



GENITAL TRACT TRAUMA; FACTORS RESPONSIBLE IN PREGNANT FEMALES UNDERGOING VAGINAL DELIVERY

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ABSTRACT... Aims and objectives: To record frequency of factors responsible for genital tract trauma in pregnant females undergoing vaginal delivery. **Study Design:** Descriptive cross sectional trial. **Period:** 18-11-2015 to 17-02-2016 (3 months). **Settings:** Holy Family Hospital, Rawalpindi. **Material & methods:** 100 cases with genital tract trauma during delivery (at hospital or referral) in the form of tears or laceration, which may be cervical, vaginal or perineal were included in the study. After third stage of labour, we examined vulva, vagina and cervix for presence of any tears/lacerations. The causative factors of lacerations/tears including mode of delivery (assisted/spontaneous) birth weight of the neonate (<4kg/>4kg), multiparous / primiparous and place of labour (referral/institutional) were recorded. **Results:** Mean age 28.88 ± 3.41 years, cervical injury in 26% (n=26) cases, vaginal injury was present in 36% (n=36) and 38% (n=38) and findings of perineal injury. Risk factors causing genital tract trauma were recorded as 10%(n=10) had institutional place of labour while 90%(n=90) were delivered outside hospital through untrained health care providers, 24%(n=24) were primiparous while 76%(n=76) were multiparous, 69%(n=69) were delivered spontaneously, 31%(n=31) had assisted delivery, 67%(n=67) had >4kg fetal weight at birth while 33%(n=33) had <4kg weight of fetus at birth. **Conclusion:** Un-booked and birth outside hospital by unskilled health care workers was the significant risk factor responsible for genital tract trauma.

Key words: Vaginal birth, genital tract trauma, risk factors, delivery outside the hospital, un-trained health care workers.

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INTRODUCTION

Perineal trauma followed by vaginal delivery is highly associated with post-term morbidities and mortality while the complications are directly linked to the severity of birth trauma.¹

Birth canal suffers with at least one slight injury during human childbirth which may not have any need of suturing while occasionally deep tears may occur inspite of best efforts and skills by the obstetricians.² Severe perineal injuries are recorded in women delivered other than hospital settings by untrained birth attendants, e.g. rural areas of our country and even many cases from urban areas as well.² Perineal trauma include cervical and vaginal lacerations, perineal tears, episiotomy, para-urethral tears and vulva haematoma.² In previous studies, higher rate of vaginal trauma is recorded where the episiotomy

is restricted.³ Historically, it was hypothesized that anal sphincter tears and spontaneous perineal injury is reduced by episiotomy due to control, direction and the extent of damage of tissue.⁴ This fact is supported by a Spanish study who recorded 87.5% of diagnosed tears in females undergoing spontaneous vaginal delivery (SVD) and it occurred in nulliparous women in absence of episiotomy in SVD as compared to those who underwent episiotomy.¹ With the advancement in obstetrics, severe perineal trauma is controlled where majority of the women are delivered and managed in hospital through skilled health care providers.⁵

Primary postpartum hemorrhage (PPH) is a major complication of lower genital tract injuries and contributes to the maternal morbidity and mortality⁹ particularly when the repair is delayed

due to delivery outside the hospital. Perineal pain, post-partum infection, dyspareunia and discomfort may complicate perineal injuries.² Third degree perineal tear, vesico-vaginal fistula (VVF), and recto-vaginal fistula are also included as other serious morbidities of lower genital tract injury.

The etiological factor of perineal injuries include macrosomia, instrumental delivery, first vaginal birth, shoulder dystocia and deliveries done by untrained medical personnel.⁶⁻⁷ Instrumental delivery and midline episiotomy is responsible for a higher rate of genital tract injuries.^{6,8-10}

The rationale of our study was to add up our local data regarding frequency of risk factors responsible for genital tract trauma, so that our findings will be helpful to record recent rate of risk factors responsible for genital tract trauma following vaginal delivery.

