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PLACENTA PREVIA AND PLACENTA ACCRETA SPECTRUM (PAS) DISORDER: INCIDENCE, RISK FACTOR AND FETOMATERNAL OUTCOME IN A TERTIARY CARE CENTER

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ABSTRACT **Introduction:** Placenta Previa is characterised by Placental implantation into the lower uterine segment covering whole or part of the cervix . It complicates 0.4% of pregnancy at term The average incidence is 0.3% or 1 case per 300 to 400 deliveries. The presence of placenta previa can also increase a woman's risk for placenta accreta spectrum (PAS). This spectrum of conditions includes placenta accreta, increta, and percreta. Uncontrolled postpartum hemorrhage from placenta previa or PAS may necessitate a blood transfusion, hysterectomy thus leaving the patient infertile, admission to the ICU, or even death. **Material and method:** Study was conducted in department of obstetrics & gynecology , swaroop rani hospital, Allahabad for 1 year . A total of 102 pregnant women presenting to antenatal OPD or admitted in IPD with history of antepartum hemorrhage and confirmed case of PP or MAP in Ultrasonography were selected. The follow up till the fetomaternal outcome was done and risk factors were evaluated for 102 cases. **Result:** Out of the total 2342 deliveries in one year 95 patients had PP and the incidence was 4.04% and 7 patients had morbidily adherent Placenta which accounts to an incidence of 0.29%. Previous LSCS, Multiparity, increase maternal age, Dialatation and curettage were risk factors in both Placenta Previa and Morbidily Adherent Placenta. Antenatal complication were antepartum hemmorrhage , Anemia, preterm labor. Emergency LSCS is more common mode of delivery in cases of Placenta previa. Caesarean hysterectomy were done in 3.2% cases of Placenta Previa and all cases of Morbidily adherent placenta . Most common perinatal complications in both groups were prematurity and low birth weight. **Conclusion:** Now a days Placenta previa and Morbidily adherent placenta are very common. Incidence increases as the rate of cesaerean section or abdominal surgery were increases.Earlydiagnosis and pre plan mode of delivery will decrease the risk of prematurity and low birth weight.

KEYWORDS :

INTRODUCTION

Placenta Previa is a disorder that happen during pregnancy that is characterised by the presence of placental tissue close to or covering the cervix. Antepartum hemorrhage forms one of the most dangerous and life threatening emergency. Placenta previa contributes 1/5th of cases of antepartum hemorrhage. This catastrophic complication not only poses a risk to fetus but also endanger the mothers life.

AIMS AND OBJECTIVES

1- To evaluate the incidence of Placenta Previa and morbidily adherent Placenta in tertiary care center.
2- To find out the risk factors for Placenta Previa and morbidily adherent Placenta.
3- To assess the fetomaternal and neonatal outcome in patients with Placenta Previa and morbidly adherent Placenta

METHODS: Study was carried out in Department of Obstetrics and Gynecology MLN Medical College and Kamla Nehru Memoreal Hospital Prayagraj on total 102 patients over a period of 1 year. Out of total 102 patients 95 cases were Placenta Previa and & patients were Morbibily Adherent Placenta.

Inclusion criteria: We included Women with > 28 weeks gestational age diagnosed as a case with Placenta Previa or morbid adherent Placenta in USG with or without bleeding per - vaginum.

Exclusion Criteria: We excluded

1. Known cases of hemoglobinopathies.
2. Known case of coagulopathy 3.Patient with Placental abruption
4. Patient presented with bleeding pervaginum due to local causes.
5. Cases of vasa Previa

A detailed clinical history and menstrual history was taken.

Clinical examination and Systemic examination Systemic examination was done including weight, height, body mass index, pallor ,icterus ,edema, thyroid examination , pulse blood pressure, and breast examination.

Obstetric examination was include fundal height ,lie ,presenting part and fetal heart sound in advance pregnancy.

Routine investigation included blood group /Rh typing, complete blood counts, HIV 1&2 HBsAg, VDRL, HCV, S.TSH , Blood sugar (2 hours after 75gm glucose orally) ,urine routine and microscopic examination.

