International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064

Maternal and Perinatal Outcome in Cases of Placenta Previa

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Abstract: ***Study of 88 cases of placenta previa during 1 year duration was carried out at civil Hospital, Ahmadabad. Demographic data, investigations, treatment & maternal and perinatal outcome were studied .88 cases of placenta previa noted out of 6824 admitted deliveries which makes its incidence 1.3%. Caesarean rate was as high as 63.6%.Postpartum hemorrhage 17%, Blood products required in 65%. 4.5% still born, 71% Low Birth Weight babies & 20% early neonatal deaths observed. 2 maternal deaths in cases with placenta accrete & 22 perinatal deaths were present in this study which shows the severity of the condition & demand of vigilant monitoring & utmost medical attention.***

Keywords: PlacentaPrevia, Low Lying Placenta, Placenta Accreta, Inevitable Ante Partum Hemorrhage, Bleeding Per Vaginum

1. Introduction

When Placenta is situated partially or completely in lower uterine segment, it is called placenta previa. Clinically present as painless, causeless, recurrent bleeding of variable amount. Depending upon amount of bleeding patient may go into shock. It must be differentiated from abruption placenta and vasa previa.

JAUNIX & CAMPBELL, in 1921 classified placenta previa into four types: Type I (Low Lying) Type II (Marginal) Type III (Partial Central or Incomplete) Type IV (Total or Central). However clinically it is commonly classified into Major (60%) or Minor (40%) placenta previa depending upon whether it covers internal os or not respectively [1]. Initial bleeding in placenta previa is called WARNING HEMORRHAGE [2]. It is rarely profuse, cease spontaneously, it suggest that recurrence is likely to occur. Warning hemorrhage mostly occur in major placenta previa.

DIAGNOSIS: Confirmation is done by TAS with 96% accuracy [3]. However TVS is even more sensitive. Transvaginalsonographyor transperinealsonography iseven more accurate than Trans Abdominal Sonography (TAS). MRI should be used when placental invasion is to be seen in cases of placenta accreta, increta or percreta.

MANAGEMENT: EXPECTANT or DEFINITIVE

Expectant management (MacAfee & Johnson) must be applied (only till term) when fetus is preterm, mother is not in labour & whenever mother &fetus is stable. It causes decrease in perinatal mortality rate [4].The protocol of expectant management includes bed rest, periodic blood investigations & cross matched blood ready, watch on vaginal bleeding, frequent fetal surveillance with USG & steroidal therapy if gestation is less than 34 weeks. Termination of expectant management is done when pregnancy reaches maturity; patient goes in labour, recurrent hemorrhage or in case of fetal distress or death.

Definitive Management: Cesarean section should be carried out in patients with major Placenta Previa, in cases with other indications of Caesarean Section and when patient is in exsanguinated state due to bleeding. Before taking patient into Operation Theatre, a USG must be done to know the localization of placenta (as Anterior is associated with high morbidity) & to rule out myometrial invasion if possible as Placenta Accreta is highly associated with PPH, obstetric hysterectomy & mortality.

2. Literature Survey

Antepartum hemorrhage complicates 2-5% of pregnancies. [5] Out of them one third cases are of placenta previa. Incidence in hospital deliveries is 4-5 per 100 pregnancies.[6], [7]. Amongst these 60% are of major degree and 40% of minor degree placenta previa. It is commonly seen in cases with prior caesarean section and uterine curettage, advanced maternal age, multiparty, multiple gestations, past history of placenta previa & smoking. Placenta previa is associated with adverse consequences for mother and fetus such as antepartum hemorrhage, postpartum hemorrhage, massive maternal blood transfusion, ARF and obstetric hysterectomy, preterm deliveries, fetal distress, prematurity, low birth weight.

Because of widespread use of ultrasound, placenta previa has been diagnosed increasingly. False positive diagnosis is common in the second trimester and the term **"POTENTIAL PLACENTA PREVIA"** [8] is used to describe this situation. In some cases of mid-trimester potential placenta previa is more likely to migrate (phenomenon of the "rising" placenta) and ultrasound may be useful to predict this process. Rate of migration is

4.1mm/week when it is 3 cm away from internal os and it is 0.1 mm/week when it is covering the internal os [9]

3. Methodology

Observational retrospective Study of 88 cases of placenta previaduring 1 year duration was carried out at civil Hospital, Ahmedabad. Demographic data, history, clinical presentation, investigations, treatment given & maternal and perinatal outcome were studied.

