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RISK FACTORS AND PREGNANCY OUTCOME OF ABRUPTIO PLACENTA: A RETROSPECTIVE STUDY

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Abstract

Background: Abruptio placenta is the most common cause of antepartum haemorrhage which is defined as separation of normally situated placenta after 20 weeks of gestation and before birth of fetus. Obstetrical haemorrhage accounts for almost half of all postpartum deaths in developing countries. Aim of study was to determine maternal and fetal outcome in pregnancy complicated by abruption.

Methods: This was a retrospective study conducted at Gopinath maternity home, Sir T. Hospital, Bhavnagar. From MAY 2020 –APRIL 2021.all pregnant women came to labour room with diagnosis of abruptio placenta were included.

Results: Total patients of abruption Identified Are 33 out of 2683 deliveries giving incidence of 1.1% In this study. Most of them are found at 26-35 years of age with 33-36 weeks of gestation. It is associated with multiparity in 57.5%. Vaginal bleeding is the most common presenting complain followed by absent fetal movement. 72.7% cases had association with preeclampsia. There is higher LSCS rates (61%) as compared to vaginal deliveries (39%). Most common complication found is DIC (30.3%) and next common is ARF (24.2%). case fatality rate of 6.06%. In our study 60.6% still birth and 39.3% live birth. Many of them required NICU admission.

Conclusion: Abruption is continued to be responsible cause of maternal and foetal adverse outcome. early detection and proper management prevents morbidity associated with it. Combined care is required for it.

Keywords: Abruptio placenta, risk factors, feto-maternal outcome.

Introduction

Placental abruption is the most common cause of antepartum haemorrhage and is defined as the preterm partial or complete separation of normally situated placenta from the uterine wall. It is a major cause of maternal and neonatal morbidity and mortality. It occurs in 0.5-1% of pregnancies. It accounts for 30% of 3rd trimester bleeding.

The types are-

Revealed – blood tracks between the membranes and escapes through vagina.

Concealed- blood collects behind the placenta

Mixed

Exact aetiology of abruptio placenta is unknown but a hypothesis suggests placental or vascular abnormalities due to failure of secondary invasion of trophoblastic villi. Abnormal placentation, vascular malformation and increased vascular fragility resulting into hematoma formation behind the placenta.

Risk factors such as high parity, advanced maternal age, cigarrete smoking, abdominal trauma, pregnancy induced hypertension, GDM, polyhydramnios, multiple pregnancy prior history of abruption have all been identified.

The clinical hallmark of abruption include painful vaginal bleeding, tetanic uterine contraction, uterine hypertonicity, non-reassuring foetal heart status.

Aim of study:

It is to determine the foetal and maternal outcome in pregnancy complicated by abruptio placenta in relation to risk factors associated with it.

Material and Method

This is a retrospective study by analysing the case sheets of patients of abruptio placenta in Sir T. Hospital, Bhvanagar from MAY 2020 - APRIL 2021.

All Pregnant mothers diagnosed to have abruptio placenta above the Gestational age of 28 week and beyond are included in study.

All other causes of APH like placenta previa and other extraplacental causes are excluded.

From those case records, basic details regarding the age, parity, gestational age, Hb level, clinical features, risk

factors, blood products transfusion, association with preeclampsia were collected. Mode of delivery for all women is noted along with maternal complications like PPH, DIC, ARF, shock, maternal death were studied. Foetal outcome in the form of live birth, foetal distress and NICU admission were studied. Results of the study were recorded in percentages.

Results

Total number of deliveries from MAY 2020 to APRIL 2021 at Sir T Hospital, Bhavnagar is 2683. Out of which total abruptio placenta case is 33. There are many factors associated with it.

Maximum number of abruptio placenta is seen in the age group of 26-35 year and next common age group is <25 year.

It is mainly seen in 2^{nd} to 4^{th} gravida and least common in $>4^{th}$ gravida

Most of the cases are presented at 33-36 wks of gestation and with Hb <6gm/dl.

Table 1: Distribution according to baseline characteristics of patients

CHARACTERISTICS		CASES	%
Maternal age	<= 25 years	12	36.3
	26-35 years	18	54.5
	>35 years	03	9.09
Parity	Primigravida	11	33.3
	G2-G4	19	57.5
	>= G5	03	9.09
Gestational age	28 – 32 weeks	08	24.2
	33-36 weeks	18	54.5
	>37 weeks	07	21.2
Hb level	6-10	09	27.2
	<6	23	69.6

Patients of abruptio placenta is presented in labour room with complain of bleeding per vagina followed by absent foetal movement. Many of them are associated with H/O preeclampsia.

