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Placenta Previa: Maternal and Perinatal Outcome

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Abstract

Introduction: Placenta previa unpredictable obstetric emergency substantially contributing to maternal morbidity and mortality.

Aim: To Determine the Maternal and Neonatal outcome associated with Placenta Previa.

Materials and Methods: A Retrospective observational Hospital based study, conducted in the Department of Obstetrics and Gynecology of Bharati Hospital, Pune from March 2019 to September 2020.

Results: Out of 20 cases studied 3 were Morbidly Adherent Placenta, out of these two underwent Hysterectomy. Placenta Previa risk increase with scarred uterus and increase linearly with number of prior caesarean sections and curettage. In present study 38.8 % of all cases present with massive PPH, 33.3% of these require massive blood transfusion. Newborns are most likely to be lowbirth weight due to increase in incidence of preterm delivery with placenta previa. Out of these 20 cases, 2 patients were missed on ultrasonography and were diagnosed on table.

Conclusion: Placenta previa is a medical emergency, with timely diagnosis and proper management associated complications can be prevented. There is significant relationship between placenta previa and scarred uterus, this risk becomes very high with escalation in a number of cesarean sections.

Clinical significance: In present era with increasing number cesarean sections number of placenta previa cases and associated complications require obstetricians on toes to manage these deadly complications. Timely diagnosis along with judicious expectant management with blood transfusion is required, and timely delivery can lead to the most favorable outcome.

Keywords: Placenta previa; shock; obstetric hysterectomy; Adherent placenta.

Introduction

Placenta previa is an obstetric condition characterized by abnormal implantation of the placenta into the lower uterine segment, covering whole or part of the cervix.[1] "Previa"- going before, placenta goes before fetus into the birth canal.

Placenta previa complicates 0.3–0.5% of all pregnancies and is a major cause of third-trimester hemorrhage.[2] Placental migration is defined as apparent movement of placenta away from internal os, and those placentas that migrate were never implanted with the true villous invasion.

Several factors affecting this migration are:

- Previous LSCS
- Maternal age
- Multiparity
- Endometrial damage
- Uterine abnormality
- Multiple pregnancy
- Defective decidual circulation
- Pregnancy following failure to IUCD
- Smoking

Placenta previa accounts for one third of all cases of Antepartum hemorrhage.[3] It is of concern as obstetric hemorrhage is most common cause of maternal morbidity and mortality. It is further classified.[4]

- *Placenta previa:* Placenta covering internal os either completely or partially.
- *Low-Lying placenta:* placenta is implanted such that placental edge is not covering the internal os but lies within 2 cm from internal os.

Main diagnostic modality is transvaginal ultrasound. Due to increase in primary cesarean rates all over the world, there is increase in incidence of previa due to defective circulation over scar.

The purpose of this study is to identify the associated risk factors and maternal and perinatal outcomes.

Materials and Methods

Study Area: Department of Obstetrics and gynecology in a tertiary care hospital, Bharati hospital and research centre at Bharati Vidyapeeth (Deemed to be University) , Pune.

Study Design: A Retroprospective observational, Clinical study

Study Duration: March 2019 to September 2020.

Inclusion Criteria

All pregnant women who are diagnosed with placenta previa both antenatally and intraoperative.

Exclusion Criteria

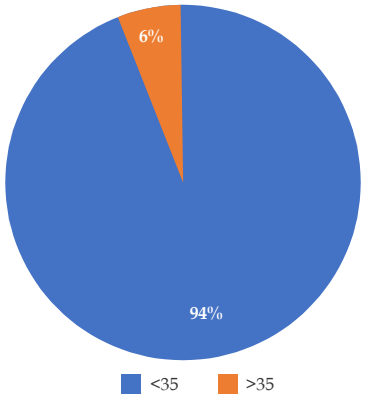
Cases of placenta previa with any other maternal morbidity such as severe pregnancy induced hypertension, severe IUGR, and gestational diabetes mellitus.

Methodology: Records of all women who had placenta previa were reviewed and relevant clinical findings were noted. Diagnosis of placenta previa was based on ultrasonography and confirmed at cesarean delivery. In the present study,20 cases were studied, Information obtained were analyzed statistically.

Statistical Analysis: All the collected data was entered in Microsoft Excel Sheet 2007. Qualitative data was represented in the form of frequency and percentage. All analysis was carried out by using SPSS software version 21. Appropriate statistical evaluation was carried out as per the type and distribution of data.

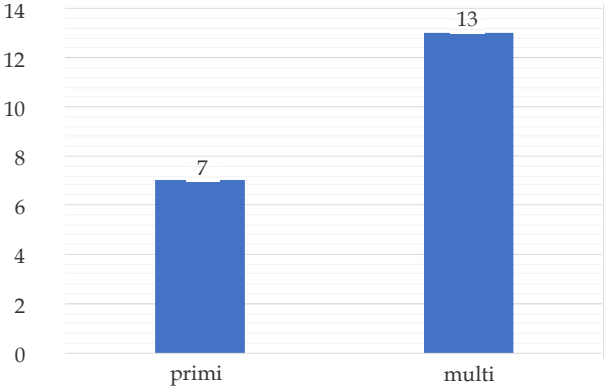
Results

Placenta previa cases were highest in the age group 20–35 years i.e. 94% and 6 % in the age group 30–35 years. (Graph 1)



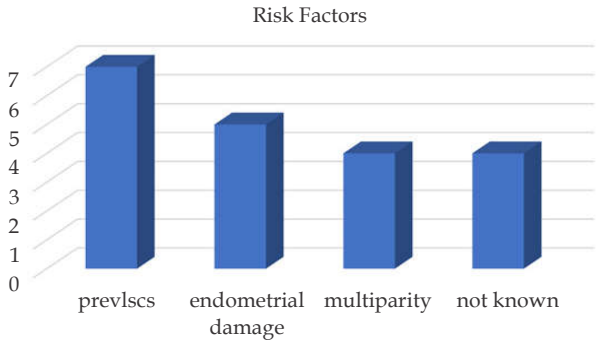
Graph 1: Placenta previa cases highest in the age group 20–35 years.

