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Research Article

A Study On maternal and Perinatal Outcome in Placenta Previa

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Abstract: The aim of the present study is to find out the demographic profile, maternal and perinatal outcome of patients with placenta previa. It is a prospective study done at Government General Hospital, Kakinada, Andhra Pradesh during the period of July 2013 to June 2014. 61 Antenatal women with more than 28weeks of gestational age with a complaint of painless vaginal bleeding or those diagnosed as having placenta previa on routine ultrasound examination were included in this study and were evaluated with comprehensive maternal history, clinical, laboratory and ultrasound examination and demographic profile, type of placenta previa on ultrasound examination, impact of previous method of delivery and present method of delivery, maternal and perinatal complications, incidence of postpartum haemorrhage and the need of blood transfusion were noted. Total number of deliveries during this period is 10,299. The incidence of placenta previa was 0.6%. Unbooked cases (77.04%),Mean age of presentation was 29yrs. Multigravidae (65.57%), (52.45%) presented between 28-34weeks gestational age, APH(65.57%), malpresentations (18.03%), women with previous history of surgical intervention (60%), postpartum haemorrhage (27.87%), need for blood transfusion (80.32%). Perinatalmortality (6.6%) and NICU admissions (24.56%), TAH (3.27%), maternal mortality was nil. Early diagnosis of placenta previa and timely intervention with arrangement of blood transfusion, and a good anesthetic, surgical and pediatric team improves maternal and perinatal outcome.
Keywords: Placenta previa, Antepartum haemorrhage, Postpartum haemorrhage, Maternal mortality, Perinatal mortality, Lower segment cesarean section

INTRODUCTION

Obstetric hemorrhage is one of the most common causes of maternal morbidity and mortality worldwide. Abnormal placentation, is currently the most common indication for peripartumhysterectomy. Placenta previa accounts for one third of all cases of APH [1]. Placenta previa is a major risk factor for obstetric haemorrhage especially in women with a previous uterine scar [2]. Placenta previa defined as implantation of placenta in lower uterine segment, overlying or approaching internal cervical os [3]. It is further classified as type I if implantation is in lower uterine segment but does not reach the internal os, type II reaches the internal os but does not cover it. Type III covers the internal os but not at full dilatation. Type IV placenta covers the internal os even at full cervical dilatation of cervix [4]. It occurs in 2.8/1000 and 3.9/1000 in singleton and twin pregnancies respectively [5]. Risk factors include high parity, advancing maternal age, previous cesaerean section and uterine surgery [6]. The main diagnostic modality is by transvaginal ultrasound. Early prenatal diagnosis allows for timely management thus reducing the perinatal and maternal morbidity and mortality by keeping an eye on need of blood transfusion, and arranging for a team of experienced surgeon, anesthesiologist and paediatrician [3].

The risk of placenta previa in post cesaerean pregnancy has been reported to be higher than after vaginal delivery. As there is an increase in primary cesarean rate, and increased incidence of placenta previa the purpose of this study is to assess the value of demographic profile and early identification of placenta previa in the maternal and perinatal outcome.

Aims and objectives

The aim of the present study is to find out the demographic profile, maternal and perinatal outcome of placenta previa.

MATERIALS AND METHODS

This is a prospective study done at Government General Hospital, Kakinada, Andhra Pradesh during the period of July 2013 to June 2014.Total number of deliveries during this period was 10,299. Ethical committee permission obtained.61 Antenatal women with more than 28weeks of gestational age with a complaint of painless vaginal bleeding or those

diagnosed as having placenta previa on routine ultrasound examination were included in this study and hospitalized. Written informed consent was obtained from all the patients and was evaluated with comprehensive maternal history, clinical, laboratory and ultrasound examination and demographic profile, type of placenta previa on ultrasound examination. The patients were delivered by lower uterine segment cesarean section at 37 weeks of gestation or when there is an acute episode of bleeding PV, impact of previous method of delivery and present method of delivery, maternal and perinatal complications, incidence of postpartum haemorrhage and the need of blood transfusion, were noted.

RESULTS

Results are shown in tables 1 to 5.

