

A Study of Maternal and Perinatal Outcome In Placenta Previa At A Tertiary Care Centre In Andhra Pradesh

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Abstract

Background: Placenta previa is one of the important causes of third trimester bleeding and maternal death. The objective of this study is to analyse the risk factors associated with placenta previa and its effect on maternal and fetal outcome.

Material and Methods: A total of 84 cases of placenta previa diagnosed on ultrasound were followed upto delivery. Details regarding demographic factors like age, parity and socioeconomic status, need for blood transfusion, additional procedures required for controlling bleeding, maternal complications, NICU admissions and perinatal deaths were recorded.

Results: The highest number of Cases was in the age group 25 – 29 with 46 cases (54.76%). The incidence was highest among nulliparous Women (66 cases) with 78.57%. The number of cases of Placenta previa in BPL group (Below Poverty Line) was 53 cases (63.09%). The commonest mode of delivery was by LSCS seen in 73 cases (86.90%). B-Lynch with uterine artery Ligation was the most common procedure used to control bleeding (42.85%). Hysterectomy was required in cases of Adherent placenta in 8 cases (9.52%). APGAR Scores 8 – 10 at birth was seen in 53 cases (63.09%). NICU admissions was required in 33 cases (39.28%).

Key words: placenta previa, abortion, postpartum hemorrhage, previous cesarian section, obstetric hysterectomy, adherent placenta.

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I. Introduction

Placenta previa is the implantation of placenta partially or entirely into the lower segment of the uterus. It is classified into Minor and Major types. In major placenta previa the placenta edge reaches or covers the internal cervical Os.

The independent risk factors for placenta previa are previous caesarian section, risk increases as the number of Caesarian sections increases. It is also common in multiparous women. Birth spacing more than 4 years also increases risk of placenta previa. Multiple pregnancy is associated with placenta previa^[1].

II. Material And Methods

It is a prospective, observational study for a period of one year from April 2017 to March 2018 at Government General Hospital, Vijayawada. A total of 84 cases of placenta previa after 28 weeks of gestation diagnosed on ultrasound were included in the study. They were followed until delivery. The total number of deliveries at Government General Hospital during this period was 7,642. The incidence of placenta previa was 1.09%.

Detailed obstetric history, clinical presentation, need for blood transfusion, mode of delivery was taken. Additional procedures required like uterine packing, balloon tamponade, B-Lynch Sutures/stepwise devascularization of uterus, internal iliac artery ligation and hysterectomy when needed to control bleeding was documented.

Maternal outcome details like development of hypovolemic shock, DIC, renal failure and maternal deaths were recorded. The need for more than 1 unit of transfusion was also noted. Fetal outcome was documented. APGAR scores at birth, birth weight, NICU admissions and perinatal deaths were noted. Data was tabulated and analysed using SPSS version 24.

III. Results

Table – 1: DEMOGRAPHIC FACTORS:

Demographic factor	No. of Cases n= 84	Percentage (1%)
Age		
15 – 19 yrs	9	10.7%
20 – 24yrs	17	20.23%
25 – 29yrs	46	54.76%
30 – 34yrs	12	14.28%
Parity		
Primi	18	21.4%
Multi	66	78.57%
Socio economic Status		
Below poverty line (BPL)	53	63.09%
Above poverty line(APL)	31	36.94%

The highest number of cases was in the age group 25 – 29 with 46 cases (54.76%). The incidence was highest among multiparous women 66 cases, (78.57%). Also the number of cases of Placenta Previa in BPL group (Below Poverty Line) was 53 cases (63.09%)

Table – 2: TYPE OF PLACENTA PREVIA

Type	No. of cases n=83	Percentage(%)
MINOR DEGREE	37	44.04%
MAJOR DEGREE	47	55.95%
TOTAL	84	

Out of the 47 cases of Major degree placenta previa, 8 cases were diagnosed as adherent placenta on ultrasound which was confirmed with MRI.

Table – 3: MATERNAL RISK FACTORS:

RISK FACTOR	n=84	PERCENTAGE (%)
Age > 25 years	58	69.04%
Multiparity	66	78.57%
Below poverty line	53	63.09%
H/o. Abortions	19	22.61%
Previous CS	31	36.90%
Multiple Pregnancy	4	4.76%

Maternal risk factors for Placenta Previa in this study were age > 25 yrs in 58 cases(69.04%), multiparity in 66 cases(78.57%), Below poverty line in 53 cases(63.09%), history of abortions in 19 cases (22.61%), previous CS in 31 cases(36.90%) and multiple pregnancy in 4 cases(4.76%).

Table – 4: MODE OF DELIVERY:

Mode of Delivery	No. of cases (N=84)	%
Vaginal	11	13.09%
LSCS	73	86.90%
Total	84	

The commonest mode of delivery was by LSCS seen in 73 cases (86.90%).

Table – 5: ADDITIONAL PROCEDURES REQUIRED FOR CONTROLLING BLEEDING:

Type of procedure	No. of cases	%
Uterine Packing	5	5.95%
Baloon Tamponade	13	15.47%
B-Lynch with Uterine artery Ligation	36	42.85%
Internal Iliac artery Ligation	4	4.76%
Emergency Hysterectomy	8	9.52%

B-Lynch with uterine artery ligation was the most common procedure adopted to control bleeding (42.85%). Hysterectomy was required in cases of Adherent placenta in 8 cases (9.52%). Minor Degree Placenta Previa required uterine packing in 5 cases (5.95%) and balloon tamponade in 13 cases (15.47%).

