

Fetomaternal Outcome in Placenta Previa at Tertiary Care Hospital in Western Rajasthan: A Retrospective Analysis

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Abstract: Background: Placenta Previa (PP) is defined as placenta that lies wholly or partly within the lower uterine segment. It is associated with significant maternal and fetal morbidity and mortality because of unanticipated blood loss and is of the most acute life-threatening emergency in obstetrics. Objective: Feto-maternal outcome in cases of placenta previa in a teaching hospital. Material and Methods: This was a retrospective observational study conducted in Dr S N Medical College, Jodhpur, Rajasthan over a period of one year from June 2018 to May 2019. There were a total of 9557 deliveries during this period and 76 patients were placenta previa. Results: There were a total of 9557 deliveries during this period and 76 patients were placenta previa. Incidence of placenta previa was 0.8%. In our study 41 cases were found in the age group of 26-30 years (53.95%) and 23 cases were found in the age group of 20-25 years (30.26%) and placenta previa was found in 36 cases (47.1%) in >gravida 2, followed by gravida 2 in 27 cases (35.52%). Low lying placenta was the most common type of placenta previa in 40.79% cases, followed by type 2 in 28.95%. Out of 76 cases, 46.05% cases were present between 34-37 weeks of gestation followed by 38.2% cases were >37 weeks. Most common mode of delivery was Caesarean 93.4%. Out of 76 cases 59.2% babies were of birth weight <2.5 kg and 40.8% babies >2.5 kg. Out of 76 cases 15.78% cases had Atonic PPH, 5.26% cases were minor degree PPH and 10.52% cases were of major degree of PPH, of which 5.26% cases went for hemorrhagic shock. Of these 4 cases, 2 cases were controlled by medical and surgical (bilateral uterine ligation) and 2 case landed up in hysterectomy due to Intractable PPH. No maternal mortality in our study. Conclusion: Managing a case of placenta previa during pregnancy poses a great challenge to every obstetrician in present day obstetrics due to its increased risk of maternal and perinatal complication. Therefore, waiting till 37 weeks if patient is not bleeding could decrease neonatal morbidity in our population.

Keywords: Placenta previa, low lying placenta.

1. Introduction

Placenta Previa (PP) is defined as placenta that lies wholly or partly within the lower uterine segment¹. It is associated with significant maternal and fetal morbidity and mortality because of unanticipated blood loss and is of the most acute life-threatening emergency in obstetrics. Frequency varies with parity; for nulliparous incidence is 0.2% whereas in grand multiparous it may be as high as 5%.²

Risk factors are old age, multiparity, previous caesarean delivery, abortion, smoking, cocaine, and male fetus³. In previa patients, postpartum haemorrhage is substantial, which increases maternal complications. Risk factors for massive haemorrhage and transfusion are old age, abortion, previous caesarean section, uterine myoma, increased BMI, increased neonatal weight, and complete previa⁴.

With the rising incidence of caesarean sections combined with increasing maternal age, the number of cases of placenta previa and its complications, including placenta accreta, will continue to increase⁵.

In Placenta previa the most common symptom is painless vaginal bleeding. The first haemorrhage is usually not severe the "warning haemorrhage", occasionally it is severe one. Absence of pain and uterine contraction is an important distinguishing feature between PP and Abruptio placenta^{6,7}

The traditional classification of placenta previa describes the degree to which the placenta encroaches upon the cervix in labour and is divided into low lying, marginal, partial or complete placenta previa⁸.

True placenta previa in which internal cervical os is covered by placental tissue and low-lying placenta in which placenta lies within 2 cm of cervical os but does not cover it⁵.

Placenta previa is one of the major causes for maternal and perinatal mortality accounting for 35% cases of antepartum haemorrhage. This study is conducted to know the various clinical presentations and feto-maternal outcome in cases of placenta previa in a teaching hospital.

2. Materials and Methods

This was a retrospective observational study conducted in Dr S N Medical College, Jodhpur, Rajasthan over a period of one year from June 2018 to May 2019. There was a total of 9557 deliveries during this period and 76 patients were placenta previa.

Data were collected from the records present in Labor ward and Medical record section.

All patients with bleeding per vaginum after 28 weeks of gestation but before birth of the fetus were included in the study. Cases with bleeding before 28 weeks and after delivery of the baby were excluded.

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The diagnosis of all cases was made on the basis of history, clinical examination and ultrasonography. Statistical analysis was done by using SPSS software version 21. Institutional ethical committee clearance had been taken for this study

3. Results

A total of 76 patients were analyzed in this study.

Table 1: Incidence of placenta previa according to maternal age

Age	No of cases (%)
<20years	3 (3.94%)
20-25years	23 (30.26%)
26-30 years	41 (53.95%)
>30 years	9 (11.84%)

In our study 41 cases were found in the age group of 26-30 years (53.95%) and 23 cases were found in the age group of 20-25 years (30.26%).

