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A Study on Maternal & Fetal Outcome in Placenta Previa & Adherent Placenta

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Abstract
Introduction: *Placenta previa defined as implantation of placenta in the lower uterine segment. The incidence is 0.3-0.5%. Pregnancies complicated with placenta previa are prone for second trimester and postpartum bleeding which increases the risk of adverse perinatal and maternal outcome.*
Materials and Methods: *This retrospective study was conducted for a period of 6 months from June 2013 to December 2013 in the Dept. of OBG, GGH Kurnool which is a tertiary referral center for 3 districts. Data was collected from the medical records of the women with diagnosed cases of placenta previa & Adherent Placenta. The results were analyzed with respect to incidence, maternal age, parity, obstetric history (present & Adherent Placentat), gestational age at termination, details of prior C-section, need of blood transfusion, maternal & fetal outcome.*
Results: *In the present study, our hospital being a tertiary care centre the incidence of PP is 0.5% & adherent placenta is 0.1% out of 5100 deliveries. Which is on par with other studies. This might have been due to our obstetric population tending to have high parity and a high incidence of previous Caesarean section. Incidence of PP & adherent placenta was highest in age group of 20-29 years with mean age in our study was 23.4 years which is less compared to other studies.(DAS & SINGH et al)*
Incidence of placenta previa was highest in multigravidas (68%)(2-3 viable births) compared to primi & Grand multi.
Conclusion: *In conclusion, in view of the increased risk of maternal morbidity, adherent placenta should be excluded in every case of PP by MRI, especially in those with risk factors such as previous uterine surgery, high parity, and advanced maternal age. The placenta previa and its complications are more in cases where the primary C-section and uterine instrumentation has been done in peripheries/health care facilities with low resource settings & less aseptic precautions. To reduce morbidity, the delivery of these women should be planned in an institution with optimum facilities and with pre-set precautions.*
Key words: *Placenta previa, maternal, gestational*

I. Introduction

Placenta previa defined as implantation of placenta in the lower uterine segment. The incidence is 0.3-0.5%. Pregnancies complicated with placenta previa are prone for second trimester and postpartum bleeding which increases the risk of adverse perinatal and maternal outcome. Placenta accreta when the villi penetrate only superficially of the myometrium without invading it, placenta increta when the villi penetrate the myometrium and placenta percreta when the villi penetrate through the uterine serosa.[1] The term "Adherent Placenta" refers to all three conditions (accreta, increta, percreta).[2] Adherent Placenta are commonly together with placenta previa. Uterine damage due to previous surgery (cesarean deliveries, curettage, myomectomy) poor healing allows the placenta to grow through a damaged or absent Nitabuch layer in the myometrium.[3] Prolonged hospitalisation, peripartum hysterectomy, massive blood transfusion and intensive care unit admission are potential maternal morbidities of Adherent Placenta. Prenatal diagnosis of Adherent Placenta decreases fetal and maternal morbidities and mortalities.[4] Diagnosis of Adherent Placenta are accomplished sonographically with a sensitivity of 77%-87%, specificity of 96%-98%, a positive predictive value of 65%-93%, and a negative predictive value of 98%.[5]

AIM

To study the maternal and fetal outcome in placenta previa and Adherent Placenta

OBJECTIVES

- To study the incidence of placenta previa and Adherent Placenta
- To know the impact of placenta previa & Adherent Placenta on maternal mortality.

- Morbidity in terms of Need for blood transfusion; intraoperative complications ;C- Hysterectomy; Postoperative sepsis.
- To evaluate its association with risk factors like prior CS and h/o previous abortions with intrauterine instrumentation like D&C.

II. Materials And Methods

This retrospective study was conducted for a period of 6 months from June 2013 to December 2013 in the Dept. of OBG, GGH Kurnool which is a tertiary referral center for 3 districts.

Data was collected from the medical records of the women with diagnosed cases of placenta previa & Adherent Placenta.

The results were analyzed with respect to incidence, maternal age, parity, obstetric history (present & Adherent Placentat), gestational age at termination, details of prior C-section, need of blood transfusion, maternal & fetal outcome.

