



A PROSPECTIVE CLINICAL STUDY ON PREGNANCY WITH ABRUPTIO PLACENTAE IN WOMEN ATTENDING A TERTIARY CARE CENTRE OF CENTRAL INDIA

Dr. Sabahat Khan*

Department of Obstetrics and Gynecology, Mahatma Gandhi Memorial Medical College Indore, Madhya Pradesh, India *Corresponding Author

Dr. Prof. Nilesh Dalal

Department of Obstetrics and Gynecology, Mahatma Gandhi Memorial Medical College Indore, Madhya Pradesh, India

Dr. Sheetal Achale

Department of Obstetrics and Gynecology, Mahatma Gandhi Memorial Medical College Indore, Madhya Pradesh, India

ABSTRACT

Background- Placental abruption is a relatively rare but serious complication of pregnancy and placed the well-being of both mother and fetus at risk. Placental abruption is also called abruptio placentae. The estimated incidence is around 1% of all pregnancies. Despite being a relatively rare occurrence, placental abruption needs urgent intervention. Most placental abruptions happen before 37 weeks of pregnancy. Maternal morbidity and neonatal mortality are primarily caused by placental abruption. Despite the fact that blood transfusions are available, maternal deaths are nonetheless uncommon and higher than the overall maternal mortality rate. Preterm birth, low birth weight, perinatal hypoxia, stillbirth, and neonatal mortality are all neonatal consequences. Even with better prenatal care and monitoring methods, the rate of placental abruption has been rising in several nations. **Material and Method-** The present study is a prospective study done in the Department of Obstetrics and Gynecology, M.G.M Medical College and M.Y Hospital, Indore, over a period of 1 year from March 2021 to February 2022.. All cases are admitted in Department of Obstetrics and Gynaecology, M.G.M Medical College and M.Y Hospital, Indore. The study will include prospective cases for 1 year from ethics committee

Inclusion Criteria-

1. All cases of concealed and revealed abruption with gestational age > 28 weeks till term.
2. All abruption with clinical symptoms of sudden onset abdominal pain, vaginal bleeding and uterine tenderness
3. All patients of abruptio placentae diagnosed on USG findings.

Exclusion Criteria-

1. All patients who come with the history of Ante partum hemorrhage but are having local (vaginal/cervical) causes excluded.
2. All patients referred to the hospital for the management of post-partum complications.
3. All other causes of APH like placenta previa and other extra placental causes.

Result- Majority of the study population were booked multigravida in the age group of 26-30 years of low socioeconomic status with B+ blood group with anemia and gestational hypertension as risk factors. Most of them underwent LSCS with Shock and sepsis as complications 80% study participants had live and healthy baby. 20% had perinatal death. 47.9% of the babies were low birth weight and 25% required resuscitation **Conclusion-** Without a doubt, abruptio placentae is a potentially serious obstetric condition that has the potential to threaten mother health and wellbeing, foetal viability, neonatal mortality, and morbidity. We found that important risk factors for abruptio placenta are multiparty, unbooked status, living in a rural area, maternal anaemia, and hypertension and also it is independent risk factor for perinatal mortality. From the present study we conclude that to prevent and lessen the severity of the situation early intervention, prompt delivery, and strengthening of safe motherhood services, particularly in remote regions will be helpful.

KEYWORDS :

INTRODUCTION-

Abruptio placenta is defined as premature partial or complete separation of normally implanted placenta after the 20th week of gestation and prior to birth.

According to the WHO, the incidence of abruptio placenta is 0.65 % worldwide, while maternal death rates are 2.1% and 15%, respectively(3). Abruption occurs in 6.2 in every 1000 singleton pregnancies and 12.2 in every 1000 twins throughout the world

Although Abruptio Placentae cannot be prevented, aggressive management can significantly lower maternal and perinatal morbidity and mortality. Modern advancements in anaesthesia and obstetrical facilities, increased use of blood and its products to treat anaemia, increased use of ultrasonography to diagnose abruptio placentae, and advanced neonatal care facilities have all contributed significantly to a reduction in maternal and perinatal morbidity and mortality.

