

## Placenta Accreta and its Management and Outcomes in Tertiary Centre: Low Resource Settings

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### How to cite this article:

C. Shanthi, K.S. Chitra. Placenta Accreta and its Management and Outcomes in Tertiary Centre: Low Resource Settings. Indian J Obstet Gynecol. 2019;7(1):27-29.

### Abstract

*Background:* This is an era of increasing trend in placenta accreta in modern obstetrics. The aim of this study is to identify the risk factors of such cases, early antenatal diagnosis, peripartum management protocol, and to evaluate maternal and neonatal outcome in tertiary care centre. *Method:* It is a prospective study conducted for a span of one year from 2017-2018. *Result:* A total of 15 cases of placenta accreta were identified and studied in Madurai medical college from March 2017 to April 2018. It was found that 40% cases were above 30 years of age, 93% have previous caesarean section history and 26% have previous dilatation and curettage history. 73% cases underwent hysterectomy, and almost all cases required ICU admission and blood transfusion. One case of bladder injury was reported (6%). Neonatal outcomes include preterm birth (53%), 60% cases required NICU admission. one perinatal death was observed. *Conclusion:* placenta accreta cases are highly associated with increasing caesarean section rate, high maternal age and repeated curettage. It causes adverse maternal and neonatal morbidity and mortality. Hence prompt antenatal diagnosis with ultrasound and planned management in multidisciplinary setup helps in reducing morbidity and mortality.

Caesarean section; Hysterectomy; ICU, NICU.

### Introduction

Placenta accreta is the emerging challenge in the modern obstetrics. Its incidence has increased dramatically worldwide due to increase in the rate of caesarean section and advanced maternal age both being independent risk factors. Placenta accreta is the general term used to describe abnormal placentation. It is classified as three types, namely placenta accreta in which the placental villi penetrate only to the surface of the myometrium. Placenta increta is characterized by invasion of placental villi into the myometrium. Placenta percreta characterized by invasion of villi beyond the myometrium into the uterine serosa and adjacent organs. Placenta accreta leads to life threatening complications. Maternal morbidity factors include massive haemorrhage, hysterectomy, cystotomy, bladder and ureteral injury, massive blood transfusion, ICU admission. Neonatal mortality factors include preterm birth, low birth weight, nicu admission. Risk factor for placenta accreta includes advanced maternal age, previous h/o caesarean section,

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**Received on** 21.12.2018

**Accepted on** 14.01.2019

**Keywords:** Placenta accreta;

previous h/o dilatation and curettage, placenta previa in present pregnancy. Early antenatal diagnosis of placenta accreta can be made by ultrasonography where the presence of bladder line interruption, absence of the retroplacental clear zone and presence of placental lacunae were regarded as the criteria for prediction of MAP. MRI scans also play pivotal role in making the diagnosis. Once the diagnosis of placenta accreta is made it requires multidisciplinary approach in the tertiary Centre to reduce the maternal and neonatal morbidity and mortality.

## Methods

A prospective study was conducted for 15 cases of placenta accreta were identified and treated in Madurai medical college hospital from March 2017- April 2018. A structured questionnaire was developed to collect various data regarding risk factors, antenatal diagnosis, and peripartum management, maternal and neonatal outcome.

## Results

Out of 15241 Deliveries from March 2017-April 2018, totally 15 cases of placenta accreta were identified.

**Table 1:** Demographic and clinical characteristics

Maternal Age %	20-25 years 4 (27%)	26-28 years 5 (33%)	30-35 years 6 (47%)
Antenatal care	Booked 12 (80%)	Unbooked 3 (20%)	
Referred from outside	Yes 14 (93%)	No 1 (7%)	

In Table 1- 40% of cases are in the age group 30-35 Yrs. 80% of cases were booked. 93% of cases were referred from outside.