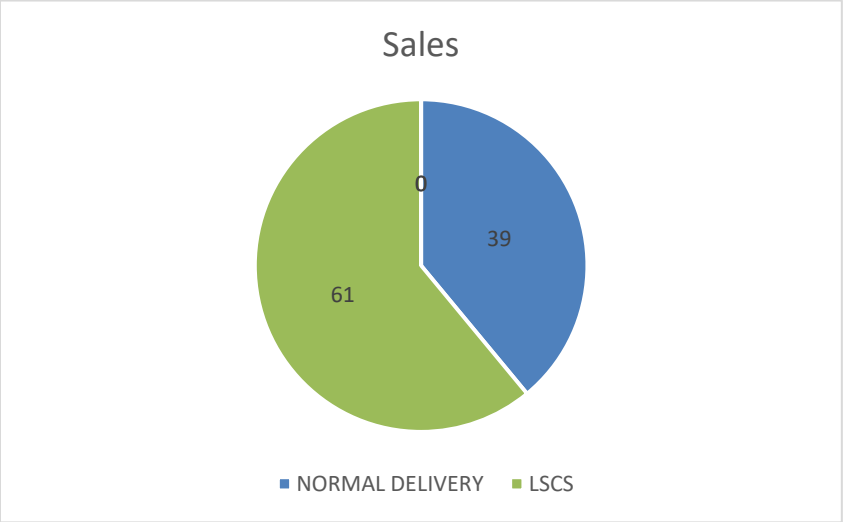
Table 2 : Clinical features wise distribution

CLINICAL FEATURES	CASES	%
Labour pain	11	33.3
Bleeding per vagina	22	66.6
Woody hard uterus	15	45.4
Absent fetal movement	20	60.6
H/O Fainting	03	9.09
Preterm labour pain	16	48.4
H/O Preeclampsia	18	54.5

Most of the patients of abruptio placenta having risk factor of preeclampsia. Least common in twins in our study which is almost nil.

Table 3: High risk factors

	CASES	%
Previous H/O abruption	02	6.06
Preeclampsia	24	72.7
PROM	15	45.4
Twins	00	00
Multigravida	03	9.09
Chronic hypertension	02	6.06
Previous LSCS	08	24.2



Graph 1: Mode of delivery in abruption

There are 2 mortality in our study. it is mainly due to DIC and ARF. Almost all of the pt. is having anaemia which needs blood transfusion.

Table 4: Distribution according to maternal adverse outcome

ADVERSE OUTCOME		CASES	%
Maternal death		02	6.06
PPH		02	6.06
DIC		10	30.3
ARF		08	24.2
Shock		07	21.2
Sepsis		02	6.06
Hysterectomy		01	3.03
Anaemia		32	96.9
Needs transfusion of blood products	None	01	3.03
	1-4	14	42.4
	>4	18	54.5

Foetal outcome is presented as still birth in most of cases.

Table 6: Distribution of foetal outcome

FETAL OUTCOME	CASES	%
Still birth	20	60.6
Live birth	13	39.3
NICU admission	08	24.2
Low birth weight	05	15.1
Fetal distress	08	24.2

Discussion

Placental abruption is one of the serious complications of pregnancy, as it leads to both poor maternal and foetal outcome. This study is conducted at Gopinath maternity home, sir T. Hospital, Bhavnagar. During the study period from MAY 2020 - APRIL 2021, a total of 33 cases of abruptio placenta were seen out of a total 2683 deliveries, which gives incidence of a 1.1% in our study. which is relatable to incidence of abruptio placenta (1%).

On admission all baseline characteristics of patients examined. Abruption occurs at any age and at any stage of pregnancy but according to our study it is mainly seen at 26-35 years of age-54.5% and at 33-36 weeks of pregnancy- 54.5%. It is least common in >35 yrs of age and at >37 weeks of gestation. Multiparity is significantly associated with abruptio placenta. we found it is in 57.5 and next common in primigravida of 33.3.%. The mean haemoglobin concentration is <6 gm/dl in our study. Which may be due to poor nutrition status and iron deficiency anaemia. It is also a risk factor of abruptio placenta. Bleeding per vagina is most common symptoms of patients (66.6%) followed by absent foetal movement (60.6%), preterm labour pain (48.4%), woody hard uterus (45.4%).

We found 72.7% cases of abruptio placenta patient having association with preeclampsia which is found in so many studies. previous H/O abruption and previous LSCS association is not so common. The risk and benefits of conservative and expeditious management of abruptio placenta needs to be optimised for better fetal and maternal outcome. There is higher CS rates(61%) in our study as compared to vaginal delivery rate(39%) for better maternal outcome. DIC was associated with 30.3% of the patients in our study. Renal failure is also seen in 24.2% of patient. It is major cause of death. We found almost all cases (96.9%) have anaemia which required blood transfusion. Only 1 patient not required blood transfusion. This major complications are followed by shock (21.2%) followed by PPH and sepsis (6.06%). Only one patient needs urgent obstetric hysterectomy due to intractable PPH which is similar to a study done by Alka et al,2017. In our study 2 maternal death occurred which gives case fatality rate of 6.06%. Abruption has many adverse events on foetus like asphyxia, preterm, low birth weight, NICU admission and foetal death. We studied that there is 60.6% still birth and 39.3% live birth from which 24.2% needs NICU admission. None of the above mother was managed with conservative management as most of them are serious with large size of retroplacental clot.

Conclusion

Abruptio placenta is one of severe complications of pregnancy which has higher perinatal mortality and morbidity. Abruption is continued to be responsible cause of maternal and foetal adverse outcome. Early detection and proper management prevents morbidity associated with it. This study reveals that severe preeclampsia, high parity are independent risk factors for abruptio placenta. It is neither predictable nor preventable in majority of cases. 6.

Regular antenatal check-up, anaemia correction, detection of preeclampsia, early diagnosis and prompt management will reduces morbidity. Team work of obstetricians, neonatologists and intensivists is required for better maternal and foetal outcome.

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