Table 1: Demographic profile of women

Parameter		No. of women	Percentage
Booking status	Booked	14	22.95
	Unbooked	47	77.04
Age	19	5	8.19
	20-30	53	86.88
	31-40	3	4.91
Parity	Primigravida	21	34.42
	Multigravida	40	65.57
Residence	Rural	43	70.49
	Urban	18	29.50

Table 2: Obstetric evaluation

Parameter		No. of women	Percentage
Gestational age at the time of presentation	28-34 weeks	32	52.45
	35- wks to term	29	47.54
APH	No bleeding	21	34.42
	Bleeding	40	65.57
Presentation of fetus	Cephalic	50	81.96
	Breech	8	13.11
	Oblique	2	3.27
	Transverse	1	1.63
Previous obstetric performance	Primi	21	34.42
	Vaginal	18	29.50
	LSCS	16	40
	Abortion	6	9.83

Table 3: Type of placenta

Type of placenta	Ultrasound evaluation		Intraoperative evaluation (60 cases)	
	No. of women	Percentage	No. of women	Percentage
Type I	6	10.71	8	13.33
Type II	24	42.85	27	45
Type III	11	19.64	16	26.66
Type IV	15	26.78	9	15
Scan not done	5	8.19	Normal delivery--1	

Table 4: Maternal complications

Parameter	No. of women	Percentage
Postpartum hemorrhage	17	27.87
Blood transfusion	49	80.32

Table 5: Details of babies

Parameter	No. of babies		Percentage
Maturity Gestational age	<32 wks	16	26.22
	33-37 wks	20	31.78
	>37wks	25	40.98
Live /Dead	Live	57	93.44
	Dead	4	6.55
NICU admissions	14		22.95

There was total of 10,299 deliveries during that period of July 2013 to June 2014. 61 cases of placenta previa were registered amounting to the incidence of 0.6%. maximum number 47 (77.04%) are unbooked cases. The mean age is 29yrs. Multigravidae constituted 40(65.57%).

40 (65.57%) presented with bleeding per vagina and of these 37 (92.5%) presented at first episode of bleeding PV.32 (52.45%) presented with gestational age of 28—34weeks. Malpresentations were present in 11 (18.03%). Of these 8were breech, 2 oblique lie, and one fetus in transverse lie.24 (60%) has previous history of operative intervention.(16 cases with previous LSCS and 6 cases with abortion and D&C history). 18 (45%) with previous normal vaginal delivery.

Out of the 60 (98.36%) delivered by lower segment cesarean section--- elective 9(15%), and emergency LSCS 51(85%). One case delivered vaginally. 17 (27.87%) had atonic PPH. 49 (80.32%) woman needed blood transfusion. The need for blood transfusion is 1,2,3,4 units in 24,13,7 and 5 patients respectively. Two cases were associated with abruption placentae. Two cases required total abdominal hysterectomy for PPH. One for atonic PPH not controlled with medical and conservative surgical treatment and another for placenta accrete.

Of the 61 cases delivered 57 were live births and 4 still births. 14 babies required NICU admission. There is no maternal mortality.

DISCUSSION

There were 61 cases presented with painless bleeding PV and placenta previa on ultrasound evaluation amounting to 0.6%. Mean age of presentation is 29years. APH complicates 2-5% of pregnancies of which approximately one third are due to placenta previa [7]. Increasing maternal age and high parity are considered as risk factors for placenta previa and maternal hemorrhage in many studies [8, 9] and in our study in agreement with Kindo *et al*. [10] maternal age & parity were not found to be risk factors for placenta previa as per his attribution that to the pathophysiology of placenta previa in multiparity was similar to that of age which is thought to be due to atherosclerotic changes in the uterus and infarction which cause underperfusion of placenta and increase in its size. It causes mainly minor placenta previa. The association of placenta previa and history of prior instrumentation has been identified as risk factor for the development of adherence [11,12]. In our study rate of placenta previa in primi was 2/1000 births, 1.7/1000 in women with vaginal delivery at first birth and 2.3/1000 births in women with cesarean section at first birth. We had only one case of placenta accreta. Incidence of blood transfusion is high in our study (80.32%). While Brenner et al and Willikan et al reported 36% and 52.4% respectively [13, 14]. The high incidence in the present study is due to preexisting anemia in our patietns. The incidence of PPH is 27.87% almost similar to study by Crane et al and [15]. PNMR in present study is only 6.55%. This may be due to early diagnosis, treatment and better NICU facilities at this institute. There is no maternal mortality reported.

CONCLUSION

Prenatal identification of Placenta previa either at the onset of first bout of bleeding or by routine ultrasound examination and early referral to centers with the capability to manage them will likely result in improved outcomes. This facilitates prior arrangement of blood transfusion and better anesthetic, surgical and pediatric team thus resulting in better maternal and perinatal outcome.

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