Recently there is an increase in the incidence of abruptio owing to increase in risk factors. Despite the fact that there are many complications with potentially fatal outcomes for both

the mother and the foetus, little is known about these conditions and the factors that can predict these outcomes. We can reduce the morbidity and mortality linked to abruptio placentae if we can determine the potential causes of unfavourable outcomes. Therefore, this study was carried out to ascertain the incidence, demographic characteristics, and to estimate the likely causes and outcomes for the mother and the foetus in a case of abruptio placentae at a tertiary care facility in India

MATERIALS AND METHOD-

Study Design:

Prospective observational study

Study Site:

Department of Obstetrics and Gynaecology, MGM Medical College and MY hospital, Indore.

Study Duration:

One year (1 March 2021-28 February 2022)

Study Population:

All pregnant women with clinical diagnosis of abruptio placentae and gestational age of more than 28 weeks

reporting to the Department of Obstetrics and Gynaecology, MGM Medical College and MY hospital, Indore.

Sample Size: n=60

Inclusion Criteria:

1. All cases of concealed and revealed abruption with gestational age > 28 weeks till term.
2. All abruption with clinical symptoms of sudden onset abdominal pain, vaginal bleeding and uterine tenderness
3. All patients of abruptio placentae diagnosed on USG findings.

Exclusion Criteria:

1. All patients who come with the history of Ante partum hemorrhage but are having local (vaginal/cervical) causes excluded.
 2. All patients referred to the hospital for the management of post-partum complications.
 3. All other causes of APH like placenta previa and other extra placental causes.
- Informed written consent was obtained after explaining about the purpose, nature and process of the study and then data collection was started.
 - Prestructured proforma was used to collect details about the patients.
 - Demographic profile, detailed history, risk factors, physical and obstetrics examination including general physical, abdominal and pelvic examination were noted.
 - Investigation details such as complete haemogram, viral markers, urine routine microscopy, USG, Ante-natal profile were also noted.
 - Meticulous clinical assessment so as to exclude from placenta previa was done.
 - Placental abruption was suspected depending on clinical features of vaginal bleeding, uterine tenderness, hypertonic uterus and diagnosis was confirmed by retro-placental clots.
 - Ultra-sonogram was done for placental localization and retro-placental clots
 - Antenatal and intra-natal details were noted.
 - Maternal and foetal monitoring was performed according to standard guidelines.
 - Incidence and risk factors including demographic factors associated were abruption were analysed in individual cases.
 - Maternal and foetal outcome in terms of morbidity and mortality were noted.

RESULT AND DISCUSSION-

1. The incidence of Abruptio Placenta in our study was 0.81%.
2. Majority of the study participants were in the age group of 26-30 years. Mean age was 29 ± 6 years ranging from 18 – 38 years.
3. Majority of the study participants were Hindu (75%) and rest were Muslims (25%).
4. Patients with abruption placenta predominately come from rural areas and have low socioeconomic level.
5. 78.3% of the participants were booked and 21.75 were unbooked.
6. Incidence of abruption was most commonly seen in multigravida (38%) and in primigravida (36.7%).
7. 32% of the participants had 32 – 36 weeks of gestation, 31.7% had >36 weeks of gestation and 15% had 28 – 32 weeks of gestation.
8. 88.3% of the participants were anaemic.
9. Majority of patients had B+ blood group.
10. Also we observed Gestational Hypertension, Gestational Diabetes Mellitus and chronic hypertension were present

- in 45%, 13.3% and 13.3% of participants respectively.
11. 5% of participants had history of smoking and 3.3% had history of tobacco chewing.
 12. 58.3% of the study participants had mixed type of abruption followed by 30% had revealed type of abruption. 35% had grade 3, 30% had Grade 2, 25% had Grade 1 and 10% had Grade 0 of abruption.
 13. 50% of the participants had Vaginal bleeding as the most common sign of abruption.
 14. 21.7% of the study participants had polyhydramnios, 16.7% had PROM and 8.3% had trauma.
 15. 58.3% of the study participants with abruption had LSCS.
 16. 41.7% of participants had 2 – 4 hours of interval between abruption and delivery.
 17. 36.7% of the participants had Shock, 26.75 %had sepsis, 21.7% had prolonged hospital stay and 30% of the participants required blood transfusion.
 18. 3.3% maternal mortality was observed.
 19. 80% study participants had live and healthy baby. 13.3% were IUFD, 6.7% were still born and 20% had perinatal death.
 20. 47.9% of the babies were low birth weight.
 21. Among foetal complications, 27.1% of babies had depressed Apgar at 1 min, 25% required resuscitation, 29.2 % required NICU admission and 83% had Congenital anomalies.

