PLACENTA PREVIA: MATERNAL AND FOETAL OUTCOME*Meenakshi Devarmani¹, Patil Sanjana Tallur²*¹*Professor, Department of Obstetrics and Gynaecology, M. R. Medical College, Gulbarga.*²*Senior Resident, Department of Obstetrics and Gynaecology, M. R. Medical College, Gulbarga.*

ABSTRACT

AIM

To analyse maternal and neonatal outcome in pregnancies complicated with placenta previa and to evaluate the potential risk factors.

BACKGROUND AND OBJECTIVES

To study the risk factors for placenta previa, to study the mode of deliveries, to study the maternal and foetal outcome and to study the incidence of placenta previa.

METHODS

50 pregnancies with placenta previa during a 2 years study period (2014-2016) were analysed. The total number of deliveries during the study period was 4759. The data on the potential risk factors compiled; the information on the maternal and neonatal outcome was subjected to appropriate statistical analysis and following deductions provided.

RESULT

The incidence of placenta previa was 1.8%. Factors significantly associated with development of placenta previa were advanced maternal age, number of previous caesarean section, number of previous abortions and multiparity. The complications seen most commonly in the neonatal outcome was prematurity at birth (42.85%) followed by RDS (28.5%) and aspiration (14.2%); 48% of the babies required resuscitation, out of which 24% required further NICU admission. The neonatal mortality calculated was 280/1000 live births.

CONCLUSION

In the present study, the incidence of antepartum haemorrhage was 4.9% and placenta previa contributed to 37% of cases. The perinatal mortality due to placenta previa was 280 per 1000 live births. The maternal mortality rate due to placenta previa in this study is nil, but maternal morbidity was high, that is more than 60% of cases had antenatal, intranatal and postnatal complications and anaemia worsened the clinical state of patients.

KEYWORDS

Placenta Previa; Maternal Morbidity; Neonatal Mortality.

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INTRODUCTION

Antepartum Haemorrhage (APH) still presents as one of the most dreaded and devastating group of disorder in obstetrics.

Vaginal bleeding in any stage of pregnancy is an alarming event generating significant concern in both patients and doctors and when occurring in third trimester causes are mainly placenta previa and abruptio placenta and marginal placental separation.

Majority of the painless vaginal bleeding in the 2nd half of the pregnancy are associated with placenta previa, more common with neglected pregnancies, increased parity and advancing age.

Availability of blood for transfusion have dramatically decreased maternal mortality, morbidity and with better NICU facilities available, perinatal morbidity and mortality has

certainly been curtailed to a large extent; still, lot needs to be done in the lower socioeconomic group in urban slums and the rural India. Approximately >40% patients deliver in hospitals without immediate 24 hours blood bank to facilities. These are the statistics and this is in booked cases, the state of unbooked case is even worse.

Placenta previa involves bleeding from placental site completely, which is located in the lower uterine segment either partially or completely and as the lower uterine segment stretches near term or in labour the associated bleeding is inevitable.

Antepartum haemorrhage forms one of the most dangerous and devastating group of disorders in obstetrics. Placenta previa contributes to 115th of the cases of antepartum haemorrhage.

This catastrophic complication not only poses a risk to the foetus, but also endangers the mother's life. Developed countries have a near zero maternal mortality rate for placenta previa, but even with today's better medical facilities and awareness India lags way behind.

The maternal and neonatal outcome can be definitely improved in cases of placenta previa, as it can be diagnosed by antenatal USG even before the first episode of bleeding. Once the condition is diagnosed, the case should be judiciously managed and all steps required should be taken to treat the complications associated with such cases. These cases are to

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be managed only in centres where there are facilities for blood transfusion, immediate operative interventions and NICU facilities round the clock.

Better ANC and thorough screening of the patients with second trimester scan, better referral system, transport and more hospitals with 24 hours blood bank facility are the need of the labour.

All these measures can probably bring down the maternal and perinatal mortality and morbidity rates and achieve the standards of the developed countries.

AIM OF THE STUDY

1. To study the risk factors for placenta previa.
2. To study the mode of deliveries.
3. To study the maternal and foetal outcome.
4. To study the incidence of placenta previa.

MATERIALS AND METHODS

Analysis of maternal and neonatal outcome in cases of placenta previa occurring over a period of 2 years from Jan 2014 to Jan 2016. This study was carried out at the Basaveshwar Teaching and General Hospital, Gulbarga, attached to M. R. Medical College, Gulbarga.

