

Original Research Article

INCIDENCE OF ABRUPTION IN PRE ECLAMSIA

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ABSTRACT

Background: Aim: To investigate the incidence of abruptio placenta in women with Pre-eclampsia.

Materials and Methods: This descriptive observational study was conducted at KIMS, Koppal's Department of Obstetrics and Gynecology over six months (January-June 2024). The study comprised 26 cases.

Results: Out of 3048 deliveries, 26 cases of abruptio placentae among 450 cases of Pre-eclampsia were reported, yielding an incidence rate of 5.8%. The study revealed alarming fetal adverse outcome with Prematurity- 61%, Low birth weight- 69.2%, NICU admission-23%.17 cases (65%) resulted in intrauterine deaths.

Conclusion: Abruptio placenta poses significant risks to both mother and foetus, underscoring the importance of early intervention for favourable outcomes.

Keywords: Abruptio placenta, pre-eclampsia, prematurity.

INTRODUCTION

According to the Royal College of Obstetricians and Gynaecologists, antepartum hemorrhage (APH) refers to vaginal bleeding occurring after 24 weeks of gestation until childbirth. A significant cause of APH is abruptio placenta, responsible for 20-25% of all APH cases.^[1] Placental abruption is the premature separation of the placenta from its uterine attachment before the delivery of a fetus. Symptoms can vary, but typically include vaginal bleeding, uterine abdominal pain, and contractions. Additionally, abnormal fetal heart rate patterns often accompany this condition.^[2]

Placental abruption affects approximately 0.4-1% of pregnancies.^[3] It is categorized into two types: concealed, where there is no vaginal bleeding, and revealed, where vaginal bleeding occurs. While the primary cause of abruption often remains unknown, several factors increase the risk, including pregnancy-induced hypertension, preeclampsia, advanced maternal age, multiparity, premature rupture of membranes, smoking, polyhydramnios, abdominal trauma, fetal growth restriction, intrauterine infections, and a history of previous abruption.^[4]

is Abruptio placentae, а severe obstetric complication that occurs in approximately 0.38-1% of singleton births and 1-2% of twin pregnancies.^[5,6] It's a leading cause of maternal and fetal morbidity and mortality worldwide, particularly in developing countries.^[7] This condition is associated with a range of serious complications, including antepartum hemorrhage, disseminated intravascular coagulopathy, maternal shock and death,^[9,10] renal failure,^[8] and postpartum hemorrhage. Furthermore, abruptio placentae increases the risk of adverse fetal outcomes, such as low birth weight, preterm birth, intrauterine growth restriction, birth asphyxia, fetal distress, low Apgar score, and stillbirth.^[10,11] Overall, prompt medical attention is crucial to prevent severe complications and ensure the best possible outcomes for both mother and baby.

Aims and Objectives

- To study the incidence of abruptio placentae in 1. pregnancies complicated with preeclampsia.
- Effect of complications on maternal and fetal 2. morbidity

MATERIALS AND METHODS

This is a observational study conducted at KIMS, Koppal. Department of obstetrics and gynaecology over six months (January -June 2024). The study comprised 26 cases of abruptio placenta out of 450 cases of preeclampsia. The diagnosis of preeclampsia was done based on high blood pressure (>140/90) with proteinuria. The diagnosis of abruptio placenta was made according to the signs and symptoms including vaginal bleeding, abdominal pain, tense and tender uterus, pallor, features of shock, fetal death and USG findings.

Inclusion Criteria

- 1. Singleton pregnancy.
- 2. Patients booked in the first trimester with known first trimester BP record.
- 3. Pregnant women between 28-42 weeks of gestation with BP>140/90 mm of Hg with proteinuria.

Exclusion Criteria

CONVULSIONS

- 1. Gestational age <28 weeks or >42 weeks.
- Obstetric complications like multiple gestation, polyhydramnios, premature rupture of membranes.

- 3. Medical conditions like chronic hypertension, renal disease, heart disease, diabetes mellitus and thrombophilia.
- 4. History of trauma.
- 5. Placental anomalies.

RESULTS

During the study period, a total of 450 deliveries occurred among women with preeclampsia, with 26 cases diagnosed with abruptio placenta, resulting in an overall incidence of 5.8%. An analysis of the demographic characteristics of the study population revealed the following. The majority of women (53.8%) were over 30 years old. Multiparous women accounted for 73% of the cases, and most pregnancies (61.3%) were preterm, occurring before 37 weeks of gestation.

Table 1: Incidence of Abruption		
PRE ECLAMPSIA	ABRUPTION	
100%(450)	5.8%(26)	
Table 2: Incidence Based on Parity		
BASED ON PARITY	0/0	
PRIMIGRAVIDA	26%(7)	
MULTIGRAVIDA	73%(19)	
Table 3: Incidence Based On Costational Age		
RASED ON CESTATIONAL ACE(WEEKS)	0/-	
28.36	⁷⁰ 61 3(16)	
28-50 \	39.6(10)	
751	57.0(10)	
T.1. 4 L. 1		
Table 4: Incidence Based On Age	A (
	%	
18-21 Years	11(3)	
22-30 Years	34.6(9)	
>30 Years	53.8(14)	
Table 5: Incidence Based on Severity of Pre-Eclampsia		
SEVERITY OF PRE ECLAMPSIA	%	
NSPE	19.2(5)	
SPE	80.7(21)	
Table 6: Incidence Based On Mode of Delivery		
MODE OF DELIVERY	%	
LSCS	69.2%(18)	
VAGINAL DELIVERY	30.7%(8)	
Table 7: Incidence Based On Grades of Abruption		
BASED ON GRADES OF ABRUPTION	%	
GRADE 1	11(3)	
GRADE 2	23(6)	
GRADE 3	65.3(17)	
Table 8: Incidence Based On Clinical Presentation		
BASED ON CLINICAL PRESENTATION	%	
PAIN ABDOMEN	88.4(23)	
VAGINAL BLEEDING	80.7(21)	
HEADACHE, BLURRING OF VISION	7.6(2)	
TENSE ABDOMEN	92.3(24)	
SHOCK	11 5(3)	

