



PLACENTA PREVIA – IMPACT ON OBSTETRIC AND NEONATAL OUTCOME- A SINGLE INSTITUTIONAL ANALYTICAL STUDY.

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ABSTRACT

Placenta Previa is associated with high risk of maternal hemorrhage,emergency peripartum hysterectomies, prematurity, low birth weight, increased incidence of maternal neonatal deaths.

Aims And Objectives: To study the incidence of placenta previa,risk factors associated with it,to study the incidence of maternal and neonatal morbidity and mortality and outcomes.

Materials And Methods: Total of 142 cases of placenta previa among 21240 deliveries conducted during the period were analysed and statistical estimation of variables were done using Chi square and Fisher's exact test.correlation between various parameters were done using logistic regression analysis. Relation between gestational age and 5 minute APGAR score was made with Pearson coefficients and P values.

Results: Incidence of placenta previa in our study was 0.66%.Incidence increases with age, parity and previous cesarean delivery.Placenta accreta increased with previous C sections and associated with increased blood loss and increased incidence of obstetric hysterectomies.Mean gestational age at delivery was 34.6 weeks. Average weight of neonates was 2441grams and mean APGAR score was 7.4.Increased incidence of prematurity and neonatal deaths were associated with placenta previa.

Conclusion: From our study,we concluded that placenta previa is associated with increased incidence of maternal and neonatal complications , increased incidence of peripartum emergency hysterectomies leading to severe blood loss, urinary tract injuries and adverse peripartum and post partum outcomes.

KEYWORDS	Placenta previa, placenta accreta, obstetric hysterectomy, APGAR score.
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Introduction:

Placental tissue over or near the internal cervical OS after 28 weeks of pregnancy a condition called placenta previa (PP) is observed at rate of 1 in 300 pregnancies^[2]. This Obstetric condition is associated with high risk of maternal hemorrhage and emergency peripartum hysterectomies. Multiparity, advanced maternal age, cigarette smoking, male fetal sex, previous cesarean section, uterine surgeries or abortion are associated with increased risk of developing placenta previa. Only very few studies in currently available literature have compared different types of PP and most of these have focussed on potential risk factors for abnormal placentation. Our study has evaluated the obstetric outcome for different types of PP and whether major types(complete and partial) are associated with a worse prognosis for the mother and neonate.

Aims And Objectives:

- 1.To study the incidence of placenta previa,
- 2.To Study the risk factors associated with PP
- 3.To study the incidence of maternal and neonatal morbidity and mortality and outcomes.

Materials And Methods:

Analytical Prospective study conducted at our Institute Of Obstetrics and Gynecology which is a high volume tertiary care referral centre for Tamilnadu.Total of 142 cases of placenta previa among 21240 deliveries conducted during the study period were analysed and statistical estimation of variables were done using Chi square and Fisher's exact test. Correlation between various parameters were done using logistic regression analysis. Relation between gestational age and 5 minute APGAR score was made with Pearson coefficients and P values

Results:

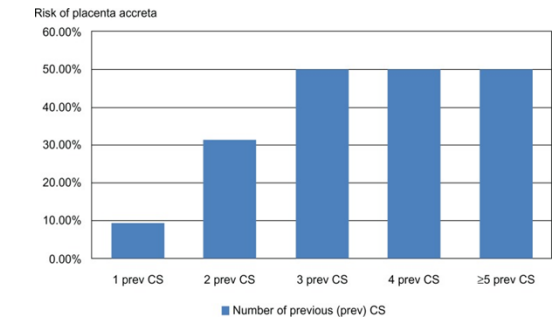


Fig 1

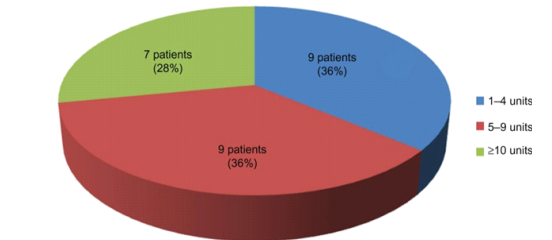


Fig 2

The incidence of placenta previa in our study was 0.66% (Fig 1). Among the placenta previa group, complete PP was 20.5% (29/142), Partial PP was 51.5%(73/142), marginal PP 5.3% (8/142), low lying placenta was 22.5%(32/142). Previous cesarean delivery history was present in 27.34%, with p value <.001.History of previous miscarriage was present in 43.22%(62 patients).The maternal age was 28.6 years. Association between increasing parity and PP was statistically significant with p value <.001.The incidence of obstetric hysterectomy in our study group was