Inclusion Criteria

Pregnant women with placenta previa confirmed by ultrasonography and with gestational age beyond 28 weeks were selected irrespective of their parity, type of placenta previa and with a live or dead foetus.

RESULTS

Out of 50 cases of placenta previa, 24 cases had minor degree of placenta previa and 26 cases had major degree of placenta previa; 41 cases were delivered by caesarean section; 38 as emergency as elective and 9 cases delivered vaginally.

Complications	Percentage		Total (n=50)	Percentage
	Minor (n=24)	Major (n=26)		
No. of episodes of bleeding	35	53	88	-
Severe anaemia (<7 g%)	6	10	16	32.00
Patients in shock	-	8	8	16.00
Antenatal blood transfusions	2	4	6	12.00
Malpresentation-breech	3	4	7	14.00
IUD	3	8	11	22.00

Table 1: Antenatal Complications in the Present Study

Intraoperative Complications	Type of Placenta Previa		Total (n=50)	Percentage
	Minor (n=24)	Major (n=26)		
Haemostatic sutures Cho's	-	2	2	4.00
Vertical haemostatic sutures B-lych	-	1	1	2.00

Table 2: Intraoperative Complications

Postoperative Complications	Type of Placenta Previa				Total (n=50)	Percent
	Minor		Major			
	Vaginal (9)	LSCS (15)	Vaginal (n=0)	LSCS (n=26)		
Sepsis	-	-	-	3	3	6.00
Febrile morbidity	-	1	-	7	8	16.00
UTI	1	1	-	6	8	16.00
PPH	-	1	-	4	5	10.00
Table 3: Postoperative Complications						

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Outcomes	Maturity and Mode of Delivery				Total	Percent
	Term(n=5)		Preterm(n=45)			
	LSCS	Vaginal	LSCS	Vaginal		
Alive	3	0	29	7	39	78
AUD	1	1	8	1	11	22
Table 4						

Table 4

Neonatal Outcome	Term	Preterm	Total	Percent
No. of neonates requiring no resuscitation	3	23	26	52.00
NICU admissions	--	12	12	24.00
Expired within 48 hours	--	3	3	6.00
		9	9	

Table 5: Neonatal Outcome in the Live Born Fetuses

Graph Correlation of Maternal Age and Placenta Previa

Graph Correlation of Parity and Placenta Previa

Graph Risk Factors for Placenta Previa

RESULT

In the present study, analysis of maternal and neonatal outcomes in cases of placenta previa occurring over a period of 2 years from January 2014 to January 2016 at the Basaveshwar Teaching and General Hospital attached to M. R. Medical College, Gulbarga. We studied 50 eligible cases of placenta previa selected randomly. After detail analysis of the case, the present study was compared with other studies.

From the above study our incidence was almost similar to study conducted by Sharma BD.¹ where the incidence of APH was 3.1% and placenta previa was 52.64%, while in the present study the percentage of APH and placenta previa was 4.9% and 37% respectively. Our study shows that 50 eligible women among attending our hospital, only 30 (60%) were booked while 20 (40%) remained unbooked. Also the study conducted by Razial et al² showed that the number of unbooked cases were (84%). Similarly, our ANC care is also inadequate and a universal effort is required by all south Asian countries to improve the ANC and high risk screening for better outcome of maternal and neonatal welfare. The association between maternal age and incidence of placenta previa has been maximally in the age group 20-29 years (56%) about 28 cases in the present study.

This data correlates with the incidence seen in the same age group reported by Tariq.³ Michelle AW.⁴ and Steven Clark.⁵ In the present study 28 (56%) multiparous women had placenta previa, while 12 (24%) women were multigravida and 10 (20%) women were primigravidae. These studies correlate with the statistic of studies done by Tariq.³ Michelle AW.⁴ and Steven Clark.⁵ Comparing our study with statistic of Victoria Taylor.⁶, our incidence of previous LSCS was 12% versus 20% and the percentage of previous spontaneous abortions in the present study was 18%, whereas it was 36% in the study conducted by Victoria Taylor.⁶ The incidence of twin gestation in the present study is nearly double the incidence seen in the study done by Steven Clark.⁵, whereas incidence of twins were up to 6% in the study conducted by Savita Rani.⁷

The most common gestational age in our study group, which presented with bleeding was 30-34 weeks, whereas findings in Tariq.³ study showed maximum number of patients with first episodes of bleeding in 34-38 weeks group followed by 30-34 weeks. Our study show only 26% of women with normal haemoglobin, while 16% of patients had severe anaemia and transfusion was required in 29 (58%) cases, whereas when compared with the study conducted by Tariq.³ only 16.7% of women were anaemic and blood transfusion given only in 3 women (3.5%) who had their haemoglobin less than 9 gm%. Our study is almost similar to the study conducted by P. Rani Reddy.⁸ study, where there were 20% of malpresentations.