All antenatal women beyond 28 weeks of gestation coming to OPD and IPD with complaints of antepartum hemorrhage had undergo ultrasonography.When they were detected as Placenta Previa or morbid adherent Placenta on USG, then they were enrolled and followed till term for both maternal and perinatal outcome.some patients diagnosed with MAP were also underwent MRI.

Ultrasound was routinely performed for gestational age, lie, presentation, fetal well being,Placental localisation and type of PP and and features of MAP: loss of the normal hypoechoiretro Placental zone between the Placenta and uterus, Placental vascular lacunae, presence of hypervascularity of the interfacenbetween uterine serosa and the bladder wall on color doppler imaging.

MRI evaluation of Placenta was done to provide more accurate diagnosis of Placental localisation ,type of Previa,and to check for radiological sign of Placental invasion and findings of accreta / percreta includes, uterine bulging, hetrogenous signal intensity within thePlacenta,focal interuption of in myometrial wall, tenting of bladder and direct visualisation of the invation of pelvic structure by Placental tissue.

Management of Placenta Previa was decided primarily according to gestational age type of Placenta Previa, severity of bleeding if present,and maternal and fetal health.On the basis of clinical and Ultrasonographic findings treatment plan was decided. conservative management was consideredin the patients who were less than 37 weeks of gestation vitals were stable and active vaginal bleeding not present. Emergency LSCS was done in all patients with active bleeding irrespective of gestational age or in the patients who had completed 37 weeks of gestation in whom fetus was immature and there was no active bleeding , patients observed closely in obstetrical unit.

During cesarean section perop findings, like exact Placental localisation,intraoperative and postoperative complication were noted. Neonatal outcome of pregnancy were noted in terms of apgar score at 1 minute and 5 minute , birth weight,neonatal intensive care

unit admission and complcations and perinatal mortality.

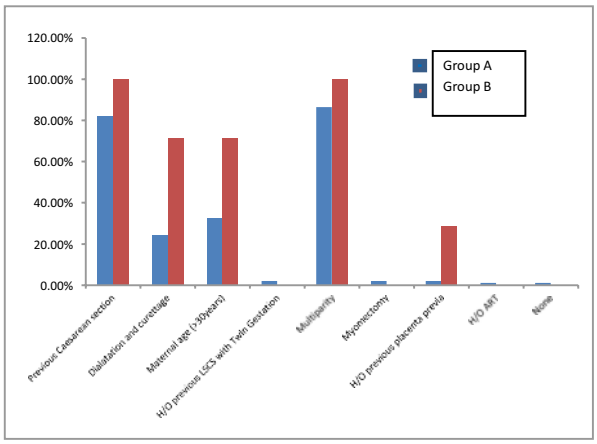
Table 1-Demograpgic Characters

Demograpgic Characters	Placenta previa	Morbidily Adherent Placenta
Mean Age	28.58 ± 4.76	32.29 ± 2.63
Unbooked	76.8%	85.7%
Booked	23.2%	14.3%
Multiparity	86.4%	100%
Previous 1 LSCS	73.2%	28.58%
Previous 2 LSCS	21.95%	57.5%
Previous >2 LSCS	4.87%	5.6%

The mean age of the patients of Placenta previa was 28.58 ± 4.76 years, 76.8% cases were unbooked, 23.8 % cases were booked and and 86.4% cases were multigravidas. Whereas, in cases of Morbidily adherent placenta mean age was 32.29 ± 2.63 years, 85.7% cases were unbooked only 14.3% cases were booked, 100% cases were multiparous.History of previous 1 LSCS were more common in Cases with Placenta previa while h/o previous 2 LSCS were more common with Morbidily adherent placenta.

Table 2-Risk factors in Placenta Previa and abnormally adherent Placenta.