III. Results

Total No.**of deliveries**	5100
Total no.of cases of PP*	**25**
Total no.of cases of Adherent Placenta among PP	**5(20%)**
Incidence of Placenta Previa	**0.5%**
Incidence of Adherent Placenta	**0.1%**

Table 1: Incidence of Adherent Placenta

DEMOGRAPHY		PLACENTA PREVIA	ADHERENT PLACENTA
AN REGISTRATION	Un Booked*	16(64%)	5(20%)
	Booked	4(16%)	-
Age Distribution	20-29 Years	14(56%)	3(12%)
	30-35 Years	6(24%)	2(8%)
	> 35 Years	1(4%)	-
Parity	Primi	6(24%)	1(4%)
	Multi	13(52%)	4(16%)
	Grand multi	1(4%)	-

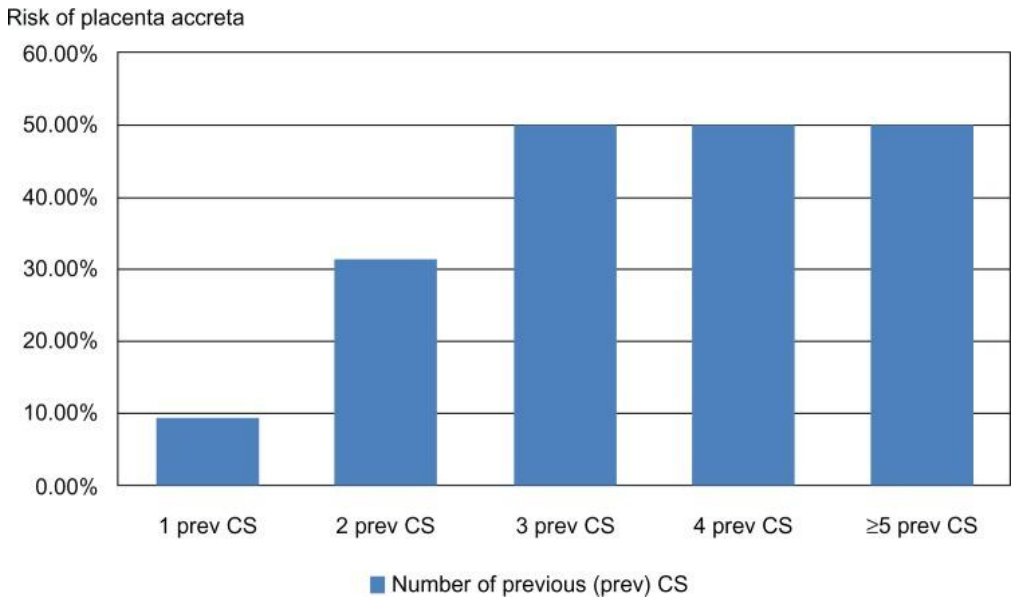
Table 2: Patient Demographics

TYPE OF PLACENTA PREVIA	NO OF CASES
Type I (LOW LYING)	4(16%)
Type II (MARGINAL)	2(8%)
TYPE III (PARTIAL)	4(16%)
TYPE IV (COMPLETE)	1(40%)
PLACENTA ACCRETA	3(12%)
PLACENTA INCRETA	1(4%)
PLACENTA PERCRETA	1(4%)

Table 3: Types of Placenta Previa

Risk factors	PLACENTA PREVIA	PLACENTA ACCRETA	PLACENTA INCRETA	PLACENTA ACCRETA
Previous Caesarean section	9(36%)	2(8%)	1(4%)	1(4%)
Check curettage	2(8%)	2(8%)	-	-

Table 4: Risk Factors



The risk of placenta previa and placenta accreta Increases with increasing no. of prior caesarean sections as shown in figure.

