# Placenta Previa Pregnancy Outcomes

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## ABSTRACT

When the placenta is implanted partially or completely over the lower segment (over or adjacent to internal os), it is called placenta Previa several demographic factor may contribute to the higher risk of placenta Previa first maternal age increase placenta Previa, multiparty also elevated risk for the placenta Previa. Cigarette smoking increased relative the risk of placenta Previa at least two-fold. For clinical purpose, the placenta type is divided in minor degree (type I and type II) and major degree (type III and type IV).

**Methodology:** This is a hospital based prospective research that has been conducted during 1/7/1401 – 29/12/1401 in Nangarhar university teaching hospital Obs/Gyn ward. In this research, we had included all the pregnant women with gestational age of > 28 weeks that were hospitalized due to either parturition or obstetrical complication and having placenta Previa, on the other Words, we excluded all the women with multiple pregnancies and having placenta Previa

**Main objective:** We aimed to evaluate the placenta Previa pregnancy outcomes

**Supportive objective:** To find out the cause of placenta Previa

**Results:** A total of 7848 pregnant women were hospitalized in Nangarhar university teaching hospital during our research period. among this population 26 pregnant women were suffering from placenta Previa, the mean age of these women was approximately 25-35 years, and most of these women were multipara. According to the causes of placenta Previa, two patients had one scar of C/S, six patients had two scars of C/S and 4 Patients had the past surgical history of miscarriage and the remaining 14 patients had not a clear past surgical history on the uterus.

**Conclusion:** As far as total placenta Previa is associated with some life threatening fetal and maternal complications, so these women must be hospitalized in advanced health centers for better health services, some of these complications are curable so women must routinely go to health centers for antenatal care visits to prevent the occurrence of further complications.

**Keywords**: placenta Previa, maternal outcome, fetal outcome, emergency cesarean hysterectomy.

**Main objective:** We aimed to evaluate the placenta Previa pregnancy outcomes

**Supportive objectives:** to find out the cause of placenta Previa

**Introduction:**

Maternal and fetal morbidity and mortality from placenta Previa is considerable and associated with high demands on health care resources, because Placenta Previa can cause severe hemorrhagic bleeding during the pregnancy or/and at the time of delivery[1] It can be one of the obstetrician's worst nightmares which are associated with severe maternal morbidity and one of the major causes of maternal death.[2]

When the placenta is implanted partially or completely over the lower segment (over or adjacent to internal os), It is called placenta Previa .1/3 cases of antepartum hemorrhage belong to placenta Previa. It is found 80% in multipara women. The placenta Previa incidence increased by age, parity but till now the exact cause of this pregnancy late complication is not clear [3]

It is one of the major causes of antepartum hemorrhage, which complicates two to five percent of the pregnancies. The incidence of placenta Previa is approximately 4-5 per 1000 deliveries[4] several demographic factor may contribute to the higher risk of placenta Previa first maternal age increase placenta Previa, multiparity also elevated risk for the placenta Previa. Cigarette smoking increased relative the risk of placenta Previa at least two-fold. Incidence range is 0,3 % or one case per 300 or 400 delivery .[5]

Chances of postpartum hemorrhage in cases of Placenta Previa are high as lower uterine segment fails to contract resulting in bleeding from sinuses of placental bed. Use of utero tonics, suturing of bleeding sinuses, stepwise revascularization, internal iliac artery ligation, balloon catheter and failing all hysterectomy are used to control bleeding[6]

Depending on the degree of extension the placenta on the lower segment of the uterus it has four types of depending. [7]

Grade I: the majority placenta part implant in upper segment lower adage reach to the lower segment but not up to internal os (low laying)

Grade II: the lower edge of placenta Previa reach to the internal os but not covered it. (Marginal placenta Previa)

Grade III: lower edge of placenta partially covered the internal os (partial placenta Previa)

Grade IV: The placenta is completely lay in the internal os, it means placenta completely covered, even after the fully dilatation of the cervix. (Complete or total placenta Previa).