19.6%(28), out of which 16 cases were done for placenta accreta, 7 for massive intra partum bleeding , 5 cases for uterine atony. Intra operative bladder injury occurred in 5 cases(3.52%) and ureteric injury in 2 patients.(1.40%). In our study 95 patients (67%) had blood loss of more than 1000ml. Mean blood loss was around 1121ml.Maternal death in our study period due to PP was 3(2.11%).The mean gestational age at delivery was 34.6 weeks.The 5 minute APGAR score was 7.4.There was no significant difference in APGAR score and various types of placenta previa. The mean neonatal weight was 2441 grams. Neonatal deaths occurred in 19(13.38%) of which 7 cases were dead born and 12 deaths were due to prematurity and related causes.

Table1.Obstetric outcomes in women with major placenta praevia our study results

	N=142	P value
Gestation at delivery (weeks)	34.62 ± 1.95	0.020 ^a
Post-op haemoglobin (gm%)	9.16 ± 1.32	0.475 ^a
Mean APGAR score	7.4	0.77 ^a
Emergency hysterectomy		
Anterior PP	18	0.001 ^a
Posterior PP	10	
Caesarean (%)		0.412
Elective	43 (34.9)	
Emergency	92 (63.8)	
Estimated blood loss (ml)	1127.11± 19.98	0.004 ^a
Postpartum haemorrhage (%)		0.390 ^b
Primary PPH	34 (23.94)	
Secondary PPH	1 (0.70)	
Received blood transfusion (%)	133 (93.66%)	0.021 ^b
DIVC (%)	2(1.40%)	0.221 ^b
Placenta accreta (intraoperative) (%)	6(4.22%)	0.001 ^b
Maternal death	3(2.11%)	0.056 ^b

Table 2 - Neonatal outcomes in women with major placenta praevia our study results

Neonatal Morbidity		
Dead born	7	
Prematurity	12	0.043 ^b
Others	1	
Others	20	
a- p value, b-Chi-square,APGAR- Pearson coefficients-x		

Discussion: Placenta previa has been reported to be associated with serious maternal morbidity and mortality and also adverse neonatal outcomes^[3]. The exact etiology of placenta previa still remains unknown. However, uterine scarring has been speculated as the underlying cause of placenta previa ^[8,9]. This is a detailed study that examined the factors associated with occurrence of placenta previa and its pregnancy outcomes. From our study we find the incidence of PP was 0.66%^[3] which is comparable to the reported incidence of 0.4 to 0.5% in literature. The incidence of placenta previa increases with increasing age and parity with our study revealing four times increased incidence with increasing parity which is in concordance with previous studies reported by Dola et al. and Olive et al.^[7] Placenta accreta accounted for significant number in our study for having high incidence of massive hemorrhage and obstetric hysterectomies and bladder injuries^[10,11,12].

Our study showed a strong correlation between number of previous cesarean sections and placenta previa incidence. The risk of obstetric hysterectomy increased twelve times in patients with history of more than one CS. The major cause of maternal deaths was due to coagulopathy. A careful sonographic evaluation for placenta accreta should be made in all antenatal women with previous history of CS and associated placenta previa.^[13,14]

The higher incidence of preterm delivery in placenta previa is attributed to increased incidence of antepartum hemorrhage, which was statistically significant in our group(p<.001).The most common neonatal outcome in PP was prematurity which is shown in different studies.^[5]

The present study analyzed risk in both mother and neonate associated with placenta previa.^[4] They indicate that women are more prone for massive hemorrhage and obstetric hysterectomy. The neonates suffer from increased chances of preterm delivery and prematurity. Prompt prenatal diagnosis and careful intra partum monitoring and management can prevent these consequences

Conclusion: From our study,we concluded that placenta previa is associated with increased incidence of maternal and neonatal complications, increased incidence of peripartum emergency hysterectomies leading to severe blood loss, urinary tract injuries and adverse peripartum and post partum outcomes.There is increased incidence of prematurity leading to neonatal mortality.

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