VARIABLE	PLACENTA PREVIA (n=16)	PLACENTA ACCRETA (n=3)	PLACENTA INCRETA (n=1)	PLACENTA PERCRETA (n=1)
Elective C/S	6(24%)	-	1(4%)	1(4%)
Emergency C/S	10(40%)	3(12%)	-	-
C-hysterectomy	-	2(8%).	1(4%).	1(4%).
Internal iliac @ ligation	2(8%)	2(8%).		1(4%)

Table 5: Surgical Management In Placenta Previa & Adherent Placenta

In the present study all patients received blood & blood component transfusion depending on their Hbg status& haemorrhagic stability. All cases of PP without adherence (80%) recovered well & discharged on 7th post-op day; All cases of Adherent Placenta required ICU management in the immediate postoperative period. 2 Among 5 cases of Adherent Placenta needed postoperative stay of more than 2 weeks. The outcome in case of Adherent Placenta were dismal accounting for 12% of maternal mortality.

POSTOPERATIVE COMPLICATIONS.	PLACENTA PREVIA (n=16)	PLACENTA ACCRETA (n=3)	PLACENTA INCRETA (n=1)	PLACENTA PERCRETA (n=1)
Bladder injury		1(4%)	1(4%)	1(4%)
SHOCK/ HYPOTENSION	0	3(12%)	0	0
Fever	0	0	0	1(4%)
DIC	0	2(8%)	0	0
Wound infection	0	0	0	0
Sepsis	0	0	0	0
Maternal mortality	0	3(12 %)	0	0

Table 5: Post operative Complications

Shock /hypotension was noticed in 12% of cases.
DIC noticed in 8% of cases.
Postoperative febrile morbidity was not seen in any of cases and no sepsis complications.
Incidence of maternal mortality in our study was 12% seen in cases of anterior placenta previa with ADHERENT PLACENTA.

Live births	Term	Pre term
23	4(17%)	19(82%)
Gestation age	28-33wks	34-37+wks
23	15(65%)	8(32%)
Birth weight	<2.5kgs	>2.5kgs
23	14	9
NICU ADMISSIONS	0	12(63%).
PERINATAL DEATHS	0	8(42%)

Table 6: Fetal Outcome In Placenta Previa And Adherent Placenta

15 (65%) babies require resuscitative measures out of which 12 required NICU admission with perinatal mortality is 8(42%). Perinatal mortality were higher in the gestational age group of 28-33 wks.(23%). Infants with birth weight > 2.5 kgs. had high survival rate compared to <2.5kgs.

Most of the neonatal mortality attributed to prematurity with its associated risk, particularly Respiratory distress syndrome. In our study placenta previa & Adherent Placenta accounting for 82% of preterm births.

IV. Discussion

In the present study, our hospital being a tertiary care centre the incidence of PP is 0.5% & Adherent Placenta is 0.1% out of 5100 deliveries. which is on par with other studies. This might have been due to our obstetric population tending to have high parity and a high incidence of previous Caesarean section. [6,7]

Incidence of PP & Adherent Placenta was highest in age group of 20-29 years with mean age in our study was 23.4 years which is less compared to other studies.(DAS & SINGH et al) [8,9]

Incidence of placenta previa was highest in multigravidas(68%)(2-3 viable births) compared to primi & Grand multi. Recurrence rate following PP is 4-8% but in the present study there was no association with history of previous pp. Present study shows the association of prior C-section (52%)with PP & Adherent Placenta is more than h/o previous D&C (16%) when compared to other studies. (rani et al). In our study all cases of Adherent Placenta had previous surgeries done at peripheries.[10]

The increased rate of Caesarean section in our hospital is the increased referral of women with multiple previous Caesarean sections from other hospitals as it is the tertiary referral Centre for three districts(Kurnool, Anantapur & Nearby Telangana). [11]

V. Conclusion

In conclusion, in view of the increased risk of maternal morbidity, Adherent Placenta should be excluded in every case of PP by MRI, especially in those with risk factors such as previous uterine surgery, high parity, and advanced maternal age. The placenta previa and its complications are more in cases where the primary C-section and uterine instrumentation has been done in peripheries/health care facilities with low resource settings & less aseptic precautions. To reduce morbidity, the delivery of these women should be planned in an institution with optimum facilities and with pre-set precautions. Elective delivery of patients should be planned with PA at 36 weeks instead of 34 weeks should be considered to reduce perinatal morbidity & mortality unless there is maternal risk.

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