

# Frequency of Placenta Previa in Unscarred Uterus at Nishtar Hospital, Multan

SAIMA GUL BASHIR<sup>1</sup>, SAMIEA PARVEEN<sup>2</sup>, SAMINA MUMTAZ<sup>3</sup>

## ABSTRACT

**Aim:** To find out frequency of placenta previa in unscarred uterus at Nishtar Hospital Multan.

**Methods:** This cross sectional was carried out in the Outpatient Department of Obstetrics & Gynaecology and Labour Ward, Nishtar Hospital, Multan from September 2011 to February 2012. A total of 335 patients were included in the study.

**Results:** Majority of the patients were recorded between 30-35 years of age i.e., 43.58% (n=146), 32.24% (n=108) were between 36-40 years and 24.18% (n=81) were between 41-45 years, mean and s.d. was 36.92±2.15, 65.37% (n=219) were between 37-40 weeks, 21.79% (n=73) between 41-42 weeks and 12.84% (n=43) between 32-36 weeks of gestation, 37.91% (n=127) with >4 paras, 34.02% (n=114) were between 3-4 paras while only 28.06% (n=94) were between 1-2 paras, 1.19% (n=4) were recorded with placenta previa, stratification of effect modifiers like age, gestational age, and parity for placenta previa was done which shows 25% (n=1/4) were between 30-35 years, 25% (n=1/4) between 36-40, 50% (n=2/4) between 41-45 years of age; gestational age shows 25% (n=1/4) between 32-36 weeks of gestation, 75% (n=3/4) between 37-40 weeks while no patients between 41-42 weeks, while no patients was recorded with 1-2 para, and 50% (n=2/4) were recorded between 3-4 and >4 paras respectively.

**Conclusion:** The frequency of placenta previa in unscarred uterus at Nishtar Hospital Multan is slightly higher than other studies and this problem may be estimated for further planning and management of placenta previa.

**Keywords:** Placenta previa, frequency, unscarred uterus

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## INTRODUCTION

Placenta previa refers to placenta that is situated wholly or partially in the lower uterine segment<sup>1</sup>. It is associated with significant maternal and fetal morbidity and mortality because of unanticipated blood loss and is of the most acute life threatening emergency in obstetrics. Frequency of placenta previa is 3.46% and found to be more common in young age and in grand multipara<sup>2</sup>. frequency varies with parity; for nulliparous incidence is 0.2% whereas in grand multiparous it may be as high as 5%<sup>3</sup>. Other risk factors include maternal age greater than or equal to 35 years, non white ethnicity, multiple pregnancy, smoking and previous abortion<sup>4</sup>.

Incidence of placenta previa varies between 0.4-0.8% and associated with significant hemorrhage to both mother and fetus<sup>5</sup>. In one study frequency of placenta previa was 0.9% vs. 0.1% in scarred and unscarred uterus respectively<sup>6</sup>. Age is associated with varying prevalence of placenta previa. Women with age 12-19 years had 1% frequency of placenta preiva, age 20-29 years had 0.33%, age 30-39 years had 1% and older than 40 years had 2% frequency of placenta previa<sup>7</sup>.

The etiology is still controversial. Major theories focus on endomyometrial damage in the corpus and defective genetics or placental mechanism. In humans the blastocyst is completely embedded in the substance of endometrium. So abnormalities of endometrial vascularization and prior trauma to endometrium/ myometrium appear to influence the site of implantation, therefore contributing to probability of placenta previa<sup>8</sup>.

Haemorrhage is leading cause of death worldwide in 3<sup>rd</sup> world countries as well<sup>9</sup>. Placenta previa is a major cause of haemorrhage worldwide and frequency of this condition may be on rise. So we need to identify and target prevention interventions among women at high risk of placenta previa. As cesarean section rates are rising, the number of women at risk of massive haemorrhage, emergency hysterectomies and maternal deaths are rising too.

In previous studies frequency of placenta previa in scarred uterus i.e. lower segment cesarean section were found but now a days we had observed that frequency of placenta previa is increasing in primigravida and multigravida with unscarred uterus. So in this study I wanted to find out the frequency of placenta previa in unscarred uterus so that the management of the problem may be estimated for further planning and management.

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<sup>1</sup>Consultant Gynaecologist, Indus Hospital, Muzaffar Garh,

<sup>2,3</sup>Department of Obs & Gynae, Nishtar Medical College, Multan  
Correspondence: drsaimab@yahoo.com, Cell: 03467130885

The objective of the study was to find out frequency of placenta previa in unscarred uterus at Nishtar Hospital Multan.

**MATERIAL AND METHODS**

This cross sectional was carried out in the Outpatient Department of Obstetrics & Gynaecology and Labour Ward, Nishtar Hospital, Multan from September 2011 to February 2012. A total of 335 patients with age 30-45 years, booked and Unbooked patients. primi gravida and multigravida women uterine scar (unscarred uterus) after 32 weeks of gestation in 3<sup>rd</sup> trimester and women with history of dilatation and curettage endometritis or pelvic inflammatory disease were included in the study. Data was entered and analyzed using computer software SPSS. Descriptive statistics were applied to calculate mean and s.d. for the age, parity and gestational age of the patients. Frequency and percentage of outcome variable i.e. placenta previa in unscarred uterus was calculated. Age and parity was controlled by stratification.

