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Research Article

**FREQUENCY AND SEVERITY OF PERINEAL TEARS  
AMONG TEENAGE MOTHERS DURING FIRST VAGINAL  
DELIVERY**<sup>1</sup>Dr. Fauzia Anbreen, <sup>2</sup> Dr. Uzma Zaman<sup>1</sup>Associate Professor Gomal Medical College, Email: drfauziaanbreenkundi@gmail.com<sup>2</sup>District Specialist DHQ Teaching Hospital Dera Ismail Khan, Email:  
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**Abstract:**

**Objective:** To determine frequency of different grades of perineal tears among teenage mothers during their first delivery.

**Setting:** It is a multicenter study conducted in gynecology and obstetrics department of Gomal Medical College and DHQ Teaching Hospital Dera Ismail Khan.

**Design & duration:** This is a cross sectional study completed in six months duration from July to December 2019.

**Patients & methods:** Patients admitted in gynecology and obstetrics ward of study hospital were included in the study using non-probability consecutive sampling technique. Sample size was determined using WHO sample size calculator. Inclusion and exclusion criteria were made for selection of patients. A predesigned Performa was used to document data of the patients relevant to the study topic. All data was analyzed using SPSS software and results were calculated in the form of frequency, percentages, mean and standard deviation. Confidence interval was 95%, margin of error was 5%. P-value less than 0.05 were taken significant.

**Results:** Study was conducted on 250 teenage mothers, primipara undergoing first childbirth through spontaneous vaginal delivery, with age ranging 14-20 years, mean age 16.5±2.2 years. Minimum age was reported 14 years. There were 61.6% mothers, having BMI between 20-25 kg/m<sup>2</sup>. Perineal tear reported in 74% cases. First degree tear was seen in most of the mothers (74%).

**Conclusion:** Most of the female in study group undergoing first childbirth via spontaneous vaginal delivery experienced perineal tears commonly of first degree.

**Key words:** Perineal tears, spontaneous vaginal delivery, perineal trauma, first childbirth

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**INTRODUCTION:**

Operative vaginal delivery is a much commonly performed obstetric procedure. Mostly teenage mothers experience vaginal trauma during first vaginal delivery. Perineal injury affects women health adversely.<sup>1</sup> According to a study conducted in UK prevalence of perineal trauma has been increased in past few years. It has been observed in 85% of vaginal deliveries in which 60-70% cases suturing is required.<sup>2</sup> Perineal trauma can extend to anal sphincter leading to fecal incontinence. A study has reported third degree perineal tears in 2.8% primigravida and 0.4% multigravida women.<sup>3</sup> There are many risk factors contribution to perineal tears such as Increased BMI, increased size of baby, baby of diabetic mothers, instrumental use during delivery, induction of labor, episiotomy and use of analgesia.<sup>4</sup> Mothers with increased BMI have more chances of perineal trauma during delivery. According to results of a study conducted in Cameron, incidence of perineal tears was 13.5%, in which mostly cases (76.5%) having first degree tear, 22.1% with second degree tear and 1.3% having third degree tears.<sup>5</sup> There is different incidence of perineal trauma and anal sphincter injury in different countries depending on healthcare facilities. Its incidence increases with advancing age of mothers. Expert health care providers play important role in safe delivery. Complications related to pregnancy and childbirth are leading cause determining fetal and maternal mortality.<sup>6-9</sup> Teenage mothers are at the transitional period of progress from the initial appearance of secondary sexual characteristics to full maturity.<sup>10</sup> They are at the age of psychological and emotional development so they have high morbidity and mortality rate. Early pregnancy in teenage mothers exposes them to post-delivery complications like anemia, low birth weight and pregnancy induced hypertension.<sup>11</sup>

**PATIENTS AND METHODS:**

This is a cross sectional multicentric study conducted Gynecology and Obstetrics department of Gomal Medical College. Study was completed in six months duration. Patients admitted in gynecology and obstetrics ward of study hospital were included in the study using non-probability consecutive sampling technique. Sample size was

determined using WHO sample size calculator. Inclusion and exclusion criteria were made for selection of patients. A predesigned performa was used to document data of the patients relevant to the study topic. All data was analyzed using SPSS software and results were calculated in the form of frequency, percentages, mean and standard deviation. Confidence interval was 95%, margin of error was 5%. P-value less than 0.05 were taken significant.

**Inclusion criteria**

1. Teenage mothers having age  $\leq 20$  years
2. Primigravida, giving first time childbirth via vaginal delivery
3. Having no co-morbidity

**Exclusion criteria**

1. Old age mothers
2. Women having co-morbidities
3. Mothers undergoing delivery in which instrumentation done or episiotomy done
4. Multiparity

Informed consent was taken from all mothers included in the study. Approval was also taken from ethical committee of the study hospital. Detailed history taken and serial examinations performed on all cases admitted in the ward. All necessary baseline investigations were done initially to exclude any morbidity. In third stage of delivery examination of perineum, vagina, vulva and cervix done to see any tear or birth induced injuries. Weight of every baby was done after delivery. Chi square test applied on collected data. Results presented in the form of tables and graphs.