11.5(3)

Table 9: Incidence Based On Maternal Complications	
MATERNAL COMPLICATIONS	%
ANEMIA	65.3(17)
SHOCK	11.5(3)
PPH	38.4(10)
SEPSIS	15.3(4)
DIC	3.84(1)
DEATH	0

Table 10: Incidence Based On Perinatal Complications		
PERINATAL COMPLICATIONS	%	
IUD	65.3(17)	
ALIVE	34.6(9)	
PREMATURITY	61(16)	
LBW	69.2(18)	
NICU ADMISSION	23(6)	

DISCUSSION

Although the exact cause of abruptio placentae remains unknown, research suggests that placental or vascular abnormalities, possibly due to incomplete trophoblastic villi invasion, may contribute to its development.^[13,14] Pre-existing conditions, such as abnormal placentation, vascular malformations, and fragile blood vessels, can increase the risk of hematoma formation and subsequent placental abruption. Placental abruption is a leading cause of third-trimester bleeding and perinatal mortality. Severe hemorrhage resulting from this complication can lead to high maternal morbidity and mortality. Furthermore, reduced placental surface area for oxygenation can cause fetal morbidity and mortality.^[14] Notably, preeclampsia is a significant risk factor for placental abruption. In this study, out of 450 patients, 26(5.8%) had placental abruption. In the comparison of these findings, Khan S et al,^[15] reported that the frequency of abruptio placenta was 14.1%. In another study conducted by Rathore R, Butt et al,^[16] at King Edward Medical University, Mayo Hospital, Lahore, in 2010 where 100 patients of PE were studied, they observed abruptio placentae in 4% cases.

CONCLUSION

Abruption placenta is a life-threatening condition for both mother and fetus, requiring prompt attention from well-equipped obstetric and neonatal units. Proper antenatal care can help identify risk factors like hypertension, advanced age, and high parity. Early detection and active management are crucial to reducing maternal and fetal morbidity. This study highlights preeclampsia, advanced age, and high parity as independent risk factors for abruptio placentae, which is associated with adverse outcomes. Improved antenatal care, timely management, and better equipped units can reduce the risk of abruptio placentae and improve maternal and perinatal outcomes.

REFERENCES

- RCOG. Green top guideline No. 63. Antepartum haemorrhage. London: Royal College of Obstetricians and Gynaecologists; 2011. pp. 1-28.
- Justin S. Brandt, MD; Cande V. Ananth, PhD, MPH. Placental abruption at near-term and term gestations: pathophysiology, epidemiology, diagnosis, and management: AJOG 2023; S:13131329.
- Ananth CV, Berkowitz GS, Savitz DA, Lapinski RH. Placental abruption and adverse perinatal outcomes. JAMA. 1999; 282:1646-51.
- Ngeh N, Bhide A. Antepartum haemorrhage. Current Obstetrics and Gynecology. 2006; 16:79-83
- Ananth CV, Getahun D, Peltier MR, Smulian JC. Placental abruption in term and preterm gestations: evidence for heterogeneity in clinical pathways. Obstet Gynecol. 2006;107(4):785–92.
- Ananth CV, Wilcox AJ. Placental abruption and perinatal mortality in the United States. AJE. 2001;153(4):332–7
- Tikkanen M. Placental abruption: epidemiology, risk factors and consequences. Acta Obstet Gynecol Scand. 2011;90(2):140–9.
- 8. Hall DR. Abruptio placentae and disseminated intravascular coagulopathy. Semin Perinatol. 2009;33(3):189–95.
- Jabeen M, Gul F. Abruptio placentae: risk factors and perinatal outcome. J Postgrade Med Inst. 2011;18(4):669– 76.
- Sarwar I, Abbas A, Islam A. Abruptio placentae and its complication at Ayub Teaching Hospital Abbotabad. J Ayub Med Coll Abbottabad. 2006;18(1):27–31.
- Salihu HM, Bekan B, Aliyu MH, Rouse DJ, Kirby RS, Alexander GR. Perinatal mortality associated with abruptio placenta in singletons and multiples. Am J Obstet Gynecol. 2005;193(1):198–203.
- CH. Madhuri, B. Suryakumari, V. Gitasree. An analytic study of incidence, clinical features, risk factor, management and outcome of placental abruption in a tertiary care centre. International Journal of Academic Medicine and Pharmacy: 2753-6556.
- 13. Hladky K, Yankowitz J, Hansen WF. Placental abruption. Obstet Gynecol Surv 2002;57(5):299-305.
- 14. Misra DP, Ananth CV. Risk factor profiles of placental abruption in first and second pregnancies: heterogeneous etiologies. J Clin Epidemiol 1999;52(5):453-461.
- 15. Khan S, Chughani G, Amir F, Bano K. Frequency of abruptio placenta in women with pregnancy-induced hypertension. Cureus. 2022 Jan 23;14(1).
- Rathore R, Butt NF, Iqbal A, et al. Complications and outcome of patients of preeclampsia and eclampsia presenting to medical wards of Mayo hospital Lahore. Annals 2010;16(1):17-19.