For clinical purpose the placenta type is divided in minor degree (type I and type II) and major degree (type III and type IV).

Placenta migration: in most of cases placenta at 17 weeks of gestation reach or cover the internal os in about 10 % of cases repeated ultrasound showed no placenta cover the lower segment. [6]

Placenta Previa and coexistent accrete syndrome both contribute substantively to maternal mortality and morbidity rate, maternal mortality rate increased three-fold for women with placenta Previa, in another report of placenta Previa 5367 maternal death in USA 2006to 2013 placenta Previa alone accounted for near 3 % for the death. preterm delivery continues to be major cause of the perinatal death.in delivery with placenta Previa in USA 1997 the neonatal mortality rate three fold than un effected pregnancy [8]

The association of growth restriction with placenta Previa is likely minimal after controlling for gestation age in a papulation based on cohort study of more than 500,000 singleton birth and Associated complications in 2001 the results shows that most low birth weight infant associated with placenta Previa result from the preterm birth [4]. In 2010 Harper and coworker reported similar finding of cohort study of near 87000 women in contrast at least two studies reported a greater risk for fetal growth restriction [9]

Placenta at time confused with other causes of bleeding occurring in later month of pregnancy like abruption of placenta.

The most common complications of the placenta Previa are antepartum hemorrhage, Premature Rupture of Membrane, atony of uterus, adherent Previa, mal presentation and Preterm Labor. [10]

**Methodology:**

This is a hospital based prospective research that has been conducted during 1/8/1401 – 29/12/1401 in Nangarhar university teaching hospital Obs/Gyn ward. In this research we have

included All the pregnant women having placenta Previa with gestational age of > 28 weeks that were hospitalized due to either parturition or obstetrical complication and, on the other hand we excluded all the women with multiple pregnancies and having placenta Previa. Among all the participants only 26 of them were diagnosed with placenta Previa with the incidence of 3%. The target women were firstly registered and then a specific obstetrical history file was filled, in this specific obstetrical file, We have mentioned all important data regarding our research such as identification of the patient, first day of last menstrual period (LMP) which is important for determining Gestational age and number of deliveries. After completing history, the physical examination of abdomen of each participant has been performed by a Obs/Gyn specialist and ultrasonography was performed for the purpose of fetal wellbeing and placental location. After all these examinations, a specific questionnaire was filled from the women having placenta Previa. The questionnaire contains All the important data that was required for our research. The women having placenta Previa were under observation before and after parturition. We have the permission of the ethical committee of the Nangarhar university teaching hospital and we have also the patient verbally consent for conducting our research. Finally, we analyzed our data and result in SPSS 23 version.

**Results:**

A total of 7848 pregnant women admitted during our research to Nangarhar university teaching hospital Gyn /Obs ward, among this population, 26 pregnant women were documented for placenta Previa, the mean age of these women was approximately 25-35 years and most of the women were multipara, 15.38. % Were primi para and 84. 66% women were multipara.

According to the causes of placenta Previa two patients had one scar of Caesarea section (C /s), six patients had two scars of C/s and 4 Patients had the past history surgical treatment of miscarriage and the remaining 14 patients have not had a clear past surgical intervention history on the uterus

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| Type of surgical intervention | Cases of placenta Previa |
|---|---|
| **One scar of Previous C/s** | 2 |
| **Two scars of previous C/s** | 6 |
| **Dilatation & curettage** | 4 |

The high incidence age group for occurring placenta Previa is 25-35 years old noted in our research, It means by increasing the age the incidence of placenta Previa also increased.

| Age group (in years) | Cases of placenta Previa |
|---|---|
| **≤ 25** | 6 |
| **25-35** | 15 |
| **> 35** | 8 |

As you know placenta has four types so according the clinical types of placenta Previa, the percentage of marginal placenta Previa (type II) was 3.8%, partial placenta Previa (type III) was (26.9%)and complete placenta Previa or (type IV) was 69.20 %.

