Original Research Paper Medical Science

Study of maternal and perinatal outcome in placenta praevia at tertiary care center

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ABSTRACT

Introduction-Placenta previahigh risk pregnancy is a leading cause of maternal mortality and morbidity. Aim of this study is to study the obstetrical factors, to find out the maternal and fetal outcome in these cases along with need of CCUadmissions,need of blood transfusionsetc.

Methods-This is prospective study conducted in the Dept. of Obstetrics and Gynaecology at Grant Govt. Medical College and Sir JJ group of hospitals,Mumbaifor a period of 18months i.e. from June 2015-Dec 2016.

Results-During the study period total number of cases of placenta previa were 61,which is 0.05% of total deliveries. Maximum(78%) women belong to age group 20-30 years.83% cases being multipara,out of which 19 cases hadprevious LSCS,and 10cases had previous abortions,2 cases of previous LSCS had placenta accreta ,and approximately 20% cases had associated malpresentations along with placenta previa.Out of 61 cases 45% babies had LBW ,and 18% babies had NICU admission for respiratory distress and 2 fresh stillbirths,indicating that placenta praevia is commonly associated with preterm deliveries.Approximately 25% cases had blood loss more than 500ml ,11% cases had blood loss more than 1 liter and 6% cases had blood loss more than 2 liters ,6% cases had been shifted to CCU i/v/o intrapartum hemorrhage.

Conclusions-Placentapraevia is associated with high maternal morbidity and adverse perinatal outcome.

KEYWORDS | CCU Critical care unit,NICU-Neonatal intensive care unit,LSCS-Lower segment caesarean section

Introduction:

Latin word Praevia means *going before*and here it means placenta goes before fetus in the birth canal. Implantation of placenta in the lower uterine segment either over or near the internal os.It is one of the major cause of antepartum haemorrhage which complicates 2-5% pregnancies.Incidence of placenta praevia is 4-5 per thousand deliveries.Common factors associated with placenta previa are advancing maternal age,multiparity,previous caesarean section &previous abortion etc.Dreaded complications seen in placenta praevia are postpartum haemorrhage, need of blood transfusion, caesarean hysterectomy &rarest like maternal death if placentaaccreta.There is always a risk of preterm birth,need of NICU admission, poorapgar score of baby&sos need of ventilator which increases perinatal morbidity and mortality.

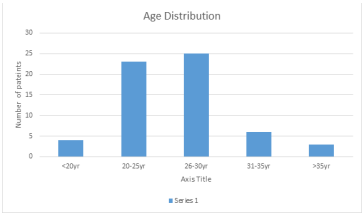
Objective-1.To study and analyze the obstetrical factors associated with placenta praevia.2.To find out the maternal and perinatal outcome associated with placenta praevia.

Methods-This study is prospectiveobservational study conducted in Dept. of Obstetrics and Gynaecology at Grant Govt. Medical College and Sir JJ group of hospitals Mumbai from June 2015-December 2016.

Results-During the study period there were 7000 deliveries, among these there were 61 cases of placenta praevia which came diagonsed as placenta praevia on ultrasound which accounts to 0.05% of total deliveries.

Among the 61cases of placenta praevia, LSCS was done for 52cases (85%) and remaining 9(15%) cases were delivered vaginally.Among 52 cases of LSCS, emergency LSCS was done in 36 cases(69%) as they presented with bleeding per vaginum while elective LSCS was planned for 16 cases.

Graph shows the age distribution of patients with placenta praevia.



Most common age group was 26-30yr, 4 patients were less than 20yr and three patient were more than 35yr of age.

Table 2 Types of placenta praevia

Placenta type	Number	Percentage
Type I (Low lying)	18	29.6
Type II (Marginal)	10	16.3
Type III (Partial)	8	13.1
Type IV (Complete)	25	40.0

Most patients presented with complete placenta praevia (40%),second most common type of placenta praevia was lowlying(29.6%).

Table 3 Obstetric factors related to placenta previa

Obstetric Profile	Number	Percentage
Gravidity a) Primigravida b) Multigravida	10 51	16.4 83
Previous LSCS	24	39.3
Previous Abortion	15	24.6
Previous LSCS with Abortion	9	14.7
Previous 2 LSCS	10	16.0
Malpresentation	8	13.11
Placental Factor(Morbid adhesion, Vasa previa,Accreta,Percreta)	4	6.6

Primigravida comprises 16.4% of total patients coming with placenta praevia , 83% cases were multigravida, 39.3% cases had previous LSCS while 24.6% cases had previous history of abortion with h/o check curettage done for the same.

Malpresentation were present in around 13.11%cases ,amongmalpresentations 5 patients had breech presentation

while other 3 had transverse lie.

