

Original Research Article

Maternal outcome in placenta previa – A retrospective study

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Abstract

Background: Obstetric hemorrhage is one of the most dangerous and devastating group of disorders in Obstetrics of which placenta previa contributes 1/5th of the cases. The aim of this study was to analyze the maternal outcome of these cases.

Materials and methods: This was a retrospective study conducted in the Department of Obstetrics and Gynecology of King George Hospital, Visakhapatnam from October 2017 to January 2018. Chart records of all women who had placenta previa were reviewed and relevant clinical findings were noted.

Results: In the present study, 50 cases of placenta previa were studied regarding type of clinical presentation, clinical course, maternal outcome. Information obtained was arranged statistically. Placenta previa cases were highest in the age group 20-29 years (82%) and in multiparous group (74%). Most common risk factor was previous cesarean section (44%) followed by abortion in 24%. Major degree of placenta previa constitutes 74% i.e., majority of cases and minor degree constitutes 26% of cases. In the present study adherent placenta previa in 8% and a total of 14% required hysterectomy.

Conclusions: Placenta previa poses danger to both the mother and the baby with high maternal morbidity and adverse perinatal outcome.

Key words

Maternal outcome, Placenta previa, Risk factors.

Introduction

Obstetric hemorrhage is one of the most common causes of maternal morbidity and mortality worldwide. Abnormal placentation is currently the most common indication for peripartum hysterectomy. Placenta previa accounts for one third of all cases of APH [1]. Placenta previa is a major risk factor for obstetric hemorrhage especially in women with a previous uterine scar [2].

Placenta previa defined as implantation of placenta in lower uterine segment, overlying or approaching internal cervical os [3]. It is further classified according to Williams 2018:

Placenta previa: Placenta completely or partially covers the internal os.

Low-Lying placenta: In this, placental edge lies within 2cm wide perimeter around the os, but does not cover the os.

It occurs in 2.8/1000 and 3.9/1000 in singleton and twin pregnancies respectively [4]. Risk factors include high parity, advancing maternal age, previous caesarean section and uterine surgery [5]. The main diagnostic modality is by transvaginal ultrasound. Every women with suspected diagnosis of placenta previa at anomaly scan needs further follow up imaging. Early prenatal diagnosis allows for timely management thus reducing the perinatal and maternal morbidity and mortality by keeping an eye on need of blood transfusion, and arranging for a team of experienced surgeon, anesthesiologist and pediatrician. The risk of placenta previa in post cesarean pregnancy has been reported to be higher than after vaginal delivery [6]. As there is an increase in primary cesarean rate, and increased incidence of placenta previa the purpose of this study is to assess the value of demographic profile and early identification of placenta previa in the maternal and perinatal outcome.

Materials and methods

This was a retrospective study conducted in the Department of Obstetrics and Gynecology of

King George Hospital, Visakhapatnam from October 2017 to January 2018. Chart records of all women who had placenta previa were reviewed and relevant clinical findings were noted.

Results

Placenta previa cases were highest in the age group 20-29 years i.e. 82% and 18% in the age group 30-35 years. Multiparity accounted for 74% of the cases of placenta previa and primipara accounted for 26% of cases (**Table – 1, 2**).

Table - 1: Age distribution.

| Age Group | Frequency | Percentage |
|-------------|-----------|------------|
| 20-30 years | 41 | 82% |
| >30 years | 9 | 18% |

Table - 2: Parity distribution.

| Parity | Number | Percentage |
|-----------|--------|------------|
| Primipara | 13 | 26% |
| Multipara | 37 | 74% |

Table - 3: Representation of risk factors.

| Risk factor | Frequency | Percentage |
|--------------------------|-----------|------------|
| Age | 9 | 18% |
| D & C | 12 | 24% |
| Multipara | 6 | 12% |
| Post C/S | 22 | 44% |
| Previous uterine rupture | 1 | 2% |
| Total | 50 | 100 |

Risk factors studied were previous caesarean section, abortion, age, multiparity and previous uterine rupture. Most common risk factor was previous cesarean section i.e.44% followed in order by abortion 24% (**Table – 3**).