**RESULTS:**

Total 250 pregnant teenage mothers were studied. Their age was ranging from 15-20 years. There were 46(18.4%) cases between 14-15 years, 112(44.8%) between 16-18 years and 92(36.8%) cases were between 19-20 years. Body mass index (BMI) was between 20-25 kg/m<sup>2</sup> in 154(61.6%) cases and between 26-30 kg/m<sup>2</sup> in 96(38.4%) cases. Perineal tear was reported in 185(74%) cases out of total 250 cases, while in 65(26%) cases no perineal trauma reported. First degree perineal tear was seen in 149(59.6%) cases, second degree tear in 73(29.2%), third degree tear seen in 18(7.2%) and fourth degree tear seen in 10(4%) cases.

Figure-1: Severity of the perineal tears

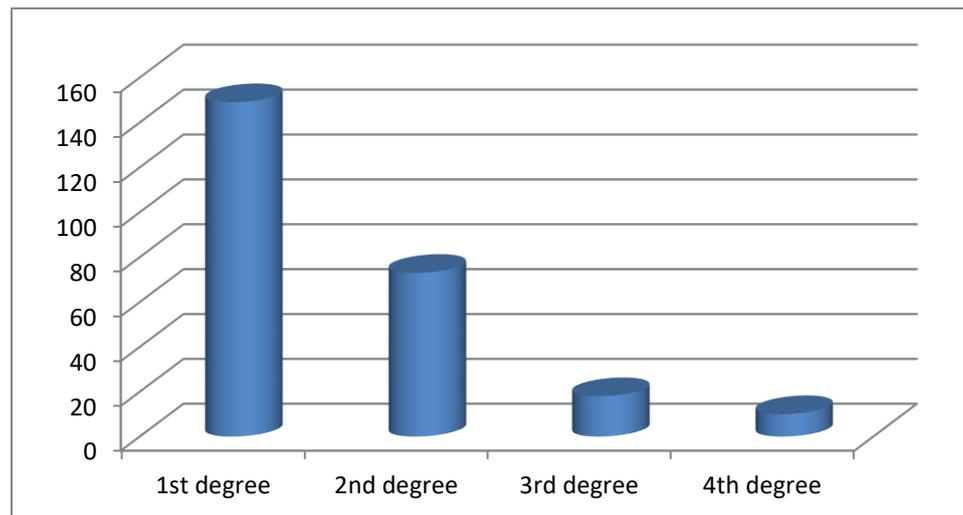


Table-1: Characteristics of cases in study group (n=250)

Age of patients (years)	Frequency	Percentage	P-value
14-15	46	18.4%	0.001
16-18	112	44.8%	
19-20	92	36.8%	
<b>BMI (Kg/m<sup>2</sup>)</b>			0.016
20-25	154	61.6%	
26-30	96	38.4%	
<b>Perineal tears</b>			0.011
Yes	185	74%	
No	65	26%	

## DISCUSSION:

A spontaneous vaginal delivery occurs when a pregnant female goes into labor without the use of drugs or techniques to induce labor and delivers her baby in the normal manner, without forceps, vacuum extraction or a cesarean section. Perineal trauma is a very common complication occurring during vaginal delivery. Its prevalence is high in developing and under developed countries due to limited healthcare facilities. According to a study large female population in UK choose cesarean section to avoid perineal trauma. Perineal trauma may cause severe pain, post partum hemorrhage and need of suturing the wound. This morbidity prevents mothers feeding their children and affects their routine life for weeks to months. Other long term complications of perineal trauma include chronic pain, urinary or fecal incontinence and dyspareunia. According to a study perineal trauma is much common among mothers during first vaginal delivery in which instrumentation is done or in which spinal analgesia is given during second stage of labor. Statistics tell that incidence of pain after first and second degree tears was 95% and

60%.<sup>12</sup> A study conducted by Thomas et al on 19442 patients showed that 88 women had severe perineal trauma and risk factors were instrumental delivery, nulliparity, posterior orientation persistently and large size baby.<sup>13</sup> Another study done by Yvonne et al described incidence of perineal trauma in 4.5% primipara and in 1.7% multipara mothers. They evaluated multiple risk factors including Asian ethnicity, shoulder dystocia and assisted delivery. They showed episiotomy as a protective factor in primiparous women and as a risk factor in multiparous women. Prolonged labor and posterior position of fetus were other risk factors in their study.<sup>14</sup> A meta analysis of 22 studies showed risk factors of perineal trauma as heavy infant (mean difference 192.8 g), operative vaginal delivery (OR 3.82,95% CI, 1.96-7.42) and episiotomy incision (OR 5.10, 95% CI, 3.33-7.83).<sup>15</sup> There are various techniques to reduce risk of perineal tears as showed by a study, perineal injection of Hyaluronidase.<sup>16</sup> Another study reported massaging of perineal area in second stage of labor reduces risk of perineal tear and also decreases need of episiotomy.<sup>17</sup> Some studies

document obesity as a protective factor against perineal tears.<sup>18-20</sup>

### CONCLUSION:

Our study concluded that majority of teenage mothers delivering vaginally experience perineal tears and among them first degree tears are more common. Its common risk factors are increased size of baby, prolonged second stage of labor and increased BMI.

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