Most common complaint with which these patient presented were bleeding per vaginum (60%).26% cases were admitted electively for safe confinement .

LSCS was done for 52 cases (85.2 %), out of which emergency LSCS was done in 36 cases (59%) and elective LSCS was planned for 16 cases (26%). 9 cases(15%) of low lying placenta delivered vaginally.

Table 4 shows neonatal outcome-

Factors		Numbers	Percentage
Maturity(Weeks)	<28	8	13.11
	28-33	25	40.98
	34-36	18	29.60
>37		10	16.30
Birth weight	<1.5	8	13.11
	1.5-2.4	25	40.98
	2.5-3.0	18	29.60
>3.0		10	16.30
Preterm birth		33	54.09
Low birth weight baby		35	57.09
Fresh still birth		3	4.0
Respiratory distress		15	24.60
Early neonatal death		5	8

54 % of the babies were preterm ,while 57 % of babies were low birth weight, there were 4% fresh still birth while 8% neonatal death, 24.60%babies were admitted to NICU for respiratory distress.

Table 5.Obstetrical complications

Complications	Number	Percentage
Post partumhaemorrhage		
>500ml	22	36
>1000ml	9	14.75
Blood transfusion	24	39.30
Caesarean Hysterectomy	3	4.91
CCU admission	6	9.80

Looking at the obstetrical complications shown in table 5 almost 36% of patients had blood loss >500ml.There were 14.75% cases were having blood loss more than 1000ml. 39.30% cases required blood transfusions and 9.80% patients required CCU admission for excessive blood loss and 4.91% cases required caesarean hysterectomy for uncontrolled blood loss.

Discussion

Placenta praevia is one of the most common cause of antepartum haemorrhage and is associated with dreaded complications in obstetrics which affects adversely maternal and perinatal outcome. Incidence of placenta previa in this study undergoing caesarean sections was found to be 0.60 % of total deliveries.Different other studies have shown incidence of placenta previaranges around 0.4-0.6 % of total deliveries. In the meta analysis reviewing studies on placenta previa between 1950-1996 among 13992 patients diagnosed with placenta previa reported incidence was 0.28-2% or approximately 1:200 deliveries[4] .This incidence is similar to this study.

Multigravidity is an important risk factor for the placenta previa.In this study around 83% patients were multigravida.Most common age group was 26-30years.According to Cleary et al. a prospective study data base from multicenter investigation of 36,056 with singletons shows increasing age was significantly associated with placenta previa.Multiple studies showing increasing parity to be important risk factors for placenta previa[9,10,11] .

Previous obstetric history is also associated with placenta praevia. In this study almost 39% patients had previous history of caesarean section,while one fourth had previous history of abortion for which check curettage was done.In a retrospective cohort study of 399,674 women rate of placenta praevia at second birth for women with first vaginal birth was 4.4 per 1000 birth compared to 8.7 per 1000 birth for caesarean section at first birth.Previous history of abortions (Both spontaneous and induced) have significantly associated with upto three times risk of placenta previa[2,4,13,14] .

In population based retrospective cohort study in Nova Scotia,Canada from 1988-1995,308 cases of placenta previa was identified.Maternal complications included postpartum bleeding(RR-1.86),hysterectomy(RR-33.26),blood transfusion relative risk(10.05),septicaemia (RR-5.55).Previous LSCS with morbidly adherent placenta is an independent risk factor for caesaren hysterectomy in case of placenta previaIn this study 4.91% patients had to undergo caesarean hysterectomy for morbidly adherent placenta.Sheiner et al.found pregnancies complicated by placenta previa had significantly higher rate of postpartum haemorrhage(OR3.8,95%CI,1.2-10.5), malpresentations (OR7.6,97%CI,15.2-10.5),need of CCU admission.[1,4,6]

A population based retrospective cohort study among singleton 544,374 mother infant pair showed that the association between low birth weight and placenta previa is chiefly due to preterm delivery,Sheiner showed that congenital malformation and perinatal mortality was 2.6 times more common among cases of placenta previa as compared to those without it.In this study around 55 percentage had low birth weight and one fourth of babies needed NICU admission for respiratory distress along with low birth weight, whlile 4 percentage were fresh still born ,8 % had neonatal death.Increased perinatal mortality as well as neonatal death has been noted in other studies,[15,16]

Conclusions

There were 61 cases of placenta previa which is 0.6% of total deliveries. Most common age group was 26-30yr age,complete placenta previa was seen in 40% of cases,Mostof patient presented with bleeding pervaginum.Caesarean section was done for 85% patients,39.30% patients required blood transfusion.In 4.91% cases due to massive blood loss caesarean hysterectomy was done.55 % babies were preterm and 57 % were having low birth weight while 5 babies had neonatal death.

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