**Table 2:** Distribution according to Causative Factor

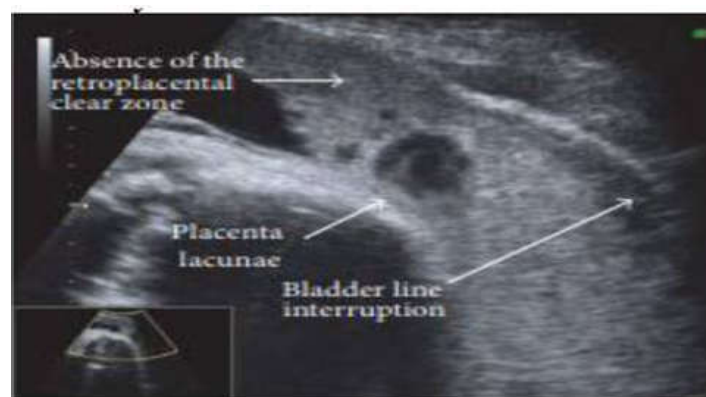
Causative factor	Total Number	Percentage %
Previous Caesarian section	14	93%
Placenta previa	15	100%
Dilatation and curettage	4	27%
	Previous 1 DNC:3 Previous 2 DNC:1	

In table 2 - 93% of cases had undergone previous Caesarian section. 2.7% cases had previous DNC. Placenta previa was associated with 100% women.

**Table 3:** Morbidity associated with Placenta Accreta

Total hysterectomy	6
Subtotal hysterectomy	5
Cystotomy	2
Bladder repair	1
Blood Transfusion (more than 4 Packed cell)	7
FFP Transfusion	8
Conservative Management	4
ICU admission	14

According to Table 3 - 73% of cases underwent Hysterectomy and 27% of cases managed conservatively with preservation of uterus. B/L uterine artery ligation and balloon tamponade, Bladder injury and repairing done in 7% cases. In this study 8 cases of placenta accreta were identified during antenatal period with ultrasound and MRI scans. AN steroid coverage was done. Elective Caesarean hysterectomy done with in situ placenta. 7 cases were identified during the operative procedure of which 3 cases undergone caesarean hysterectomy due to atonicity and blood loss and 4 cases were managed conservatively by B/L uterine ligation, suturing placental bed, balloon tamponade. one case had bladder invasion and repairing of bladder done. No pre op stenting done in any case. All specimens sent for histopathology and confirmed as placenta accreta and one case of placenta percreta was reported.



**Picture 1:** Shows the Ultrasound finding in placenta accreta

**Table 4:** Neonatal outcome

Pre term birth	53%
Average Birth Weight	2.3 kg
NICU Admission	9
RDS	7
Birth Asphyxia	4
Sepsis	1
Neonatal Death	1 (7%)

## Discussion

Women with high maternal age, history of previous caesarean section, previous history of dilatation and curettage, associated risk of placenta previa, antepartum bleeding should be carefully monitored and evaluated early antenatal diagnosis of placenta accreta is possible using gray scale ultra sound and color Doppler study. Placenta accreta is confirmed in ultrasound only when all three criteria were present namely bladder line interruption, absence of retroplacental clear zone, and placenta lacuna.

The cases diagnosed earlier during antenatal period were taken up for elective hysterectomy and their morbidity were reduced comparative to those diagnosed at time of procedure. There is a great benefit of planned as opposed to emergent peripartum hysterectomy. The overall incidence of placenta accreta in our study period was 1 in 1000 cases. The incidence of placenta accreta in cases of placenta previa was 1 in 8 cases. Hence placenta previa cases should be dealt in tertiary centers.

The multidisciplinary team consists of well experienced obstetrician, anaesthetist, Neonatologist, urologist in case of bladder invasion, blood bank with all blood components, maternity intensive care unit and neonatal intensive care unit. Eller et al. showed that delivery at a medical Centre with multidisciplinary care team resulted in more than 50% risk reduction in morbidity among placenta accreta cases. Placenta accreta cases mostly delivered at preterm most of the baby were of low birth weight, requires NICU admission. occurrence of birth asphyxia, RDS, sepsis was high among them. One perinatal death was noted in our study. Studies have reported higher preterm delivery rates and poorer neonatal outcomes for babies born to mothers with placenta accreta.

## Conclusion

Placenta accreta pose a challenge to the life of both the mother and the neonata. screening should be done for the cases of high maternal age, previous caesarean section, previous uterine procedures and

placenta previa cases. Early antenatal diagnosis using ultrasound and preplanned management in tertiary care is the key in reducing maternal and neonatal mortality and morbidity in placenta accreta cases.

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