4. Results & Discussion

Table 1: Age Distribution

Age	*Cases*	*Percentage (%)*
<25	13	14.7
25-30	20	22.7
30-35	30	34
>35	25	27.3

14.7% cases belonged to the age group less than 25.22.7% in 25-30 years, 34%belonged to the age group 30-35 while 27.3% in age group of more than 35. It clearly shows that there is rise in incidence of placenta previa with advancing maternal age.

Table 2: Case distribution in relation to gravida status

Gravida	*Cases*	*Percentage (%)*
Primi	22	25
Multi	66	75

25% cases were primigravida patients while 75 % were multigravida. The incidence is more in multigravida patients.

Table 3: Case distribution according to gestational age

Gestational age	*Cases*	*Percentage (%)*
<34	30	34.1
34-37	38	43.2
>37	20	22.7

34.1% patients belonged to gestational age <34 weeks, most patients (43.2%) belonged to gestational group of 34-37 weeks and 22.7% patients belonged to >37 weeks gestation.

Table 4: Association of risk factors with cases

Associated factors	*Cases*	*Percentage (%)*
Previous CS	15	17
Previous Curettage	7	8
Multiple Gestation	7	8
H/O P.Previa	8	9

17% patients had history of previous caesarean, 8% underwent previous curettage, 8% patients were of multiple gestations, 8% had history of placenta previa.

Table 5: Maternal outcome – Vaginal Delivery vs LSCS

Caesarean Vs.Vaginal	Cases(n=88)	Percentage (%)
Caesarean Section	56	64
Vaginal Delivery	32	36

64% patients were delivered by caesarean section and 36% by vaginal delivery.

Table 6: Morbidity Associated With Placenta Previa

Morbidity associated	*Cases*	*Percentage (%)*
Anaemia	88	100
PPH	13	15
Malpresentation	15	17
Blood Transfusion	57	64.7
ARF	4	4.5
Obstetric Hysterectomy	2	2.2
Maternal Mortality	2	2.2

15% cases of placenta previa were associated with PPH, 17% with malpresentation, 4.5% with ARF. In 65% of patients blood components had to be transfused. 2 cases of placenta previa with accrete underwent obstetric hysterectomy and both patients eventually expired. All cases of placenta previa were associated with anemia.

Table 7: Still Born Vs Live Born

Out of 95 babies born		
Still born/ Live born	*Cases*	*Percentage (%)*
Still Birth	4	4.2
Live Birth	91	95.8

There were 88 patients & 95 deliveries as there were 7 multiple gestations. Out of total 95 babies born 4 babies were still born. Out of 91 live born babies 68 babies (74.7%) were preterm & 23 babies (25.3%) are full term.

Table 8: Perinatal Outcome

Out of 91 Live born babies		
	Cases	*Percentage (%)*
Full Term	23	25.3
Pre Term	68	74.7
LBW	65	71.4
Early Neonatal Death	18	20

Out of those 91 live born babies 18 (20%) died in early neonatal period, main cause being preterm & low birth weight. Total 65 babies (71.4%) were low birth weight.4 babies were still birth & 18 died in 1st week of life which makes total perinatal mortality of 22.

5. Conclusion

TOTAL 88 cases of placenta previa noted out of 6824 admitted deliveries which makes its incidence 1.3%. Incidences were higher in patients who are elderly [≥30 years age] (60%), multigravida (75%). It is associated with previous CS (17%), previous Curettage (8%), past h/o placenta Previa (8%), multiple gestations (8%). Caesarean was carried out in 63.6% of cases of placenta previa.15% of patients underwent Post Partum Hemorrhage.100% cases associated with Anemia. 65% of the patients were transfused with blood and its components either to overcome blood loss or to correct the coagulation derangement.4.5% of patient underwent Acute Renal Failure. 2 patients had Placenta Accreta (2.2%) who underwent obstetric hysterectomy (2.2%) & despite massive transfusion could not survive (2 Maternal Deaths).

74.7% preterm babies & 71.4% Low Birth Weight babies' observed.4.2% still born observed while 20% early neonatal deaths observed due to prematurity & Low birth weight. Perinatal mortality rate of 241.75 out of 1000 live births (24.17%) was observed in this study. This data shows very

high maternal & perinatal mortality which demands early treatment in form of blood transfusion or better management in form of MacAfee Johnson or timely planned route of delivery after thorough investigation.

6. Future Scope &Limitations

This study is done for one year duration. If the same study is done for longer duration then the data (in form of incidence, etiological factors, associated maternal &fetal morbidity & mortality) will be more accurate. In this study only the cases of placenta previa who were admitted in labour room & who were delivered are included. Thorough follow-up of placenta previa cases during antenatal period was not done. Exact staging of all cases of Placenta Previa was not done as some patients came directly as emergency cases in labour room & their general physical condition were not that good. So they were directly taken to operation theatre.

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