

A Study of Maternal Outcome in Abruption Placenta in Pregnancy

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Abstract

Objective: To study the demographic factors, etiological factors, maternal complications and maternal mortality in abruption placenta in pregnancy.

To study maternal morbidities and mortality associated with abruption placenta in pregnancy.

Materials and Methods: This was a prospective analytical study and we have enrolled 50 consecutive patients presenting in obstetric department of new civil hospital, Surat with clinical diagnosis of abruption placentae.

A detailed history of the patient was taken regarding identification, age, address, occupation, socio economic status, amenorrhoea, fetal movements and history of trauma, history suggestive of hypertensive disorders, previous medical disorders and outcome of previous pregnancy. After that, thorough clinical examination & ultra sound was performed for confirmation of clinical diagnosis.

Patient were managed according to “**standard department protocol**”

Result: Highest incidence was found among the maternal age of 20-30 years. The majority of cases were in multipara (70%). The majority of the patients in my study were in lower class (48%) and upper lower class (28%). In the present study 60% of them were unbooked cases probably because of low socio economic condition. Among etiological factors, most common factor found in my study was hypertension which was present in 84%. among maternal complications, postpartum hemorrhage and coagulation failure, were most common present

in 16% of patients. 12% patients having a shock and 8% patients having a acute renal failure. Most of the patients recovered after proper medical intervention. There were 2 maternal mortality in my study (4%).

Conclusion: By improving socio economic status, avoiding high parity by timely sterilization, anticipation of abruption in high risk cases, proper antenatal care, timely admission, prompt action at the time of occurrence, strict surveillance etc. Can go a long way in bringing better results in dealing with this grave condition. Early referrals from the peripheral institution would help to bring down the perinatal and maternal mortality.

Keywords: Abruption placenta; Maternal outcome, Maternal mortality.

Introduction

Abruption placentae is one of obstetrical emergencies and is truly accidental with few warning signs.¹ Abruption placenta is defined as a “premature separation of normally situated placenta”.¹ Despite advances in diagnostic and therapeutic interventions, it remained one of the significant cause of maternal and perinatal mortality and morbidity. The hypertensive disorders in pregnancy is the most common condition associated with abruption placenta in pregnancy.¹ Though it is a clinical diagnosis, the advent of transvaginal ultrasound (TVS) has helped it to differentiate it from the other causes of antepartum hemorrhage like placenta previa. With the better availability of

blood and blood products and coagulation factors, the management of shock and DIC has produced good results over last few decades. Third trimester bleeding is one of the most ominous complication of pregnancy.³ Its frequency averages 0.5 percentage to 1 in 200 deliveries.¹ The Latin word *abruption placentae*, which means "rending as under of the placenta," denotes a sudden accident, a clinical characteristic of most cases of this complication.²

Etiology of abruption placenta

In majority of cases, etiology of abruption is "hypertensive disorders" in pregnancy. In minority, apparent association is seen with sudden uterine decomposition seen in polyhydramnios, multiple pregnancy, other like trauma, and inferior venacaval compression.³ There is controversial relationship between maternal age, parity, folate deficiency, socio economic status and abruption. In addition to above, there may be relationship between cigarette smoking, uterine anomalies, previous preterm labor and unexplained elevation of second trimester maternal serum alpha fetoprotein and abruption.

Maternal factors includes hypertensive disorders of pregnancy, premature rupture of membranes, preterm labor, polyhydramnios, multifetal gestation, trauma, external cephalic version, previous history of *abruptio placentae*, uterine anomalies and tumors, small for gestational age etc.¹

Demographic factors includes age, parity, race, sex of the offspring, nutritional state, socio economic status.¹

Other factors includes folic acid deficiency, cigarette smoking, drugs like cocaine, marijuana, alcohol, short labor, snake bite, increased msafp, hyper homocystinaemia, ascorbic acid deficiency, history of stillbirth, maternal diseases, supine hypotension syndrome, short cord, variation in placental anatomy etc.¹

Materials and Methods

This was a prospective analytical study of 50 patients admitted to labor room in the dept. Of obstetrics and gynecology, tertiary health center, Surat. Patients admitted with clinical diagnosis of abruption placenta and gestational age of more than 28 weeks, from July-2018 to February-2019 were taken.