CONCLUSION-

Without a doubt, abruptio placentae is a potentially serious obstetric condition that has the potential to threaten mother health and wellbeing, foetal viability, neonatal mortality, and morbidity.

We found that important risk factors for abruptio placenta are multiparty, unbooked status, living in a rural area, maternal anaemia, and hypertension and also it is independent risk factor for perinatal mortality.

From the present study we conclude that to prevent and lessen the severity of the situation early intervention, prompt delivery, and strengthening of safe motherhood services, particularly in remote regions will be helpful.

Declaration-

Funding: No funding sources

Conflict of interest: None declared

Table 1: Incidence of abruption during study period

Total admitted patients during study period	N = 7400
Incidence of abruption (60 / 7400)	0.81%

Table 2: Distribution of study participants according to Demographic characteristics

S.N	Demography	Count	Percentage
	Age Group		
1	<20	10	16.7%
2	21-25	10	16.7%
3	25-30	16	26.7%
4	>30	24	20%
	Religion		
1	Hindu	45	75%
2	Muslim	15	25%
	Locality		
1	Urban	31	51.7%
2	Rural	29	48.3%
	Booking Status		
1	Booked	47	78.3%
2	Unbooked	13	21.7%
	Blood Group		
1	A+	8	13.3%

2	B+	38	63.3%
3	AB+	6	10%
4	O+	3	5%
5	Others	5	8.4%
Parity			
1	Primi gravida	22	36.7%
2	Multi gravida	38	63.3%

Table 3: Distribution of study participants according to delivery status

		Count	Column N %
Type of onset of labour	Spontaneous	4	6.7%
	ARM	13	21.7%
	Induced	8	13.3%
Mode of delivery	Normal vaginal delivery	25	41.7%
	LSCS	35	58.3%

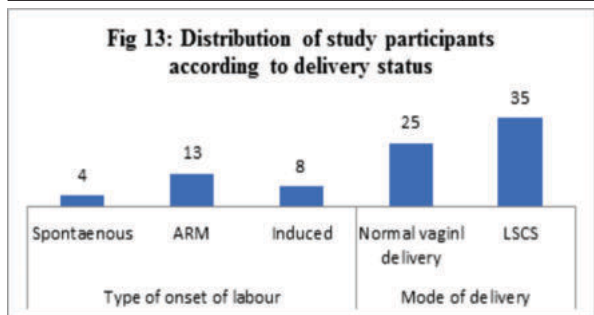


Table 4: Distribution of study participants according to Maternal Morbidity and Mortality

		Count	Column N %
Maternal Morbidity	No Complications	13	21.7%
	Hypovolemic Shock	18	30.0%
	Coagulation failure	8	13.3%
	Renal Failure	2	3.3%
	Post-partum Haemorrhage	16	26.7%
	Couvelaire Uterus	3	5.0%
Maternal Mortality	Yes	2	3.3%
	No	58	96.7%

