

# FREQUENCY OF PLACENTA PREVIA IN PATIENTS WITH PREVIOUS ONE CAESEAREN SECTION

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## ABSTRACT

**Introduction:** Placenta previa is considered as a potentially life threatening condition that requires a multidisciplinary approach in its management. The risk of placenta Previa is found to be higher among women with previous surgery on uterus, including caesarean section

**Objective:** To determine the association of placenta previa with previous one caesarean section and vaginal delivery.

**Study Design:** Cross sectional study. **Duration:** From 01-11-2019 to 01-11-2020. **Settings:** Department of Obstetrics & Gynaecology Unit-II, Nishtar Hospital Multan. **Subjects and Methods:** About 500 patients fulfilling the inclusion criteria were included in this stud. All women were asked for antenatal checkup after every 2 weeks. Placenta previa was diagnosed at 36 weeks gestational age as per operational definition. Data regarding placenta previa was recorded on especially designed proforma. Data was analyzed with statistical analysis program (IBM-SPSS 20). **Results:** Majority of cases 61.4% were in age group 26 to 30 and 59% of cases presented at gestation of 36 to 38 weeks of gestation. Majority was P2 and was having BMI between 20-25. Out of 500 patients, placenta previa was a finding in 47 (9.4%) cases. **Conclusion:** The results generated by our study indicate that previous Caesarean section is a risk factor for the development of placenta previa in subsequent pregnancies.

**Keywords:** Placenta previa, previous caesarean section, frequency

## INTRODUCTION

Placenta previa is defined as a condition in which placenta attaches to the uterine wall of the lower portion of the uterus and covers all or part of the cervix. It occurs in 2.8/1000 singleton pregnancies<sup>1</sup>. It is associated with increasing maternal age, high parity, smoking, uterine abnormalities, previous caesarean section (recurrence rate 4-8%), termination of pregnancy and intrauterine surgery<sup>2</sup>. Its occurrence increases with increasing number of caesarean sections<sup>3,4</sup>. It is a major antenatally identified risk factor for obstetric haemorrhage particularly in women with a previous uterine scar. The risk of placenta previa in a pregnancy after a caesarean section is higher than after a vaginal delivery<sup>4</sup>.

Some studies found more frequency of placenta previa with previous vaginal delivery and few showed more frequency of placenta previa after caesarean section. Due to these conflicting results their results cannot be generalized on all the population. Therefore, to get the local evidence in our general population, we have planned to determine the frequency of placenta previa in women with previous one caesarean section. This study will pave the way to plan proper management of women regarding previous mode of delivery to improve maternal outcomes.

## MATERIAL AND METHODS:

This was a Cross Sectional Study conducted in the Department of Obstetrics & Gynaecology,

Nishtar Hospital Multan from 01-11-2019 to 01-11-2020.

Non-probability consecutive sampling was used. Pregnant women age 20-40 years having singleton pregnancy on ultrasound and gestational age >32 weeks having previous one cesarean section were included in this study. 500 patients were enrolled from outdoor department of Nishtar hospital Multan after permission from ethical committee and research department. Basic demographics (age, gestational age, BMI) were recorded and informed consent was taken from each patient, ensuring confidentiality and fact that there is no risk involved to the patient while taking part in this study. All women were asked for antenatal checkup after every 2 weeks.

On each visit placental localization of all women was done with full bladder on trans-abdominal ultrasound. Placenta previa was diagnosed at 36 weeks gestational age as per operational definition. Ultrasound was done by a consultant gynecologist with 3 years of post-fellowship experience. Data was analyzed with statistical analysis program (IBM-SPSS 20).

## RESULTS:

This study was conducted in the Department of Obstetrics and Gynecology, Unit-II at Nishtar Hospital Multan from 01-11-2019 to 01-11-2020. The objective of study was to determine the association of placenta previa with previous one caesarean section.

Out of 500 patients, 26.4% were in age group 20 to 25 years, 61.4% were in age group 26 to 30 years, 8 % were in age group 31 to 35 years and 4.2% were in age group 36 to 40 years (Table 1).

Out of 500 patients 59% of cases presented at gestation of 36 to 38 weeks and 41% of cases presented at gestation of 39 to 40 weeks (Table 2).

Analysis of parity distribution showed that out of 500 patients, 332 (66.4%) patients were P2, 95(19%) were P3, 49 (9.8%) were P4 and 24 (4.8%) patients were having parity 5 or more (Figure 1).

