

# Frequency of Placenta Accreta in Patients with Placenta Previa & Previous C-Sections

Fauzia Monnoo Khan, Khizera Anwar, Samina Asghar and Shumaila Yousuf  
Department of Obstetrics & Gynecology, Fatima Memorial Hospital, Lahore

## ABSTRACT

**Objectives:** To determine the frequency of placenta accreta in patients with placenta previa & previous caesarean sections. **Place and duration of study:** Fatima Memorial Hospital, from 1<sup>st</sup> June 2014 to 31<sup>st</sup> Dec 2014. **Patients and Methods:** This prospective study was carried out on 60 patients with the diagnosis of placenta previa, the relationship between previous cesarean sections and subsequent development of placenta previa accreta was analysed. **Results:** The age distribution revealed that 24(40%) patients were between the age 36-40 years, followed by 11(18%) pts between 26-30 years, another 11 (18%) between 30-35 years, 8 (13%) patients were between 21-25 years and 6 (10%) patients were >40 years. Parity distribution showed 24(40%) patients ranged from G<sub>2</sub>-G<sub>3</sub>, and 36(60%) pts ranged from G<sub>4</sub> or more. From a total 60 women with placenta previa, 5(8.3%) patients had type 1 placenta previa, 19(31.6%) patients type 2 placenta previa, 12(20%) patients type 3 placenta previa, 24 (40%) patients type 4 placenta previa. Among all these pts, 23(38%) pts were having placenta accreta intra-operatively, 14 (60%) of these pts ended up in cesarean hysterectomy. **Conclusion:** The incidence of placenta accreta is directly proportional to the number of previous cesarean sections. Patients with previous cesarean section, and antepartum diagnosis of placenta previa, should be considered as high risk for developing placenta accreta.

**Key words:** Placenta, Caesarean, Previa, Accreta.

## INTRODUCTION

Placenta previa is an obstetric complication that occurs in 2<sup>nd</sup> & 3<sup>rd</sup> trimesters of pregnancy. Placenta is said to be previa when it is situated wholly or partly within the lower uterine segment.

Placenta accrete is morbidly adherent placenta, when part of the placenta, or the entire placenta, invades and is inseparable from the uterine wall<sup>1</sup>. When the chorionic villi invade only the myometrium, the term placenta increta is appropriate; whereas placenta accreta describes invasion through the myometrium and serosa, and occasionally into adjacent organs such as bladder.

Placenta previa is an The rising incidence of cesarean deliveries combined with increasing maternal age has resulted in a 10-fold increase in the incidence of placenta accreta over the past 50 years<sup>2</sup>

Other risk factors for placenta accreta are dilatation & curettage, intrauterine surgery such as myomectomy, smoking, multifetal gestation and

multiparity.<sup>3</sup> Placenta accreta is associated with significant risk of massive obstetrical haemorrhage, sometimes necessitating caesarean hystrectomy. Antenatal diagnosis by ultrasound is beneficial in allowing preparation for delivery by a multidisciplinary team, comprising of obstetricians, anaesthetists, radiologists & surgeons in an appropriate setting<sup>4</sup>.

Colour flow doppler studies on USG & MRI are helpful in making an antenatal diagnosis.<sup>5</sup>

The timing of delivery should be individualized. This decision should be made jointly with the patients, Obstetricians & Neonatologist.

In all cases of placenta accreta, the risk of haemorrhage, blood transfusion, hysterectomy, ICU care of patient and possible maternal death should be discussed with the patient as a part of consent.<sup>6</sup>

## Objectives

The objective of this study was to determine the frequency of placenta accreta in patients with

placenta previa & previous cesarean sections.

## PATIENTS AND METHDOS

This study was conducted in Department of obstetrics and Gynaecology, Fatima Memorial Hospital, Lahore. A total of 60 patients with the diagnosis of placenta previa in current pregnancy, and having previous history of Caesarean section were enrolled. Duration of this prospective study was from 1st June 2014 to 31st December 2014. Statistical analyses were carried out to determine the relationship between previous cesarean section and subsequent development of placenta previa accreta.

