. In our study, the majority of tears were found to be posterior in 77% as compared to 14% of anterior lacerations. Nager[4] in his study also concluded that anterior lacerations are not associated with significant adverse outcome, but midline posterior tears produced occult or recognized external and sphincter lacerations. In our community, we found that the majority of women suffer from one or more complications after sustaining anal sphincter injury but the shyness among the women and lack of knowledge about further complications is a big hinderance in diagnosis and treating of these complaints.

CONCLUSION

Anal sphincter injuries and obstetric perineal tears are still common problems in our society. Poverty, illiteracy, poor obstetric care and lack of transport facilities are the problems to be addressed. There is also need for continuing education for junior doctors as well as for Traditional Birth Attendants (TBAs) and other healthcare providers. The continuing health education should focus on how to recognize abnormal labour or other risk factors such as primigravidity, fetal macrosomia, and maternal obesity which predispose the pregnant woman to perineal tears during vaginal delivery.

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Authors Contribution:

Dr. Sumaiya Farooq made substantial contribution to conception and design, acquisition of data analysis interpretation of data and writing the manuscript.
Prof. Shaista M. Farook contributed in drafting the article and development of study protocol and writing of manuscript.
Dr. Razia Mustafa Abbassi contributed in revising the article critically for important intellectual content and final reading of the version to be published