METHODOLOGY

In this descriptive cross sectional trial, we enrolled a total of 100 cases calculated with 95% confidence level, 5% margin of error and taking expected percentage of 87.5% of diagnosed tears in females undergoing spontaneous vaginal delivery. We included all those cases presenting with genital tract trauma occurs during delivery (at hospital or referral) in the form of tears or laceration, which may be cervical, vaginal or perineal. Further inclusion criteria was prolonged stage of labour, subjected to episiotomy, instrumental delivery while we excluded all those cases with multiple pregnancy, delivered by caesarean section, with antepartum hemorrhage and Chorioamnionitis. We involved senior post-graduate residents of our obstetrics & gynaecology unit in this research. All demographic data was collected and recorded including age, parity etc. Routine laboratory investigations were done. All standard protocols for labour were followed. All cases with episiotomies and instrumental deliveries were assisted. After third stage of labour, we examined vulva, vagina and cervix for presence of any tears/lacerations and if any, they were managed following standard protocols. We recorded the causative factors of lacerations/tears including mode of delivery (assisted/spontaneous) birth

weight of the neonate (<4kg/>4kg), multiparous/primiparous and place of labour (referral/institutional). SPSS (Version 14) was used to analyze statistical analysis. Being descriptive study, we calculated mean+sd for age of the patients recorded frequency and percentage of risk factors.

RESULTS

In this study, mean age of the patients was recorded as 28.88 ± 3.41 , mean gestational age as 39.11 ± 3.10 weeks.

We recorded cervical injury in 26%(n=26) cases, vaginal injury was present in 36%(n=36) and 38%(n=38) and findings of perineal injury. (Table-I)

Obstetrical injury	No. of patients	%
Cervical	26	26
Vaginal	36	36
Perineal	38	38
Total	100	100

Table-I. Frequency of type of obstetrical injury (N=100)

Frequency of risk factors causing genital tract trauma were recorded as 10%(n=10) had institutional place of labour while 90%(n=90) were delivered outside hospital through untrained health care providers, 24%(n=24) were primiparous while 76%(n=76) were multiparous, 69%(n=69) were delivered spontaneously, 31%(n=31) had assisted delivery, 67%(n=67) had >4kg fetal weight at birth while 33%(n=33) had <4kg weight of fetus at birth. (Table-II)

DISCUSSION

Our findings regarding place of birth outside hospital by untrained healthcare providers are supported by a study at Jamshoro who recorded this factor in 84.79% of the cases.

Further, another recent study¹⁸ supported our findings by calculating (87.78%) of the referral cases. Similarly, primiparous cases were recorded as 13.5% responsible for genital tract trauma in their study it is also in agreement

with our results i.e. 24%.¹¹ we recorded a higher frequency of genital tract trauma with Birthweight ≥ 4000 g. Several other studies reveal the same findings.¹²⁻¹⁴

Risk factors	No. of patients (%)	Total
Place of birth at hospital	10(10%)	100(100%)
Referral/Place of birth outside hospital by untrained health care providers	90(90%)	
Primiparous	24(24%)	100(100%)
Multiparous	76(76%)	
Spontaneous	69(69%)	100(100%)
Assisted	31(31%)	
> 4kg	67(67%)	100(100%)
< 4kg	33(33%)	

Table-II. Risk factors responsible for genital tract trauma (n=100)

Combs and others have different opinion by revealing that no influence of fetal weight is associated with birth canal lacerations/tears¹⁵ due to the fact that they considered 3500 g and above as macrosomia, while we are of the view that >4 kg of fetal weight is responsible for higher frequency of genital tract trauma.

Other trials reveal¹⁶⁻¹⁷ that nulliparous women with vaginal birth and instrumental delivery are having higher risk of genital tract trauma while we recorded multiparous women with higher rate of lacerations, this may be due to a significant factor of birth place i.e. outside the hospital by untrained health staff.

We observed unbooked cases with potential form of trauma like vulva hematoma, cervical laceration and third degree of perineal tears, further those cases that were referral (delivered outside the hospital). These results are supported by a local study.¹¹

In summary, genital tract trauma being the usual complication in females undergoing vaginal birth leads to other complications including infection, shock and hemorrhage etc. however, un-

booked cases may face associated morbidities and mortalities especially those dealt by non-professional health care providers. In spite of advancement in pre-natal care in our country, still a significant proportion is unbooked and referred in critical situation, the main reason may be poverty and illiteracy. However, necessary steps are required to make sure provision of prenatal care to the pregnant females.

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Mistakes are always forgivable,
if one has the courage to admit them.

– Bruce Lee –

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AUTHORSHIP AND CONTRIBUTION DECLARATION

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1	Dr. Anam Zulfiqar	Data Analysis	
2	Dr. Afshan Saeed	Data Analysis	
3	Dr. Shahana Rahat	Review of Article	