Abruption placenta is diagnosed by premature separation of placenta from its site of implantation

before delivery. It can be diagnosed mainly by clinical examination which includes sudden onset of vaginal bleeding, pain, tenderness and a tonically contracted uterus with or without fetal death or shock. It can be confirmed by ultrasound examination.

As accidental hemorrhage can also be diagnosed retrospectively, cases with retro placental clots/ depression (Grade 0 accidental hemorrhage) were also included in this study. Study was conducted among all the cases registered with above said criteria.⁴

Inclusion Criteria

All consenting pregnant women presented with clinical diagnosis of abruption placenta with gestational age more than 28 weeks.

Exclusion Criteria

1. Gestational age <28 weeks
2. Not consenting
3. A detailed history of the patient was taken regarding age, address, occupation, socio economic status, months of amenorrhea, fetal movements perceived, any history of trauma, history suggestive of hypertensive disorders, previous medical disorders and outcome of previous pregnancy.

A detailed obstetric history was taken. After that, thorough clinical examination & ultra sound was performed for confirmation of clinical diagnosis.

Patient were managed according to "standard department protocol" as given below:

- Rapid initial assessment and monitor vitals
- Resuscitate if necessary and start iv fluids
- Ask for pain, check for uterine contour/ tenderness
- Per speculum examination
- Arrange and transfuse blood if needed, correct coagulopathy if present with blood components
- Confirmation of diagnosis by USG
- If heavy vaginal bleeding and vaginal delivery not possible or fetal distress then take for emergency LSCS
- Bleeding per vagina, mild or moderate in amount with normal fetal heart rate or dead fetus, then do arm and start oxytocin infusion.
- Monitor progress of labor.

- Monitor for symptoms and signs of hemorrhage, shock, coagulopathy and renal failure and further management according to that.

Maternal outcome will be noted in terms of mode of delivery like vaginal delivery or LSCS, maternal condition after delivery and obstetric complications such as obstetric hemorrhage, anemia, hypertension, bleeding disorders, DIC, jaundice, ARF or maternal mortality if any were noted.

Results

Table 1 shows the incidence of abruptio placenta in different age groups. When the age was analyzed based on subgroups displayed, the highest incidence in my study was found among 20-30 years accounting for 86%. Meanwhile the incidence below 20 years was 4% and that above 35 years was 6%. The youngest age at which abruptio was found in this series was 18 years and highest was 37 years.

Table 1: Age distribution among cases of abruptio placenta.

Sr. No.	Age	No. of patients (50)	Percentage
1	<20 years	2	4
2	20-30 years	43	86
3	30-34 years	2	4
4	>=35 years	3	6

Table 2 shows parity distribution among abruptio placenta cases. The incidence of abruptio was highest among para 2 to para 4 comprising of 70%. The incidence of abruptio

among primigravida was 20% and the incidence among women with grand multipara was 10%. It was seen that a two thirds of the cases of abruptio occurred in the multiparous patients.

Table 2: Distribution of cases based on parity of patient.

Sr. No.	Parity	No. of patients (50)	Percentage
1	Primipara	10	20
2	Multipara (2-4)	35	70
3	Grand multipara (>=5)	5	10

In my study, (Table 3) shows incidences of abruptio placenta were higher among low socioeconomically status. Majority of patients in my study belongs to lower and upper lower class. This

suggests that complications related to pregnancy were higher in lower socioeconomic status in my study.

Table 3: Distribution according to socioeconomic status of patient.

Socioeconomic Status	No of patients (50)	Percentage
Lower	21	42
Upper Lower	14	28
Lower Middle	10	20
Upper Middle	3	6
Upper	2	4

Table 4 shows; the number of abruptio cases is higher among the un booked cases accounting for

60% while the booked cases are accounting for 40% of the cases.

