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Original Research Article

An Observational Study on Maternal and Perinatal Outcome in Abruptioplacenta at a Rural Tertiary Care Center

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Abstract

Background: Abruptio placenta is a major cause of massive obstetric hemorrhage and significant cause of maternal and neonatal morbidity and mortality worldwide and in developing countries including India. This study aimed to determine risk factors for abruptio placenta and subsequent feto-maternal outcome at a tertiary care center (hospital). ***Methods:*** A prospective study was conducted at department of obstetrics and gynaecology, RIMS Adilabad. All patients diagnosed with abruptio placenta clinically and/or sonographically were included in the study. The maternal complications and fetal outcome were analyzed in detail. ***Results*:** In this study, 82 women were diagnosed with abruption placenta. Incidence of abruptio placenta is 1.4% at our institute. Most patients in our study are multiparous (64.6%), un booked (31.7%) and are in the age group of 20-30 years (58.5%). In our study abruption placenta was mostly associated with PIH/Hypertensive disorders of pregnancy (56.09%). H/o abruption placenta in previous pregnancy (12.19%), Idiopathic (23.17%), Trauma (2.4%), PROM (2.4%) are other risk factors associated with abruptio placenta. Anemia is associated with 58% of cases. Majority (54.8%) of cases delivered vaginally, 45.12% patients were delivered by LSCS. 63.14% babies were live born, 23.17% were IUD, 13.4% were stillborn. Post partum hemorrhage (19.5%), Acute renal failure (17.7%), disseminated intravascular coagulation (15.8%) are important maternal complications. Maternal mortality rate is 2.4%. Perinatal mortality is 25.6%. ***Conclusion:*** Abruption placenta is associated with poor maternal and fetal outcome. There is need to spread awareness regarding taking adequate antenatal care so that associated risk factors could be diagnosed early and treated adequately. Prompt resuscitative measures and expedition of delivery process after abruption favours good fetomaternal outcome.

Keywords: Abruptio placenta, hypertension, maternal morbidity, perinatal mortality.

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INTRODUCTION

Abruptio placenta is the premature separation of normally implanted placenta from the uterine wall after 28 weeks of gestation, prior to delivery of the fetus [1]. The incidence of abruptio placenta varies from 0.5% to 1% world- wide [2]. In India, it ranges from 2.5% to 3.8% [3]. In India maternal mortality is very high which is 4.08/1000 live births. Perinatal mortality in India is 60/1000 live births. Abruptio placenta remains a major cause of massive obstetric hemorrhage and is significant cause of maternal and perinatal mortality and morbidity [4]. Risk factors associated with Abruptio placenta are Advanced maternal age, High parity, Hypertensive disorders of pregnancy, PROM, Polyhydramnious, multiple gestation, thrombophilias, chorioamnionitis, drugs like cocaine, trauma, previous history of abruptioplacenta. Vaginal bleeding and painful uterine contractions during 2nd half of pregnancy is classical symptoms of placental abruption [5]. Uterus is hard and tender on palpation. Abruptio placenta is essentially a clinical diagnosis determined by above features and is confirmed by Retro placental clots after delivery [6]. Abruption involving more than 50% of the placental surface is frequently associated with fetal death.

AIMS AND OBJECTIVES

Aims

To find out perinatal and maternal outcome in Abruptio placenta in a tertiary care hospital with anticipation that the results of this study will help in

better understanding and further management plan of catastrophic obstetric complications.

Objectives

1. To study the incidence of abruptio placenta.
2. To study the risk factors and complications associated with abruptio placenta.
3. To study the Maternal outcome and perinatal outcome.
4. To study Mode of Delivery in abruptio placenta.
5. To suggest the preventive measures that help to prevent the maternal and perinatal complications.

Inclusion criteria

All pregnant women after 28 weeks of gestation who are diagnosed mainly clinical sign and symptoms (or)by USG and all babies delivered by mothers with abruption placenta.

Exclusion criteria

- Placenta previa, Vasa previa.
- Genital tract trauma.
- Lesions of genital tract (polyp, malignancy).

METHODOLOGY

This study was carried on antenatal mothers diagnosed with abruptio placenta admitted in the department of Obstetrics and Gynaecology from May 2023 to April 2024 in RIMS ADILABAD after the ethical clearance by Institutional ethical committee. Abruptio placenta patients were diagnosed either clinically and/or radiologically. Age, parity, gestational age, clinical presentation, Risk factors, Mode of delivery, Maternal and perinatal outcome were noted. Fetal wellbeing was assessed with ultrasound and admission Non stress test was done. All routine antenatal investigations along with coagulation profile, liver function test and renal function tests were done. After initial resuscitative management, depending upon the maternal and fetal condition, mode of delivery was decided. Labour was monitored as per our department protocol. Partograph was drawn. Active management of third stage of lab our was done. Retro placental clots were measured in a kidney tray corresponding to 500ml of blood. Mode of delivery, Requirement of blood products, ICU admissions were noted. Maternal and fetal complications were noted.