Major degree of placenta previa constitutes 74% i.e., majority of cases and minor degree constitutes 26% of cases. In the present study massive blood transfusion was required in 4% of all cases, shock/hypotension observed in 6% of all cases, PPH noticed in 20% of cases, adherent placenta previa in 8% and 14% required hysterectomy.

Discussion

About 50 cases presented with placenta previa during a period of 6 months i.e. from January 2018 to June 2018. Mean age of presentation is 26 years. Increasing age and number of pregnancies have been shown to be an important risk factor for placenta previa. This study had 18% of the patient above 30 years age group and almost 74% of the women were multipara.

According to Khirasaria, et al. [7], the mean age was 27 years and in Singhal, et al. [8] study was 26 years, similar to the present study. According to Cleary, et al., a prospective database from multicenter investigations of 36,056 women with singletons showed increasing age was significantly associated with placenta previa comparing women less than 35 years to 35-39 years and 40 years and older (OR 1.8 and 2.8 respectively). Multiple studies have shown increasing parity to be an important risk factor for placenta previa [9-12]. In Khirasaria DM, et al. study [7], incidence of placenta previa was highest (66.6%) in the multiparous group and it was 16.6% in the primi group.

Regarding previous obstetric history, 44% had previous LSCS while 24% had history of abortion. In a retrospective cohort study of 399,674 women, the rate for placenta previa at second birth for women with first vaginal birth was 4.4 per 1000 births, compared to 8.7 per 1000 birth for women with cesarean section at first birth. According to RCOG (2011) [12], the risk factors include Previous placenta previa (adjusted OR 9.7), Previous caesarean sections (RR 2.6, 95% CI 2.3–3.0 with a background rate of 0.5%), One previous caesarean section OR 2.2 (95% CI 1.4–3.4 with a background rate of 1%), Two previous caesarean sections OR 4.1 (95% CI 1.9–8.8), Three previous caesarean sections OR 22.4 (95% CI 6.4–78.3).

Previous history of abortions (both spontaneous and induced) have been significantly associated with up to three times risk of placenta previa. Regarding mode of delivery, cesarean section has

been the recommended mode of delivery for major placenta previa.

Vergani and colleagues [13] reported that more than two thirds of women with placental edge and os distance >1 cm and 1-2 cm within 4 weeks of delivery according to Bronsteen [14] had successful vaginal delivery. Women who had previous cesarean section with either placenta previa or anterior placenta underlying scar are at increased risk of placenta accrete. Colour flow Doppler is useful diagnostic modality. MRI is recommended, if ultrasound is inconclusive.

In population based retrospective cohort study in Nova Scotia, Canada from 1988-1995, 308 cases of placenta previa were identified. Maternal complications included postpartum bleeding (RR-1.86), hysterectomy (RR 33.26), blood transfusion (RR-10.05), and septicaemia (RR-5.55). Risk factor for hysterectomy in women with placenta previa included presence of placenta accrete and previous caesarean [15]. The incidence of accreta in placenta previa in the present study was 8%. According to Frederiksen, et al. [16] study in 2009, the incidence of Placenta accreta is about 15% in women with placenta previa and in the study by Miller, et al. [17], the incidence of accreta was 9.3%. Sheiner, et al. [18] found pregnancies complicated by placenta previa had significantly higher rate of postpartum hemorrhage (OR: 3.8, 95% CI: 1.2-10.5), malpresentations (OR: 7.6, 95% CI: 5.7-10.1), abruption placenta (OR: 13.1, 95% CI: 8.2-20.7).

Conclusion

Majority of the patients in our study were from rural areas where they were unaware about the importance of antenatal visits, with poor educational standards and were of low socioeconomic status. Increasing use of primary cesarean section results in increasing incidence of placenta previa as well as accreta. As the maternal and perinatal morbidity and mortality due to placenta previa is preventable, efforts should be made to bring down these rates which

can be achieved by spacing pregnancies, limitation of family size, antenatal registration of all pregnant patients, use of routine USG in pregnancy and early referral of high risk pregnant women to tertiary care centers. Awareness should be brought about in the rural public to avail the facilities provided by the Government. This will definitely help in better outcome of both mother and fetus in all high risk pregnancies.

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