Table 4: Distribution of Booked and Unbooked cases.

Booked status	No of patients (n = 50)	Percentage
Booked	20	40
Un Booked	30	60

Table 5 shows various signs and symptoms of presentation of abruption either that occurs in single or in combination. In my study as shown the most common symptoms were vaginal bleeding and pain in abdomen which was seen in 78% and

78% cases respectively. 20% patients presented with shock which was diagnosed by tachycardia and hypotension. 52% patients had moderate to severe anemia indicated by pallor and blood investigations.

Table 5: Distribution of cases based on signs and symptoms.

Sr. No.	Presenting signs and symptoms	No. of patient (50)	Percentage
1	Abdominal pain	39	78
2	Vaginal Bleeding	39	78
3	Loss or decreased Foetal movements	20	40
4	IUFD	20	40
5	Shock	10	20
6	Anaemia	26	52

In my study, (Table 6) shows association with etiological factors in abruptio placentae. Hypertensive disorders of pregnancy 42 patients out of 50. 1 case of abruption occur due to polyhydramnios, 1 case

due to multiple pregnancy and there was 1 case of noncatastrophic blunt abdominal trauma resulting in abruption. Mode of trauma was fall from height, 5 patients cause not known.

Table 6: Distribution of cases based on etiological factors.

Sr. No.	Etiological factors	No. of women	Percentage
1	Hypertensive disorders	42	84
2	Polyhydramnios	01	2
4	Multiple pregnancy	01	2
5	Abdominal trauma	01	2
6	Unknown	5	10

Table 7 shows the maternal complication that includes postpartum hemorrhage in 16%, coagulation failure in 16%, shock in 12%, acute renal failure 8%, maternal mortality in 4% patients. There was 12 patients admitted in obstetrics ICU,

out of which 10 patients admitted for observation and 2 patients kept on ventilatory support. Both of which died due to postpartum hemorrhage with irreversible shock with coagulation failure.

Table 7: Incidence of maternal complication in Abruptio placentae.

Sr. No.	Maternal complication	No. of patients	Incidence
1	PPH	08	16
2	Coagulation failure	08	16
3	Shock	06	12
4	Acute Renal failure	04	8
5	Maternal death	02	4

Discussion

In this study highest incidence was found among the maternal age of 20-30 years (86%). The lowest age found was 17 years and the highest was 40 year.

The majority of cases were multipara (70%), they formed the largest group of women who had abruption in our study. When the incidence was calculated taking into account the number of all women who delivered in respective groups, highest

incidence was found among para 4 and above which was higher than overall incidence of abruption. the majority of the patients in my study were in lower class (48%) and upper lower class (28%). In the present study, 60% of them were un-booked cases probably because of low socio economic condition. Among etiological factors, most common factor found in my study was hypertension which was present in 84%. The less common causes include trauma, polyhydramnios and multiple pregnancy. Among maternal complications, postpartum hemorrhage and coagulation failure, were most common, present in 16% of patients. 12% patients having a shock and 8% patients having a acute renal failure. Most of the patients recovered after proper medical intervention. There were 2 maternal mortality in my study (4%), both of them occurred due to hemorrhagic shock with coagulation failure.

Conclusion

As accidental hemorrhage can also be diagnosed retrospectively, cases with retro placental clots/

depression (Grade 0 accidental hemorrhage) were also included in this study. Study was conducted among all the cases registered with above said criteria either prospectively or retrospectively.

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References

1. Williams obstetrics 25th edition, 755–802.
2. Cunningham FG, Leveno KJ, Bloom SL, Hauth JC, Gilstrap III LC, Wenstrom.
3. KD. Williams Obstetrics.23rd ed. USA: Mc Graw Hill Publishers 2010;761–769.
4. Feeney JK: Accidental hemorrhage. Irish J Med Science 1926;30(5):195–2149.