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Original Research Paper

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A CLINICAL STUDY ON MATERNAL AND FETAL OUTCOME IN SCARRED AND UNSCARRED UTERUS OF PLACENTA PREVIA

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ABSTRACT

INTRODUCTION: Placenta previa is an obstetric complication in which the placenta is inserted partially or wholly in the lower uterine segment. It is a leading cause of antepartum haemorrhage affecting approximately 0.4-0.5% of all pregnancies.[1] Maternal complications of placenta previa are – antepartum haemorrhage, adherent placenta, postpartum haemorrhage, shock and peripartum hysterectomy causing significant maternal morbidity which can lead to prolonged hospitalization in these women[2]. The fetal complications are intrauterine growth restriction (IUGR), premature delivery and death. Premature deliveries and IUGR lead higher admission to neonatal intensive care unit and stillbirths. The aim of this study was to examine the risk factors and outcomes in placenta previa in previously scarred uterus and compare them to placenta previa in unscarred uterus

INCLUSION CRITERIA

- Pregnant women of all age group at or more than 28 weeks of gestation who had ultrasound documented placenta previa,
- Irrespective of their parity and complaints of bleeding,
- Coming to emergency department or admitted in antenatal ward were included in the study.

EXCLUSION CRITERIA

- All the pregnant women presenting with bleeding per vaginum or low-lying placenta before 28 weeks of gestation.
- Antepartum hemorrhage due to abruptio placenta or any other local cause.
- Pregnancy complicated with other medical disorders like pregnancy induced hypertension, diabetes mellitus and thyroid disorders.

KEYWORDS : Placenta previa, risk factor, scarred uterus (Group-A), unscarred uterus (Group B), adherent placenta, Postpartum Haemorrhage, maternal morbidity.

METHODS AND METHODOLOGY:

A Retrospective Study of 50 womens derived from case records(MRD) divided into two groups was conducted in department of obstetrics & gynaecology, at Government Dharmapuri Medical College & Hospital, over a period of 10 months from January 2020 to October 2020

All 50 women who's gestational age is beyond 28 weeks and who were diagnosed with all types of placenta previa at or after admission were included in the study. They were divided into two groups ,Group A in which placenta previa occurred in a previously scarred uterus and Group B in which placenta previa occurred in an unscarred uterus .

Details of their age, parity, gestational age & clinical features at presentation, detailed history of current pregnancy and previous pregnancies, period of gestation at which placenta previa was diagnosed, history of bleeding etc were documented. Women were subjected to a detailed clinical examination. Placental localisation was achieved by trans abdominal ultrasound in these patients .

Duration of hospitalization, need for blood transfusion, indications for termination , period of gestation at delivery, route of delivery (vaginal or caesarean), need for extra surgical manoeuvres during operative delivery to prevent or to stop bleeding like uterine artery ligation, stepwise devascularisation and hysterectomy and need for ICU admissions are noted down. An analysis of maternal mortality and morbidity was done with respect to development of hypovolemic shock, DIC, anaemia, acute kidney injury, and maternal deaths.

For the newborn gestational age at delivery, APGAR score, birth weight, need for NICU admission, still birth rate, neonatal mortality rate, presence of congenital anomalies are noted down. Both mother and baby were followed up throughout the period of their hospitalization till discharge.

TABLE 1: RELATION OF PLACENTA PREVIA WITH AGE .

AGE	SCARRED	UNSCARRED	TOTAL
<20	1 (4%)	0	1(2%)
20-30	18 (72%)	20(80%)	38(76%)
30-40	06 (24%)	05(20%)	11(22%)
>40	0	0	0
TOTAL	25 (100%)	25(100%)	50(100%)

TABLE 2 : RELATION OF PARITY INDEX :

PARITY	A	B	TOTAL
PRIMI	0	13 (52%)	13(26%)
G2	11(44%)	5(20%)	16(32%)
>G2	14(56%)	7(28%)	21(42%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 3 : RELATION OF PLACENTA PREVIA AND HISTORY OF DILATATION AND CURETTAGE

ABORTION	A	B	TOTAL
YES	12(48%)	5(20%)	17(34%)
NO	13(52%)	20(80%)	33(66%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 4: GRADES OF PLACENTA PREVIA

GRADES	A	B	TOTAL
I	14(56%)	13(52%)	27(54%)
II	3(12%)	5(20%)	8(16%)

III	1(4%)	5(20%)	6(12%)
IV	7(28%)	2(8%)	9(18%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 5 : TYPES OF PLACENTA PREVIA

TYPES	A	B	TOTAL
ANTERIOR	14 (56%)	15(60%)	29(58%)
POSTERIOR	5(20%)	8(32%)	13(26%)
CENTRAL	6(24%)	2(8%)	8(16%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 6: INDICATIONS FOR TERMINATION

INDICATIONS	A	B	TOTAL
ELECTIVE	20(80%)	5(20%)	25(50%)
H/O EXCESSIVE BLEEDING	5(20%)	20(80%)	25(50%)
TOTAL	25 (100%)	25(100%)	50(100%)