Multiparity accounted for 66.6% of the cases of placenta previa and primipara accounted for 33.3% of cases. (Graph 2)



Graph 2: Multiparity accounted.

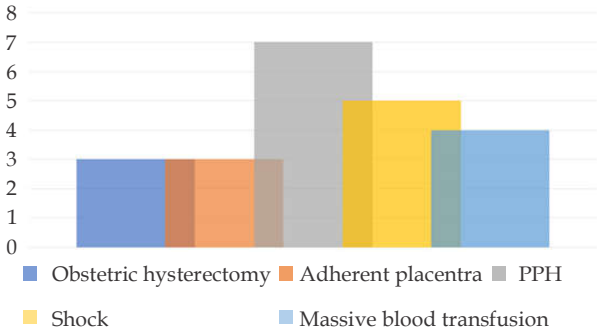
Most common risk factor was previous Cesarean delivery i.e.35% followed in order by previous procedures like curettage- 25%. (Graph 3)



Graph 3: Risk Factors.

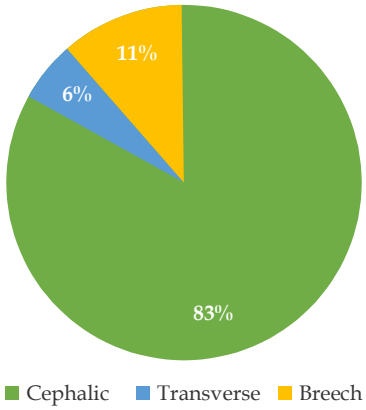
In the present study massive blood transfusion protocol was required in 20% of all cases, shock/

hypotension observed in 25% of all cases, Postpartum hemorrhage noticed in 35% of cases. Adherent placenta was noted in 3 cases (15%). All three required hysterectomy. (Graph 4)



Graph 4: Hypotension observed.

MaI presentations are common in placenta previa, however, cephalic presentation is still the most common. (Graph 5)



Graph 5: placenta previa, however, cephalic presentation.

Major degree of placenta previa constitutes 61.1% and minor degree constitutes 38.8% of cases. Most of the newborns were low birth weight due to increase in incidence of preterm delivery with placenta previa. Most common mode of delivery is Cesarean section. 99% of patients delivered between 28 to 34 weeks. Majority of them have presented with Antepartum hemorrhage. Although sonography is a very sensitive tool for diagnosing placenta previa, in this study 3 cases were diagnosed intraoperatively.

Discussion

Women with placenta previa are at increased risk for PPH, APH, need for blood transfusion, long hospital stay, and delivery by Caesarean section. In this study massive blood transfusion protocol was required in 20% of all cases, shock hypotension was observed in 25% of all cases, PPH noticed in 35% of all cases. It is also associated with poor neonatal outcome, low Apgar scores, requiring NICU admission due to increase incidence of preterm delivery with placenta previa. In this study we have seen 99 % of patients delivered between 28 to 34 weeks.

Most common risk factor is previous caesarean delivery (35 % in this study), followed by previous insults to uterus in procedures like curettage (25%). Multiparity accounted for 66.6% of cases in this study. This could be explained by degenerative changes in the uterine vasculature, leading to under perfusion of the placenta, compensatory enlargement, and increased likelihood of implantation on the lower segment.

Placenta previa had tenfold higher odds for Caesarean delivery. As placenta in the lower segment obstructs engagement of the head especially for major previa. This necessitates Caesarean section and malpresentation. In this study most common mode of delivery was caesarean, although malpresentations were not so common.

As we say ultrasonography is very sensitive tool for diagnosing placenta previa, but we have missed 2 cases on ultrasonography which were diagnosed on table.

Proper preventive measures are must to prevent maternal and perinatal morbidity and mortality which in present era with increasing caesarean rates.

Conclusion

Maternal and perinatal morbidity and mortality due to placenta previa is preventable. Proper measures must be taken to bring these rates down which includes-

- Spacing pregnancies
- Antenatal registration of all pregnant patients
- Use of routine Ultrasonography in pregnancy and early referral of high risk pregnant women to tertiary care centers.

Being a clinical emergency contributing to massive maternal hemorrhage, Proper diagnosis along with judicious expectant management with blood transfusion is required.

It can be very well concluded from this study that cesarean section had a significant relationship with placenta previa and its risk becomes very high with escalation in a number of cesarean sections.

An increasing use of primary cesarean section results in increasing incidence of placenta previa as well as accreta. Institutional delivery in a tertiary care center is preferred with multidisciplinary care.

Ultrasonography detection of the anterior placenta is of utmost importance to predict maternal outcome in placenta previa, and these cases are prone to massive maternal hemorrhage.

The family planning services should be further improved to attain a decline in the number of women of high parity. Associated morbidity can be reduced by detecting the condition in the antenatal period by ultrasound before it becomes symptomatic.

Goal is Early Diagnosis and Planned Delivery.

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