Study Design: An Institutional Prospective Analytical study.

RESULTS

Total 5819 women were delivered in our institute during the study period of which 82 were diagnosed with abruption placenta. Incidence of abruption placenta is 1.4% at our institute.

Table 1: Table showing Booked versus Un booked cases

Booked/Unbooked	Number of Cases	Percentage
Unbooked Cases	56	68.2%
Booked Cases	26	31.7%

Table 1 showing maximum number of abruptio placenta patients were un booked - 56(68.2%) and booked were only 26(31.7%).

Table 2: Obstetric parameters

Maternal Age	Number of Cases	Percentage
<20 years	24	29.2%
20-30 years	48	58.5%
>30 years	10	12.1%
Parity		
Primigravida	29	35.3%
Multigravida	53	64.6%
Gestational Age		
28-32 weeks	13	15.85%
33-36 weeks	46	56.09%
>37 weeks	23	28.04%

Table 2 showing most patients of abruption placenta belongs to the age group of 20-30years. The incidence of abruptio placenta is higher in multi gravida and in the gestational age of 33-36 weeks.

Table 3: Risk factors

Risk Factor	Number of Cases	Percentage
Pregnancy Induced Hypertension/ Hypertension of Other Origin	46	56.09%
Previous H/O of Abruption	10	12.19%
Polyhydramnious	3	3.6%

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Risk Factor	Number of Cases	Percentage
Trauma	2	2.4%
Prom	2	2.4%
Idiopathic	19	23.17%

PIH/Hypertension of other origin is the most common risk factor, accounts for 56.09% cases.

Anemia is associated with 58% of cases.

Table 4: Mode of delivery

Mode of Delivery	Number of Cases	Percentage
LSCS	37	45.12
Vaginal delivery	43	52.4
Instrumental delivery	2	2.4

Table 5: Maternal outcome

Type	Number of Cases	Percentage
Postpartum Hemorrhage	16	19.5%
Acute Kidney Injury	14	17.7%
Disseminated Intravascular Coagulation	13	15.8%
Hemorrhagic Shock	7	8.5%
Puerperal Sepsis	3	3.6%
Mechanical Ventilation	2	2.4%
Obstetric Hysterectomy	1	1.21%
Maternal Mortality	2	2.4%

In our study most important complication is postpartum hemorrhage (19.5%) followed by Acute kidney injury (17.7%) followed by Disseminated intravascular coagulation (15.8%)

Table 6: Perinatal outcome

Fetal Outcome	Number of Cases	Percentage
Alive Birth	52	63.4%
Intrauterine Death	19	23.17%
Stillbirth	11	13.4%
Early Neonatal Death	10	12.19%
Total Perinatal Death	21	25.6%

In our study out of 82 deliveries, 52 were delivered alive,14.6% needed NICU admissions.

DISCUSSION

In the present study, the incidence of abruption placenta is higher in the age group of 20-30 years (58.5%) which correlates with the study of Mohapatra S *et al.,* (2019)- 70%. Most patients in our study are multiparous. This correlates with results of Mohapatra S *et al.,* (2019)-64% and Sayli Wankedkar *et al.,* (2019)-59.1%. In this study 68.2% of patients are un booked, 31.7% patients are booked compared to Mohapatra S *et al.,* in which booked cases are 36%, unbooked cases are 64%. This study showed 56.09% of patients were associated with pregnancy induced hypertension /Hypertension from other causes. Similar observations were made by Mohapatra S *et al.,* (58%) and Sayli *et al.,* (60%). Anemia is associated with 58.5% of cases. Similar observations were made by Choudhary V *et al.,* (57.26%). In the present study 52 (63.4%) were live born. Similar observations were made by Desai N *et al.,* (60%).23.17% were delivered as an IUD in our study compared to 34% in study of Desai N *et al.,* 13.4% were delivered as still birth, similar observations were made by Murkharjee S *et al.,* (11.3%). In the present study most common complication of abruption placenta is postpartum hemorrhage (19.5%). Similar observations were made by Choudary Ve *et al.,* (22.59%), Subramaniyan Ve *et al.,* (18.7%). Disseminated intravascular coagulation is seen in 14% of cases. Similar observations were made by Choudary Ve *et al.,*

CONCLUSION

Abruptio placenta is potentially serious obstetrical emergency associated with high rates of maternal and fetal morbidity and mortality in our country. Maternal and fetal complications can be minimized if risk factors are identified and if patients report in time, so that prompt and definite measures can be undertaken expeditiously and correct treatment instituted. There is need for women's emancipation and improvement in medical and health care facilities at affordable rate and within the reach of rural population.

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