Table – 6: MATERNAL COMPLICATION:

Type of complication	Number of cases	Percentage
Hypovolemic shock	12	14.28%
Multiple blood transfusion (> 1 Unit)	26	30.95%
DIC	2	2.38%
Renal failure	1	1.19%
Maternal Death	2	2.38%

Hypovolemic shock was seen in 12 cases (14.28%) Multiple blood transfusions were seen in 26 cases (30.95%). 2 cases developed DIC and 1 case developed renal failure. 2 Maternal deaths (2.38%) One with DIC and one with renal failure were seen.

Table – 7: PERINATAL OUTCOME

APGAR at Birth	Number of cases	%
8 – 10	53	63.09%
5 – 7	21	25%
< 5	10	11.9%
Birth Weight		
<1.5 Kg.	13	15.47%
1.5 – 2.5 Kg.	29	24.52%
>2.5 kg.	42	50%
NICU Admission	33	39.28%
Perinatal deaths	8	9.52%
Early neonatal deaths	6	7.14%
Still births	2	2.38%

APGAR Scores 8 – 10 at birth was seen in 53 cases (63.09%). NICU admissions were seen in 33 cases (39.28%). Perinatal deaths occurred in 8 cases (9.52%) of which 6 cases (7.14%) were early neonatal deaths due to prematurity.

IV. Discussion

In the study done by Sruthi Prasanth et al ^[2] the incidence of placenta previa was 2%. Placenta previa was common in the age group 20-29 years (72.9%) and highest in multiparous group (73.55%); the risk factors associated were previous Caesarian sections (39.08%), abortions (37.93%) and twin gestation (82.18%). Multiple blood transfusions were received in 39.65% of cases, NICU admissions were seen in 37.35% cases. Hysterectomy was done in 1.14% cases and there were no maternal deaths.

In the study by Gamal A. Kassem et al ^[3], major placenta previa was seen in 47.54% cases. The mean age of presentation was 32.9 + 5.06 years, mean parity was 3; mean number of caesarian sections was 1.4 + 1.58. Elective caesarian section was done in 45.9% of cases. Methods adopted to control hemorrhage were multiple hemostatic sutures, bilateral uterine artery ligation, use of intrauterine balloon and internal iliac artery ligation. Hysterectomy was done in 18% of cases. In 4.1% cases the Apgar score was less than 7.

CHO H et al ^[4] in his study analysed 116 patients with placenta previa Demographic factors like parity, location of Placenta and prior Caesarian Section did affect antenatal bleeding in cases of placenta previa.

Paul Kiondo et al ^[5] studied pregnant women with placenta previa. 80% of cases were major placenta previa. 58.3% cases were in the age group 20 – 29 years. In 27.8% of cases prior caesarian section was present and in 13.9% of cases history of abortions was present. Multiparity was seen in 69.4% of cases.

In the study by Eniola et al ^[6] and Ananth CV et al ^[7] there was a definite association with increasing age and high parity and placenta previa. The pathophysiology of placenta previa in multiparity and increasing age is probably related to atherosclerosis which causes underperfusion of placenta resulting in increase of the size of placenta.

In the study by James WH et al ^[8] the risk of placenta previa was associated with abortions. In the study by H Ladky K et al ^[9] there is definite association of placenta previa with caesarian section. The scarring of the uterus may retard the physiological development of lower uterine segment. This interferes with the placental migration to the upper segment as the pregnancy advances. Women with placenta previa were 19 times more likely to deliver low birth weight baby.

Mohammed Sidhiq C ^[10] in his study documented that the incidence of placenta previa was 0.78% .42.6% cases had history of prior caesarian section and previous history of abortions was seen in 26.5% of cases. In 72% of cases placenta previa was delivered by elective caesarian section. There were no maternal deaths. Blood transfusion was given in 57% of cases.

In the Study by Raja Rajeshwari R ^[11] 134 cases of Placenta previa were studied. The commonest age group was 29 – 29 years (79.85%) and multiparity was seen in 63.43% cases. The commonest risk factor was

prior Caesarian Section in 39.5% cases followed by abortion in 24.6% cases. Major degree placenta previa was seen in 69.4% cases. 12.68% cases required hysterectomy. NICU admission was seen in 23.7% of cases.

Devarmani M et al^[12] analysed 50 cases of placenta previa. Most common age group was between 20 – 29 years (70%). The highest incidence was seen in multiparous women (56%). Risk factors like prior caesarian section were seen in 12% cases and history of abortions was seen in 18% cases. Methods adopted to control bleeding were B – Lynch and CHO sutures. NICU admissions were seen in 24% of cases. The perinatal deaths were in 28% of cases.

In the present study, the incidence of Placenta Previa was 1.09%. It was most commonly seen in the age group 25 – 29 yrs. (54.76%), multipara (78.57%) and below poverty line (BPL cases) 63.09%. Major type of placenta previa was seen in 55.95% In 8 cases adherent placenta was seen on ultrasound which was confirmed by MRI. Previous Caesarian section was seen in 36.90% cases and history of abortion in 22.6% cases Caesarian Section was done in 86.90% cases. The additional procedures adopted to control bleeding was B-lynch with oterine artery ligation in 42.85% cases, Balloon tamponade in 15.47% cases, emergency hysterectomy was required in 9.52% cases. Multiple blood transfusions were needed in 30.95% of cases. DIC was seen in 2.38% cases. NICU admissions were seen in 39.28% cases. 50% had birth wt more than 2.5 kg and 63% of babies had Apgar score of 63%. Perinatal deaths occurred in 8 cases (9.52%) of which 6 cases (7.14%) were early neonatal deaths due to prematurity.

V. Conclusion

Placenta previa is one of the life threatening complications of pregnancy and its incidence is rising probably parallel to the rise in abortions and caesarian sections. Proper family planning practices with an aim to reduce unwanted pregnancies and abortions and performing caesarian sections for appropriate indications will help to reduce placenta previa.

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