Table 2: Incidence of placenta previa with respect to gravida

Gravida	No of cases (%)
Gravida-1	13 (17.1%)
Gravida-2	27 (35.52%)
>Gravida-2	36 (47.3%)

In our study placenta previa was found in 36 cases (47.1%) in >gravid 2, followed by gravid 2 in 27 cases (35.52%).

Table 3: Incidence in relation to type of placenta previa

Type of placenta previa	No of cases (%)
Type 1 (low lying)	31 (40.79%)
Type 2 (marginal)	22 (28.95%)
Type 3 (Incomplete)	9 (11.85%)
Type 4 (Complete)	14 (18.42%)

Low lying placenta was the most common type of placenta previa in 31 (40.79%) cases, followed by type 2 in 22 (28.95%).

Table 4: Incidence of placenta previa with respect to period of gestation

Period of gestation in weeks	No of cases (%)
28-34weeks	12 (15.78%)
34-37 weeks	35 (46.05%)
>37 weeks	29 (38.2%)

Out of 76 cases, 35 (46.05%) cases were present between 34-37 weeks of gestation followed by 29 (38.2%) cases were >37 weeks.

Table 5: Relationship of mode of delivery in placenta previa

Mode of delivery	No of cases (%)
Vaginal	5 (6.6%)
Caesarean	71 (93.4%)

Most common mode of delivery was Caesarean 93.4%.

Table 6: Incidence of birth weight in placenta previa

Birth weight	No of cases (%)
<2kg	14 (18.42%)
2-2.5kg	31 (40.8%)
2.6-3 kg	19 (25%)
>3 kg	12 (15.8%)

Out of 76 cases, 45 (59.2%) babies were of birth weight <2.5 kg and 31 (40.8%) babies >2.5 kg.

Table 7: Relationship of maternal complication among placenta previa

Maternal complication	No of cases (%)
Atonic PPH	12 (15.78%)
Hysterectomy	2 (2.63%)
Haemorrhagic shock	4 (5.26%)

Out of 76 cases 12 (15.78%) cases had Atonic PPH, 4 (5.26%) cases were minor degree PPH and 8 (10.52%) cases were of major degree of PPH, of which 4 (5.26%) cases went for hemorrhagic shock. Of these 4 cases, 2 cases were controlled by medical and surgical (bilateral uterine ligation) and 2 case landed up in hysterectomy due to Intractable PPH. No maternal mortality in our study.

Table 8: Number of blood transfusions in cases of placenta previa

No of units transfusion	(Blood)	No of cases
1 unit		24 (31.8%)
2 unit		27 (35.5%)
3 unit		15 (19.74%)
4 units or more		10 (13.2%)

In our study 10 patients (13.2%) needed 4 or more units of blood transfusion.

Table 9: Perinatal outcome

Outcome	No of cases
Apgar score <7 at 5min	34 (44.73%)
Still birth	3 (3.95%)
NICU admission	41 (53.94%)

In our study 3 (3.95%) perinatal death and 41 neonates needed NICU admission (53.94%).

4. Discussion

Placenta previa is one of the major causes for antepartum haemorrhage, which complicates two to five percent of the pregnancies. In our study incidence of placenta previa was 0.8% which was higher to study by Rangaswamy et al⁹ 0.2%. A relatively higher rate can be explained on the basis that Mathura das Mathur hospital being a tertiary care referral hospital. Placenta previa was more commonly present among multigravida (47.3%) which is similar to study conducted by faiz³ et al.

Low lying placenta was the most common type of placenta previa in 31 (40.79%) cases, followed by type 2 in 22 (28.95%) similar to Vaishali et al¹⁰ where low-lying placenta previa was 43.27%.

Out of 76 cases 12 (15.78%) had atonic PPH which is similar to study by Bhatt AD et al¹¹ (15%).

In our study 3 (3.95%) perinatal death and 41 neonates needed NICU admission (53.94%).

There was no maternal mortality during the study period. 2 patients with central placenta previa had intractable atonic PPH not controlled by medical and conservative surgeries requiring peripartum hysterectomy.

5. Conclusion

Managing a case of placenta previa during pregnancy poses a great challenge to every obstetrician in present day obstetrics due its increased risk of maternal and perinatal complication. Therefore, waiting till 37 weeks if patient is not bleeding could decrease neonatal morbidity in our population. Thus, good antenatal care including more frequent antenatal check-ups, correction of anemia during antenatal period, anticipating the complications in consultation with senior obstetrician, educating the patient's regarding the complications like prematurity, need for blood transfusions and its products and rarely hysterectomy and taking the pediatrician help will definitely reduce the perinatal complications associated with it.

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