S. No.	Risk Factors	GroupA (n=95)	GroupB (n=7)	P value
1	Previous Caesarean section	78(82.1%)	7(100%)	0.597
2	Dialatation and curettage	23(24.2%)	5(71.4%)	0.016
3	Maternal age (>30years)	31(32.64%)	5(71.42%)	0.093
4	H/O previous LSCS with Twin Gestation	2(2.1%)	0	0.01
5	Multiparity	82(86.4%)	7(100%)	0.591
6	Myomectomy	2(2.1%)	0	0.698
7	H/O previous Placenta Previa	2(2.1%)	2(28.57%)	0.023
8	H/O ART	1(1.1%)	0	0.785
9	None	1(1.1%)	0	0.785



In cases of Placenta previa 82.1% caeses had h/o previous caesarean section, 86.4% cases were multigravidas.while in cases of Morbidily adherent placenta all patients had h/o previous caesarean section and all cases were multigravudas.

Table 4-Antenatal Complications in present study.

S. No	Complications	Group A (n=95)	Group B (n=7)	P value	S. No	Complications	Placenta previa
1	Antepartum Haemorrhage	82(86.3%)	3(42.85%)	0.003	1	Antepartum Haemorrhage	82 (86.3%)
2	Anaemia	64(67.36%)	5(71.42%)	0.825	2	Anaemia	64 (67.36%
3	Malpresentation	22(23.15%)	2(28.57%)	0.745	3	Malpresentation	22 (23.15%
4	Preterm labor	49(51.6%)	5(71.4%)	0.310			

Antepartum hemmorrhage and Anaemia were more common antenatal complications in both cases of Placenta previa and Morbidily adherent placenta.

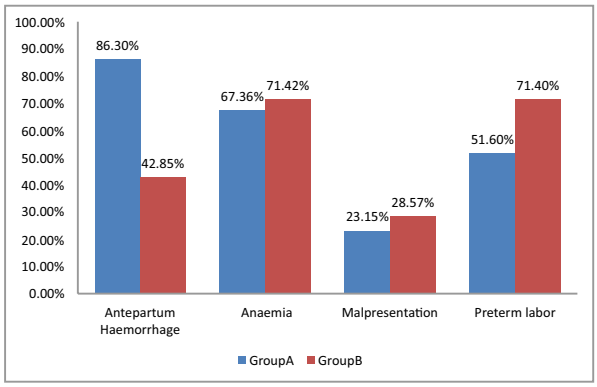
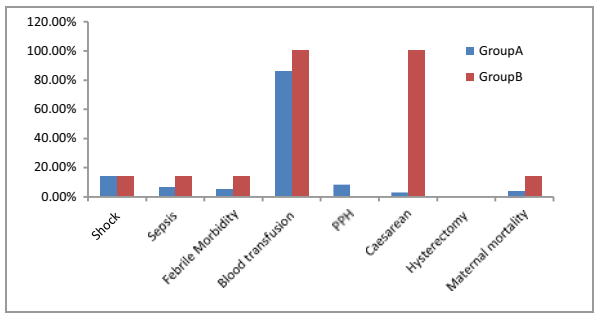


Table 5-Intra and post operative Maternal complications.

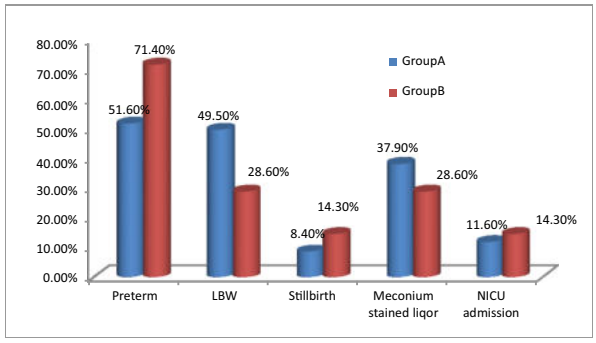
S. No.	Complications	Placenta previa	Morbidily adherent placenta	P value
1	Shock	13(13.7%)	1(14.3%)	0.964
2	Sepsis	6(6.3%)	1 (14.3%)	0.402
3	Febrile Morbidity	5(5.3%)	1(14.3%)	0.354
4	Blood transfusion	82(86.3%)	7(100%)	0.591
5	PPH	8(8.4 %)	0	0.998
6	Caesarean Hysterectomy	3(3.2%)	7(100%)	0.00001
7	Maternal mortality	4(4.2%)	1(14.3%)	0.304



Due to antepartum hemorrhage 86.3% cases of Placenta previa and all cases of Morbidily adherent placenta needed blood transfusion. 3.2% cases with placenta previa and 100% cases with Morbidily adherent placenta needed caesarean hysterectomy.