### Inclusion criteria:

Patients who fulfilled the following criteria were included in the study:

1. Patient with placenta praevia and previous delivery by caesarean section.
2. Placenta praevia accreta diagnosed antenatally by doppler USG from 28 wks onwards, in patients with previous caesarean section and confirmed at the time of caesarean section intraoperatively.

### Exclusion criteria:

1. Cases of previous caesarean section with placenta previa diagnosed by ultrasonography but intraoperatively no placenta previa.
2. Cases of marginal and low lying placenta previa diagnosed on ultrasonography but delivered vaginally.
3. Multiple gestations.

A detailed history including name, age, parity, previous number of Caesarean sections, any history of dilatation & curettage, episodes of antepartum haemorrhage resulting in hospital admission were noted. Ultrasonography was routinely done on all the antenatal patients between 16 & 22 weeks of gestation. Earlier scan was performed on patients with history of vaginal bleeding. Patients were followed with routine antenatal visits and repeat abdominal USG except for those who presented in emergency with heavy vaginal bleeding giving no time for

ultrasonography. Doppler USG was done in all patients with type III & type IV placenta previa, to diagnose placenta accreta. All the patients were counseled about the condition and written informed consent was taken. Before surgery, multidisciplinary approach was adopted involving obstetricians, neonatologist, surgeons, anaesthetists.

The diagnosis of placenta accreta was also made on the basis of difficulty on removal of placenta from uterine wall, making it possible to remove piecemeal or preventing complete removal and causing severe haemorrhage, even in the hands of experienced obstetricians. The diagnosis, therefore was clinical, except in case of hysterectomy, when specimen was sent for histopathology and the diagnosis of morbidly adherent placenta to the uterine connective tissue or myometrium with the absence of intervening decidua was confirmed.

Moreover, parameters like the amount of blood loss, injury to bladder, blood transfusion, duration of hospital stay, cesarean hysterectomy performed or not, were noted.

## RESULTS

The age range of all the 60 patients with placenta previa and previous caesarean section was between 21-40 yrs. The maximum no of cases 24(40%) were between the age 36-40years, followed by 11(18%) pts between 26-30 years, another 11 (18%) between 31-35 years, 8 (13%) patients were between 21-25 years and 6 (10%) patients were >40 years. (Table 1).

Out of these 60 patients, 24(40%) women were in their second or third pregnancy, and 36(60%) women were G<sub>4</sub> or more (Table 2).

Regarding types of placenta previa, 5(8.3%) patients had type 1 placenta previa, 19 (31.6%) patients were type 2 placenta previa, 12 (20%) patients had type 3 placenta previa, while 24 (40%) patients were having type 4 placenta previa (Table 3)

The occurrence of placenta previa was directly proportional to the number of previous cesarean sections. Table 4 shows the distribution of the total patients according to the number of prior caesarean sections.

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Out of all 60 patients, 23(38%) patients had placenta accreta, 14 (60%) of these patients ended up in cesarean hysterectomy (Table 5).

**Table 1: Age distribution of the patients with placenta previa and previous caesarean section.**

Age	No. of patients	%age
21-25	08	13%
26-30	11	18%
31-35	11	18%
36-40	24	40%
>40	06	10%

**Table 2: Parity distribution of the patients with placenta previa and previous caesarean section.**

Parity	No. of patients	%age
G <sub>2</sub> -G <sub>3</sub>	24	40%
G <sub>4</sub> or more	36	60%

**Table 3: Types of placenta previa in patients with previous caesarean section.**

Type of placenta previa	Number	%ages
Type1	5	8.3%
Type2	19	31.66%
Type3	12	20%
Type4	24	40%
Total	60	

**Table 4: Distribution of the patients according to the number of previous caesarean sections.**

Previous C-section	Number of patients	Percentage
Previous 1 C- section	09	15%
Previous 2 C- section	18	30%
Previous 3 C- section	18	30%
Previous 4 C- section	15	25%

Regarding complications 14(23%) patients ended up in hysterectomy. 18 (30%) needed ten or more blood transfusions. Injury to the bladder occurred in 8(13.3%) patients. 11 (18.3%) patients had postoperative fever. 10(16.6%) patients had to stay for more than seven days in hospital (Table 6).