Study conducted by McShane.⁹ showed 27% of malpresentations. When compared with the study done by McShane.⁹ our study has higher rates of sepsis, febrile illness, UTI and shock. This indicates that we must acquire a more appropriate and prompt approach in the management of placenta previa with good antibiotic coverage and better aseptic precaution. Resuscitation required for the neonates in the present study was 48%, whereas in the study done by McShane.⁹ it was 33%. NICU admissions in the present study done by McShane⁹ were 24% and 10% respectively, again indicating the inadequacy in our antenatal and perinatal care.

The mean Apgar score in the present study correlated with that of the McShane.⁹ study. Study conducted by Joan.¹⁰ had maximum perinatal mortality due to RDS, whereas prematurity was the most common cause of perinatal mortality in the present study. Perinatal mortality is very high in our study in all birth weight groups when compared to the study done by McShane.⁹

DISCUSSION

In the present study 50 cases of placenta previa were studied regarding the type of clinical presentation, the clinical course, the perinatal and maternal outcome. The information obtained was analysed statistically. In this study, it was observed that the incidence of APH was 4.9%, out of the total number of deliveries and placenta previa contributed to 37% of cases of APH. In the present study, the cases of placenta previa were highest in the maternal age group of 20-29 years, i.e. 70%. It was 16% in the age group of 30-35 years, 12% in the age group >35 years and 2% in the present study was 25.96+4.7 years. In the present study, incidence of placenta previa was highest (56%) in the multiparous (2-3 viable births) group. It was 24% in the grand multi group (>4 viable births) and 105 in the primi group. In the present study, the risk factors were caesarean section, abortion and twin gestation.

The incidence of prior caesarean section was 12%, prior abortion was 18% and twin gestation in the present pregnancy was 2%. Of the complications studied, in the present study severe anaemia (<7 gm%) contributed to 32%, malpresentation contributed to 14% and PIH was found in only 2% of cases. In the present study, 58% of cases required blood transfusion and shock/hypotension was noticed in 12% of cases, PPH was noticed in 10% of cases. In one case B-lynch was utilized to control intraoperative atonic PPH and in 2 cases Cho's multiple haemostatic sutures used for the bleeding from the placental site. Post-operative febrile morbidity was seen in 16% of the cases and sepsis complicated 6% of cases. In the present study, perinatal morbidity was studied as the percentage of babies requiring resuscitation and NICU admission. It was 48% and 24% respectively.

In the present study, the percentage of perinatal deaths was 28%. Prematurity was the major contributor to perinatal deaths, i.e. 42.85% followed by RDS 28.5% and aspiration contributed to 14.2% each. The perinatal mortality was the same in both the clinical types of placenta previa, i.e. chi square value was 1.26 which is not significant. The perinatal mortality was more in the 28-33 weeks gestation group i.e. 51%, whereas in the 34-36 weeks and 37+ weeks gestation group it was 34.28% and 14.28%. Infants with birth weights above 2500 grams had a good survival rate and infants with birth weight <1000 grams had a very poor survival rate.

CONCLUSION

In the present study, the incidence of antepartum haemorrhage was 4.9% and placenta previa contributed to 37% of cases. The general perinatal mortality was 81 per 1000 live births and that due to placenta previa was 280 per 1000 live births, i.e. approximately 4 times higher than the general perinatal mortality rate. The maternal mortality rate due to placenta previa in this study was nil, but maternal morbidity was high, i.e. more than 60% of cases had antenatal, intranatal and/or postnatal complications and anaemia worsened the clinical state of the patients.

As the maternal and perinatal morbidity and mortality due to placenta previa is preventable, efforts should be made to bring down these rates. This can be achieved by better spacing in between pregnancies, limitation of family size, antenatal registration of all pregnant women, routine use of USG in pregnancy and early referral of high risk pregnant women to tertiary care centres. Awareness should be brought about in the urban slums and rural public to avail the facilities provided by the government.

These measures will definitely help in a better outcome for both mother and foetus in all high-risk pregnancies.

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