TABLE 7: GESTATIONAL AGE

GESTATIONAL AGE	A	B	TOTAL
28-34	5(20%)	7(28%)	12 (24%)
34- 36	5(20%)	5(20%)	10 (20%)
>37 WEEKS	15(60%)	13(52%)	28 (56%)
TOTAL	25 (100%)	25 (100%)	50 (100%)

TABLE 8 : MODE OF DELIVERY:

MODE OF DELIVERY	A	B	TOTAL
LABOUR NATURAL	-	-	-
LSCS	25(100%)	25(100%)	50(100%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 9: PERINATAL OUTCOME

PERINATAL OUTCOME	A	B	TOTAL
ALIVE	25(100%)	24(96%)	49(96%)
STILL BORN	-	1(4%)	1(4%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 10: BIRTH WEIGHT

BIRTH WEIGHT	A	B	TOTAL
VLBW (<1.5KG)	5(20%)	7(28%)	12(24%)
LBW (1.5 – 2.5KG)	7(28%)	5(20%)	12(24%)
AGA	13(52%)	13(52%)	26(52%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 11: NICU ADMISSION

NICU ADMISSION	A	B
YES	13	11
NO	12	10
NEONATAL DEATH	0	3

TABLE 12: BLOOD TRANSFUSION

BLOOD TRANSFUSION	A	B	TOTAL
YES	16(64%)	20(80%)	36(72%)
NO	9(36%)	5(20%)	14(28%)
TOTAL	25(100%)	25(100%)	50(100%)

TABLE 13: MATERNAL OUTCOME

COMPLICATIONS	A	B	TOTAL
PPH	1(4%)	1(4%)	2(4%)
CESAREAN HYSTERECTOMY	7(28%)	0	7(14%)
WOUND SEPSIS	0	0	0
DEATH	1(4%)	0	1(2%)
NO COMPLICATIONS	16(64%)	24(96%)	40(80%)
TOTAL	25(100%)	25(100%)	50(100%)

DISCUSSION

Placenta previa is one of the dreaded complications in obstetrics due to its associated adverse maternal and perinatal outcome. Overall incidence of placenta previa in our study is 0.6% which is similar to that found in the study by Mathuriya G, Lokhande P(0.5%)[3]

The incidence of placenta previa was same in both scarred and unscarred uterus. In our study maximum number of women in both scarred (72%) and unscarred 80% were between 20-30 years of age (Table-1). According to the study by Hung et al, 71.3% were in age group of 20-35 yrs and 28.5% over 35 years of age[1]

Risk of placenta previa increases with increasing parity. In our study incidence is higher in multiparous women with scarred 56%, and in primi para incidence is 52%. Unscarred placenta previa is more common in primi 52% (Table-2). The results are consistent with Reddy et al in which 69% were multiparous and in unscarred cases in Para 2 cases, was 30%.[4]

Dilatation and curettage is not an important risk factor for placenta previa in our study.in patients with dilatation and curettage done incidence was 48% in scarred uterus and 20% in unscarred uterus (Table-3).

Anterior placenta previa is more common in patients with both scarred and unscarred uterus.In our study significantly higher number of 60% cases in unscarred uterus and only 56% in scarred uterus (Table -5). This is in contrast to that found in the study by Gayatri et al 85.3% anterior placenta in scarred uterus and 36.8% in unscarred uterus. [3]

Placenta previa in scarred uterus was identified and planned for elective LSCS(80%).Whereas placenta previa in unscarred uterus were taken up as emergency LSCS in view of bleeding per vaginum (Table-6)(5). Placenta previa in scarred uterus should be identified early and managed in tertiary care centre.

There was no stillbirth in scarred uterus as planned electively whereas incidence of stillborn was 4% in unscarred uterus (Table-9) (6-8). Early identification and planned management in tertiary care centre should be initiated. Most common cause of neonatal death -Low birth weight \ sepsis (Table-11). Incidence of still births was 9% and 24% in scarred and unscarred group in the study by Gayatri et al. [3]

The demand for Blood transfusion was more in cases of both scarred (64%) and unscarred uterus (80%) (Table-12) so adequate iron stores should be maintained antenatally.

In our study complications are more common in scarred uterus. 28% patients of scarred uterus underwent caesarean hysterectomy[9-10]. Maternal death is 4% during our study (Table- 13).

CONCLUSION

The Placenta previa remains a risk factor for various maternal complications adversely affecting maternal and perinatal outcome irrespective of maternal age and prior abortions in our study. The result of the study concludes that a significantly higher frequency of placenta previa and more chance of adherent placenta and hysterectomy among previously scarred uterus. Postpartum haemorrhage and blood transfusion are common in both study group. Incidence of placenta previa is equal in both scarred and unscarred uterus hence early identification and planned management at tertiary care centre is mandatory. So, primary prevention in the form of reduction in the rate of primi gravida caesarean section must be done in order to prevent likelihood of placenta previa in scarred uterus and its associated morbidity. Early diagnosis by ultrasound and planned delivery with adequate iron stores should be the goal in the study groups.

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