**Table 5: Percentage of placenta accreta in patients with placenta previa and previous caesarean section.**

Previa/Accreta	Number	%ages
Previa without accreta	37	61%
Accreta	23	38%

**Table 6: Complications in patients undergoing surgery with placenta previa and previous caesarean section.**

Complication	No of patients	%ages
Cesarean hysterectomy	14	23%
Massive blood transfusion	18	30%
Injury to Bladder	8	13.3%
Fever	11	18.3%
Hospital stay >7 days	10	16.6%
Maternal mortality	0	

## DISCUSSION

Placenta accreta is an uncommon but potentially lethal complication of pregnancy. It occurs when placenta is abnormally adherent to the uterine myometrium as a result of partial or complete absence of the decidua basalis and Nitabuch's layer.<sup>7</sup> This is the consequence of failure of reconstitution of the endometrium/decidua basalis after repair of a cesarean incision or endometrial damage.

Clarke and colleagues<sup>8</sup> found that, in the presence of a placenta previa, the risk of having placenta accreta increases from 24% in women with one prior cesarean delivery to 67% in women with 3 or more prior caesareans. In our study risk of placenta accreta is 15% with previous 1 cesarean section & it doubles (30%) with previous 2 & 3 caesarean sections.

Hudon and colleagues stated that Placenta accreta should be suspected in women who have both, placenta previa and a history of any uterine surgery. Vigilance is particularly indicated when the placenta is anterior and overlies the cesarean scar<sup>9</sup>. This is in complete agreement with our study, in which all the placenta previa were diagnosed ultrasonographically, and Doppler studies were used to determine the possibility of accreta, necessitating

the high vigilance.

In our study 14(%) out of 60 patients underwent caesarean hysterectomy. This is in accordance to the study conducted by Clarke SL and colleagues stating “The majority of the women with significant degrees of placenta accreta will require a hysterectomy”<sup>8</sup>

Hudon L and colleagues<sup>5</sup> mentioned a mortality rate of as high as 7%. Luckily no mortality occurred in current study.

Regarding fertility conserving options in patients with previa accreta, Sentilhes and colleagues<sup>2</sup> suggested in their study that placenta can be left in situ as an alternate strategy. Timmermans and colleagues also advocated adjuvant therapy with methotrexate to expedite the resorption of placental tissue<sup>10</sup>. Neither of the approach was adopted in our study. Though conservative approach to manage placenta accreta can successfully avoid hysterectomy in many cases, there is still risk of serious morbidity. Intensive monitoring for complications is required in patients with retained placenta.

### CONCLUSION

The frequency of placenta accreta in patients with prior caesarean section and placenta previa is considerably high and are associated with high demands on health resources. Prenatal diagnosis by imaging, followed by planning of peripartum management by multidisciplinary team may reduce morbidity and mortality.

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### The Authors:

Fauzia Monnoo Khan,  
Department of Obstetrics & Gynecology,  
Fatima Memorial Hospital,  
Lahore

Khizera Anwar,  
Department of Obstetrics & Gynecology,  
Fatima Memorial Hospital,  
Lahore

Samina Asghar,  
Department of Obstetrics & Gynecology,  
Fatima Memorial Hospital,  
Lahore

Shumaila Yousuf,  
Department of Obstetrics & Gynecology,  
Fatima Memorial Hospital,  
Lahore