According the gestation age 34.6% pregnant women gestation age was less than 34 weeks, 46.1% mother's gestation age was 34-37weeks and 19,23% pregnant women gestation age was more than 37 weeks of gestation.

| Gestational age ( in weeks) | Cases of placenta previa |
|---|---|
| **< 34** | 9 (34.6%) |
| **34-37** | 12 (46.1%) |
| **> 37** | 5 (19.23%) |

20 women have been brought to the hospital with Antepartum Hemorrhage, most of the women were informed during antenatal care period that they were having placenta Previa, only 6 women were not received any ante natal visit.

According to the type of delivery most of the women (19) delivered their babies through operative delivery and the reason was highly dependent on the type of placenta Previa and the severity of the signs and symptoms and fetal condition. 6 women with placenta Previa type III and IV were also suffering from life threatening signs and symptoms.

| Type of placenta Previa | Cases of placenta Previa |
|---|---|
| **Type I** | 0 (low laying) |
| **Type II** | 1 (Marginal) (3.8%) |
| **Type III** | 7 (partial) (26.9%) |
| **Type IV** | 18 (total) (69.20%) |

PPH has been reported in 6 women and 1 woman has gone under caesarean hysterectomy due to placenta Accreta, BT of 1-2

unit has been performed for 22 patients, one of them was gone under caesarean hysterectomy with 4 units. Blood Transfused.

| Amount of BT | Cases of placenta previa |
|---|---|
| **1-2 units** | 22 |
| **> 2 units** | 1 |

Most of women that were having placenta Previa and registered themselves or have been performed their subsequent antenatal care visits already know about the course and prognosis of their pregnancy complications. and they arrived to near health center for urgent management of their bleeding,

According to the newborn results the APGAR score of the 1st minute was 6-9 and the APGAR score of 5th minute was 7-9, two of the newborns delivered with IUGR, one of them was stillbirth and 21 newborns were delivered prematurely.

| Fetal findings | Cases of placenta Previa |
|---|---|
| **APGAR score in 1st minute** | 6-9 |
| **APGAR score in 5th minute** | 7-9 |
| **IUGR** | 2 |
| **Stillbirth** | 1 |
| **Prematurity** | 21 (80%) |

**Discussion:**

A total of 7848 pregnant women admitted during our research to Nangarhar university teaching hospital Gyn /Obs ward, among this population 26 pregnant women were documented for placenta Previa, the mean age of these women was approximately 25-35 years and most of the women were multipara, according to the causes of placenta Previa two patients have one scar of C/s, six patients have two scars of C/s and 4 Patients have the past history surgical treatment of miscarriage and the remaining 14 patients have not has a clear past surgical intervention history on the uterus.

The high incidence age group for occurring placenta Previa is 25-35 years old noted in our research .15.38. % were primi para and 84. 66% women were multipara. According the clinical types of placenta Previa, the number of marginal placenta Previa (type II) was 3.8%, partial placenta Previa (type III) was (26.9%) and complete placenta Previa or (type IV) was 69.20 % .34.6% pregnant women gestation age was less than 34 weeks, 46.1%

mother's gestation age was 34-37weeks and 19, 23% pregnant women gestation age was more than 37 weeks of gestation.

20 women have been brought to the hospital with Antepartum Hemorrhage, most of the women were informed during antenatal care period that they were having placenta Previa, most of them came to the hospital for selective C/s. only 6 women were not received any antennal visit.

According to the type of delivery most of the women (19) delivered their babies through operative delivery and the reason was highly dependent on the type of placenta Previa and the severity of the signs and symptoms and fetal condition. 7 women with placenta Previa type I and II were also suffering from life threatening signs and symptoms.

PPH has been reported in 6 women and 1 woman has gone under caesarean hysterectomy due to placenta Accrete.

BT of 1-2 unit has been performed for 22 patients, one of them was gone under caesarean hysterectomy with 4 units. Blood Transfused. 4 women don't need for blood transfusion.