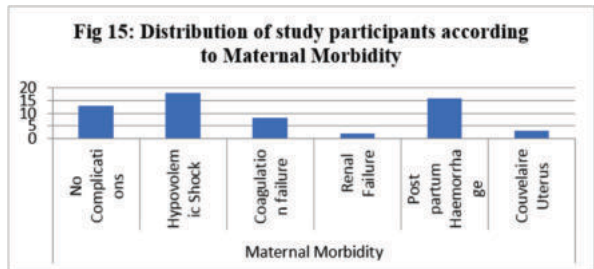


Fig 16: Distribution of study participants according to Maternal mortality

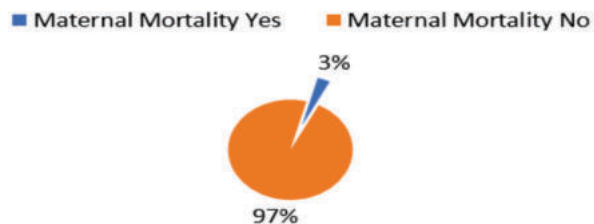


Table 5: Distribution of study participants according to Foetal Outcome

		Count	Column N %
Gender of baby	Male	25	52.1%
	Female	23	47.9%

Baby Status at Birth	Alive and Healthy	48	80.0%
	IUFD	8	13.3%
	Stillborn	4	6.7%
Birth Weight	< 2.5 kg	23	47.9%
	> 2.5 kg	25	52.1%

Fig 17: Distribution of study participants according to Foetal Outcome

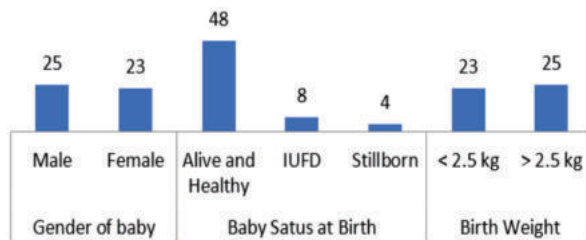
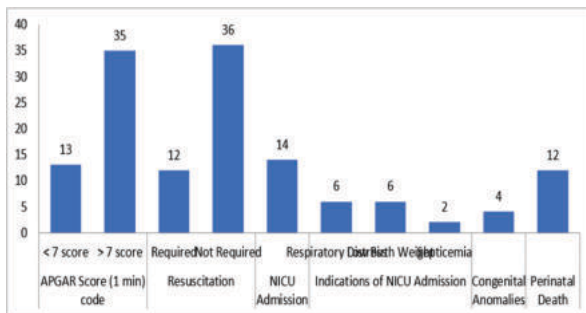


Table 6: Distribution of study participants according to Foetal Complications

		Count	Column N %
APGAR Score (1 min) code	< 7 score (severely and moderately depressed)	13	27.1%
	> 7 score (Normal)	35	72.9%
Resuscitation	Required	12	25.0%
	Not Required	36	75.0%
NICU Admission	Yes	14	29.2%
	No	34	70.8%
Indications of NICU Admission	Respiratory Distress	6	42.9%
	Low Birth Weight	6	42.9%
	Septicemia	2	14.3%
Congenital Anomalies	Present	4	8.3%
	Absent	44	91.7%
Perinatal Death	Yes	12	20.0%
	No	48	80.0%



REFERENCES-

1. D. M. Complications in late pregnancy. Emerg Med Clin North Am. 2012;30(4):919-36.
2. Krupa Patel. Study of Maternal and Foetal Outcome in Abruptio Placentae. Int J Reprod Contraception, Obstet Gynecol. 2020;9(5):1882-5.
3. Krishna P, Nayankumar V, Hospital SSCLG. Original Research Paper Obstetrics & Gynaecology Risk Factors and Foetal-Maternal Outcome in Placental Abruption 3rd year Resident Doctor , Obstetrics & Gynaecology Department , Smt S . C . L . General Hospital 1st year Resident Doctor , Obstetrics & Gyna. 2016;88-92.
4. Lokhande V, Jadhav K, Kadam M, Rawte S. Study of Maternal and Foetal Outcome in Abruptio Placentae. Int J Med Sci Clin Invent. 2021;8(01):5208-13.
5. Tikkanen M. Etiology, clinical manifestations, and prediction of placental abruption. Acta Obstet Gynecol Scand. 2010;89(6):732-40.
6. Lawrence S, Moretti F, Lafreniere A, McGee A, Lattuca S BA. Maternal and neonatal characteristics of a Canadian urban cohort receiving treatment for opioid use disorder during pregnancy. J Dev Orig Heal Dis. 2019;10(1):132-7.
7. Workalemahu T, Enquobahrie DA, Gelaye B, Sanchez SE, Garcia PJ, Tekola-Ayele F, Hajata, Thornton TA, Ananth CV WM. Genetic variations and risk of placental abruption: A genome-wide association study and meta-analysis of genome-wide association studies. Placenta. 2018;66:8-16.