Table 6-Perinatal Outcome

S. No.	Perinatal outcome	Placenta previa	Morbidily adherent placenta	P value
1	Preterm	49 (51.6%)	5 (71.4%)	0.310
2	LBW(<2.5kg)	47 (49.5%)	2 (28.6%)	0.285
3	Neonatal mortality	8 (8.4%)	1(14.3%)	0.487
4	Meconium stained liquor	36(37.9%)	2(28.6%)	0.622
5	NICU admission	11(11.6%)	1(14.3%)	0.830



Prematurity and low birth weight were more common in both Placenta previa and Morbidily adherent placenta.

DISCUSSION

During the study period there were 2342 deliveries out of which 95 cases were diagnosed as Placenta previa and 7 cases were diagnosed as

Morbidly adherent Placenta Previa (MAP).These 102 Patients were divided into two groups and were followed uptill delivery. Out of 102 cases, 95(93.13%) cases were diagnosed with Placenta Previa while 7(6.87%) cases had morbidly adherent Placenta.

Cases were categorised into 2 groups –
Group1-patients with PP
Group2-patients with MAP

Our study was in accordance with the study done by **Ashete Adere et al (2020)**[3] who found that increased maternal age increased the occurrence of Placenta Previa. The mean age of occurrence of Placenta Previa was 30.2±5.7years.

The present study showed that in group of patients having placenta previa, 13.6 % were primigravida and 86.4% cases were multigravida which is significant in patients with morbidly adherent placenta.

Ashete adere et al (2020)[3] showed that multiparity increases the risk of Placenta previa by twofold.

In the present study, in group of patients with placenta previa 76.8% were unbooked while only 23.2% were booked. Also in group of patients with morbidly adherent placenta majority 85.7% were unbooked.

Our study was in accordance with study done by **Elizabeth Eliet et al, (2017)**[4]**, Vandana et al, (2019)**[14] **,** and **Sidra et al, (2020)**[13] which also showed that Placenta Previa and morbidly adherent Placenta were more common in unbooked cases.our study was in accordance with the study done by- **Ashete et al**, **(2020)** [3] which also showed that previous caesarean section had about three times increased risk of PP and MAP. This may be because surgical disruption of the uterine cavity is also known to cause damage to myometrium and endometrium and also that there is a problem of angiogenesis at the previous scar site that may cause partial hypoxia and lead to incomplete decidualization and abnormal trophoblastic invasion that can cause Placental adhesion.[3]

Cetin et al, (2018)[12] antepartum hemorrhage developed in 66.2% patients of Placenta Previa and 89.6% in cases of MAP.

In our study out of 95 patients, 13.7% developed shock, 6.3% had Sepsis, 5.3% developed febrile morbidity, 8.4% had PPH, 86.3% needed of PRBC transfusion ,3.2% needed Cesarean hysterectomy in order to control the bleeding and Maternal mortality in this group was 4.2%.

Dhaval et al, (2017)[8] in which 43.33% patients developed shock, 86.66% needed blood transfusion and 3.33% underwent hysterectomy in cases of Placenta Previa. Prematurity was the most common cause of perinatal mortality followed by asphyxia and RDS. In pregnancies withPlacenta Previa , antepartum bleeding was a strong predictor of preterm delivery. Similar observation was also found in study done by **Raja Rajeshvari et al, (2016)**[15] who showed that prematurity was most common cause of perinatal mortality.

CONCLUSION

Now a days Placenta Previa and Morbidily adherent Placenta are common owing to increases in incidence of caesarean section. risk of Placenta Previa and MAP can be avoided by reduction in the rate of cesarean section which is being done very liberally.Patients should be referred to tertiary care centers where she can gets good meternal and neonatal care unit .