According to the newborn out come in placenta Previa, our results showed the APGAR score of the 1$^{st}$ minute was 6-9 and the APGAR score of 5$^{th}$ minute was 7-9, two of the newborns delivered with IUGR, one of them was stillbirth and 21 newborns were delivered prematurely. The frequency of placenta Previa is estimated 3% in Obs/Gyn ward.

Feto maternal Outcome with Placenta Previa and Morbidly Adherent Placenta, A Cross Sectional Study was conducted in Department of Obstetrics and Gynecology, Pak Red Crescent Medical and Dental College (PRCM&DC) Hospital Lahore from June 2017 to June 2019. A total of 62 pregnant women were registered in total, 62 patients with PP were identified 22.58% patients with morbidly adherent placenta were unhooked and other wise are booked. 61.2% patients were the age group between 20-30 years and remaining are more than 30 years. In 25.8% type IV placenta Previa and same 25.8% are morbidly adherent placenta and remaining are type I, II &III PP. Placenta Previa, only 6.45% cases were diagnosed in 2nd trimester and 93.5% cases were diagnosed in 3rd trimester.

A prospective study was conducted in our tertiary care hospital on 78 patients in order to know the cause and outcome of placenta Previa. Out of 78 patients registered in the study, 44 (56.4%) had minor degree of PP while 34 (43.6%) had major degree. Majority of patients (91%) were in the age group 21-30 years. The mean age in present study was 26

± 3.3 SD. According to the gravidity, it was observed that 38.5% were prim gravid and 61.5% were multigravida. 53.9% patients were delivered after 37 weeks of gestation, 37.2% between 34–37 weeks and 8.9% before 34 weeks of gestation. Mean gestational age at the time of delivery was found to be 36.9 ± 2.7 SD in present study. 83.3% cases had cephalic presentation at the time of delivery.

Early termination was carried out in major PP group due to APH. 13 out of 17 patients presenting with APH had major degree of PP. Abnormal lie and presentation are commonly seen in cases of PP however cephalic constituted 83.3% cases of fetal presentations in present study followed by breech 10.2%, oblique 3.9%, face 1.3% and transverse 1.3%. In this study, 92.2% neonates were born alive while neonatal death and intrauterine death (IUD) were observed in 5.2% and 2.6% neonates respectively.

- Clinical study of placenta Previa and its effect on maternal health and fetal outcome Department of Obstetrics and Gynecology, Bangalore Medical College and Research Institute, Bangalore, Karnataka, India Total 106 pregnant women with placenta Previa were analyzed between January to December 2015. After applying the inclusion and exclusion criteria these women were analyzed with respect to their age, parity, gestational age and clinical features at presentation, history of warning bleeding, duration of hospitalization, need for blood transfusion, period of gestation at delivery, route of delivery and ICU admissions. For the newborn APGAR score, birth weight, need for NICU admission, still birth rate, neonatal mortality rate is noted down. In this study 0.64% of the deliveries were complicated with placenta Previa among them 23.6% women were above 30 years of age and 80.2% were multigravidas. 60.4% had major degree placenta Previa, 36.8% had prior cesarean deliveries, 7.5% had prior abortion, 39.7% preterm deliveries. 85.8% cases delivered by cesarean delivery, 12.7% cases had postpartum hemorrhage and 4.7% had adherent placenta. There were 86.8% ICU admissions, 3.8% cases of acute kidney injury.

The numbers in our research in most conditions is similar to those of other countries. The fact that occurrence of Placenta Previa in pregnant women is a little bit higher and it is due to the lack of availability of advanced health center in Nangarhar Jalalabad city. Most of these pregnant women refer to these two or three advanced centers in eastern region, and due to high number of these women occurrence of Placenta Previa goes high. On the other hand, from the time the (CTG) is used for assessment of fetus in our ward, the number of operational deliveries went high too. As it is mentioned before that one of the causes of Placenta Previa is having of caesarian section scars.

## Conclusion:

As far as total placenta Previa is associated with some life threatening fetal and maternal complications so these women must be hospitalized in advanced health centers for better health services, some of these complications are curable so women must routinely go to health centers for antenatal care visits to prevent the occurrence of further complications.

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