Out of 500 patients, placenta previa was a finding in 47 (9.4%) cases (Table 3)

**Table No. 1 Age wise distribution of patients**

Age	No of cases	Percentage
20-25	132	26.4
26-30	307	61.4
31-35	40	8
36-40	21	4.2
Total	500	100

Mean 27.33±3.67

**Table No. 2**

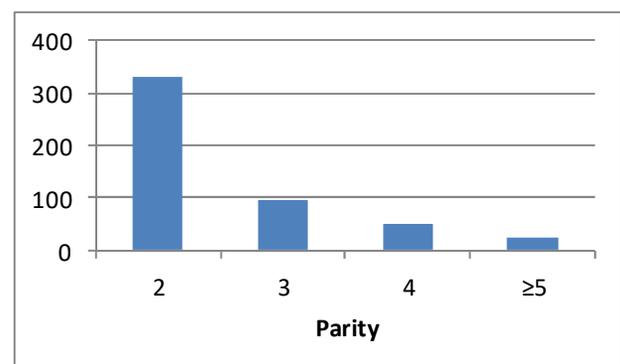
### Gestational age at presentation

Gestational age	No of cases	Percentage
36-38	295	59
39-40	205	41
Total	500	100

Mean 38.17±0.978

**Fig No. 1**

### Parity wise distribution of patients



Mean 2.53±0.87

**Table No. 3**  
**Frequency of placenta previa**

Placenta previa	No of cases	Percentage
Yes	47	9.4
No	453	90.6
Total	500	100

Frequency of placenta previa was 9.4%

### DISCUSSION:

Placenta previa is considered as a potentially life threatening condition that requires a multidisciplinary approach in its management<sup>5</sup>. The risk of placenta Previa is found to be higher among women with previous surgery on uterus, including caesarean section<sup>6</sup>.

Table 1 is revealing age wise distribution of cases. In our study, Out of 500 patients, 26.4% were in age group 20 to 25 years, 61.4% were in age group 26 to 30 years, 8 % were in age group 31 to 35 years and 4.2% were in age group 36 to 40 years. The results generated by the present study are comparable with another study conducted in Pakistan. In that study, out of 114 cases, most patients (47.36%) were between 26-30 years of age<sup>7</sup>. Risk of placenta previa was found to be higher in women with maternal age more than 35 years<sup>8,9</sup>. According to a local study<sup>10</sup> 27% of women with placenta previa were >35 years when compared to those without placenta previa. In contrast to the results of present study, placenta previa was not reported in women below 25 years of age<sup>11</sup>.

Table 2 is showing Gestational age at presentation. Out of 500 patients, 59% of cases presented at gestation of 36 to 38 weeks and 41% of cases presented at gestation of 39 to 40 weeks. Similarly in another local study, majority of cases presented at gestational age between 36-40 weeks (70.17%)<sup>166</sup>. In another International study, mean gestational age at delivery was 34.4 weeks<sup>12</sup>.

Analysis of parity distribution showed that out of 500 patients, 332 (66.4%) patients were P2, 95(19%) were P3, 49 (9.8%) were P4 and 24 (4.8%) patients were having parity 5 or more (Figure 1). Results of our study are also comparable with the results of another local study conducted in Pakistan in which majority of cases were G2-4<sup>13</sup>. Similarly in another local study revealed high frequency of women with placenta previa above 35 years and gravidity more than as compare to those without previa<sup>10</sup>. Risk of placenta previa is higher in gravida >5<sup>8,9</sup>. According to a local study<sup>10</sup>, 60.6% women with placenta previa were having gravidity more than 5 as compared to those without placenta previa.

Table 3 is revealing frequency of placenta previa. Out of 500 patients, placenta previa was a finding in 47 (9.4%) cases. The results of our study are not corresponding with the results of another local study conducted in Pakistan. In that study, frequency of placenta previa in scarred uterus was 67.54%<sup>13</sup>. A study conducted by Suknikhom et al, also reported that previous uterine operations were found in the placenta Previa group more than those without previous cesarean section. Akram H found that 23.3% patients out of 60 patients with placenta Previa had history of previous caesarean section<sup>15</sup>.

Similarly in another study from Pakistan out of total 153 patients with history of previous caesarean section during the study period, 21.5% had Placenta Previa<sup>10</sup>. Hossain et al<sup>16</sup> reported that previous one caesarean section did not increase the risk of development of placenta previa in subsequent pregnancy rather reported an increased frequency of placenta previa in patients with increasing parity and advanced maternal age. Their results support results of others<sup>11</sup>. Similar results were also reported by Cieminski et al<sup>17</sup>. Another study by Zamani<sup>19</sup> reported an increased incidence with advanced maternal age and advancing parity. They also found increased risk for placenta previa even with previous single caesarean section.

An association of Previa with previous caesarean delivery is biological plausible<sup>21</sup>. It can be assumed that the section of uterine muscles during abdominal delivery can interfere with its physiological stretching and can prevented or restrict

the placenta from moving away to the upper uterine segment in a subsequent pregnancy.

## CONCLUSION:

On the basis of this study it can be concluded that previous Caesarean section is a risk factor for the development of placenta previa. Along with previous Caesarean section other factor such as increase in maternal age, parity are also considered to be the predisposing factors for the development of placenta previa. Primary prevention in the form restricting and decreasing the rate cesarean sections for primigravidas must be done in order reduce the occurrence of placenta previa in subsequent pregnancies and its related morbidity.

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