**RESULTS**

Majority of patients were recorded between 30-35 years of age i.e., 146(43.58%), 108(32.24%) were between 36-40 years and 81(24.18%) were between 41-45 years, mean and SD. was 36.92±2.15 (Table-1)

Gestational age (in weeks) was calculated which shows 219(65.37%) between 37-40 weeks, 73(21.79%) between 41-42 weeks and 43(12.84%) were between 32-36 weeks of gestation (Table-2).

Parity distribution of the subjects shows 127(37.91%) with >4 paras, 114(34.02%) were between 3-4 paras while only 94(28.06%) were between 1-2 paras (Table 3)

Frequency of placenta previa in unscarred uterus was recorded in only 4(1.19%) while 331(98.81%) were not found with unscarred uterus (Table 4).

Table-1: Age distribution of the patients (n=335)

| Age (years) | n          | % age |
|-------------|------------|-------|
| 30-35       | 146        | 43.58 |
| 36-40       | 108        | 32.24 |
| 41-45       | 81         | 24.18 |
| Mean and SD | 36.92±2.15 |       |

Stratification of effect modifiers like age, gestational age, and parity for placenta previa was done which shows 25% (n=1/4) were between 30-35 years, 25% (n=1/4) between 36-40, 50% (n=2/4) between 41-45 years of age; gestational age shows 25% (n=1/4) between 32-36 weeks of gestation, 75% (n=3/4) between 37-40 weeks while no patients

between 41-42 weeks, while no patients was recorded with 1-2 para, and 50% (n=2/4) were recorded between 3-4 and >4 paras respectively (Table-5)

Table 2: Gestational age of the patients (n=335)

| Gestational age (weeks) | n   | % age |
|-------------------------|-----|-------|
| 32-36                   | 43  | 12.84 |
| 37-40                   | 219 | 65.37 |
| 41-42                   | 73  | 21.79 |

Table 3: Parity distribution of the patients (n=335)

| Paras | n   | % age |
|-------|-----|-------|
| 1-2   | 94  | 28.06 |
| 3-4   | 114 | 34.03 |
| >4    | 127 | 37.91 |

Table-4: Frequency of placenta previa in unscarred uterus (n=335)

| Placenta previa | n   | %age  |
|-----------------|-----|-------|
| Yes             | 04  | 1.19  |
| No              | 331 | 96.72 |

Table-5: Stratification of effect modifiers like age, gestational age, and parity for placenta previa (n=4)

| Age (yrs) | Cases % | Gest Age (weeks) | Cases % | Para | Cases % |
|-----------|---------|------------------|---------|------|---------|
| 30-35     | 1(25)   | 32-36            | 1(25)   | 1-2  | 0       |
| 36-40     | 1(25)   | 37-40            | 3(75)   | 3-4  | 2(50)   |
| 41-45     | 2(50)   | 41-42            | 0       | >4   | 2(50)   |

**DISCUSSION**

Ante-partum haemorrhage is an important cause of maternal and fetal morbidity and mortality, despite modern improvement in obstetric practice and transfusion service. It is defined as any vaginal bleeding from the 24<sup>th</sup> week of gestation till delivery. The initial management of ante-partum haemorrhage should concentrate on resuscitation and accurate diagnosis<sup>10</sup>. The most important causes of ante-partum haemorrhage are placenta previa and abruption, accounting for more than half the cases<sup>11</sup>. The number of cases of placenta previa and placenta accreta is increasing with the increasing caesarean section rate<sup>12</sup>. In many patients, it is not possible to make a definite diagnosis, despite all the investigations. Development of ultrasound especially transvaginal scan has helped in the definitive diagnosis and management of placenta previa<sup>13</sup>.

On the other hand, we observed that frequency of placenta previa is increasing in primigravida and multigravida with unscarred uterus as well. So in this study we wanted to find out the frequency of placenta previa in unscarred uterus so that the management of the problem may be estimated for further planning and management.

In our study, frequency of placenta previa in unscarred uterus was recorded in 1.19%(n=4/335).

A study was conducted to determine the risk of placenta previa and unexplained antepartum hemorrhage after a previous cesarean section (CS), of a total of 24,644 patients, 81(0.33%) had a placenta previa which demanded abdominal delivery<sup>14</sup>. The risk of placenta previa was 0.25% with an unscarred uterus.

Another study by Sisir K and colleagues to determine the relationship between previous caesarean section (CS), placenta praevia and placenta praevia accrete and recorded of 41,206 consecutive deliveries 1851 had previous caesarean section and 222 had placenta praevia<sup>15</sup>. Of the cases of placenta praevia, 175 occurred in the uterus and 47 occurred after previous CS. Placenta praevia complicated 2.54% of cases with a previous caesarean section compared with 0.44% of cases with no scar — a 5-fold increase.

In 1993, Crane JM and co workers, identified neonatal complications associated with placenta previa and during their study, and recorded that after controlling for potential confounders, neonatal complications were significantly associated with placenta previa included major congenital anomalies (odds ratio [OR] 2.48), respiratory distress syndrome (OR 4.94), and anemia (OR 2.65)<sup>16</sup>. The perinatal mortality rate associated with placenta previa was 2.30% (compared with 0.78% in controls) and was explained by gestational age at delivery, occurrence of congenital anomalies, and maternal age. Although there was a higher rate of preterm births in the placenta previa group (46.56% versus 7.27%), there was no difference in birth weights between groups after controlling for gestational age at delivery, and this higher incidence of placenta previa is responsible for higher adverse neonatal outcome, which increased the importance of management of placenta previa.

## CONCLUSION

The frequency of placenta previa in unscarred uterus at Nishtar Hospital Multan is slightly higher than other

studies and this problem may be estimated for further planning and management of placenta previa.

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