

## Association of Risk Factors with Maternal Outcomes In Abruptio Placenta at Tertiary Care Hospital

Dr. Disha Jain<sup>1</sup>, Dr. Pradeep Patil<sup>2</sup>, Dr. V. V. Choudhary<sup>3</sup>

<sup>1</sup>Resident, <sup>2</sup>Associate Professor, <sup>3</sup>Professor, Department of OBGY, MMPPCT's Ashwini Rural Medical College, Hospital & Research Center, Kumbhari, Solapur-413006, Maharashtra, India

### Abstract:

**Introduction:** Abruptio placenta is a serious condition that increases maternal and neonatal morbidity and mortality. The incidence of abruptio placenta is between 0.49% -1.8%. Primary cause of abruptio is not known but the main precipitating and predisposing factors of abruptio are age, parity, anemia, poor nutrition, pregnancy induced hypertension, eclampsia, gestational diabetes mellitus, preterm premature rupture of membrane, and previous medical termination of pregnancy. **Methodology:** It is a retrospective observational study done by analyzing the case sheets of abruptio placenta in tertiary care hospital from January 2020 to December 2020. All those patients of antepartum hemorrhage presenting directly as typical cases of abruptio placenta were included. Also, those cases in which placenta previa and other causes were ruled out after clinical, per speculum examination and/or USG examination were ruled out. **Result:** The total number of abruptio placenta collected during this period was 21. We found 38% patients with chronic hypertension, 33 % of patients with severe preeclampsia, 14% with eclampsia, 15% were normotensive. Advanced maternal age and multiparity were also the risk factors of abruptio placenta. **Conclusion:** Antenatal care which identifies the risk factors like PIH plays an important role in decreasing the incidence of abruptio placenta. Early detection and active management will reduce morbidity.

**Keywords:** Abruptio placenta, Antepartum hemorrhage, Maternal outcome

### Introduction:

The association between risk of maternal and new born death and abruptio placentae is significant.[1] In 0.49 percent to 1.8 percent of all pregnancies, placental abruptio occurs.[2] Between the 20<sup>th</sup> and the final week of pregnancy, abruptio placentae refers to the early separation of a correctly inserted placenta.[3] Age, parity, anaemia, poor nutrition, pregnancy-induced hypertension, eclampsia, gestational diabetes mellitus, early rupture of membranes, and previous medical termination of pregnancy are the key precipitating and predisposing factors of abruptio.[4] Maternal hypertension being the most common precipitating and predisposing variable.[5] An increase in disorder is being directly

related to an increase in the incidence of disorder-related risk factors. Placental abruptio is the outcome of rupture of uterine spiral artery. Once you bleed into the decidua, the placenta separates. The formation of a haematoma jeopardises the foetus' blood supply even more.

### Methodology:

- Study Area: ARMCH & RC, Kumbhari, Solapur.
- Duration of Study: Jan 2020 to Dec 2020
- Type of study: Retrospective observational study.
- Following Parameters were studied:
  1. Age wise distribution (Table 1)
  2. Parity wise distribution (Chart 1)
  3. Maternal complications (Table 2)
  4. Maternal risk factor

**Corresponding Author:** Dr. V. V. Choudhary

**Email ID:** vrundachoudhary2207@gmail.com

**Address:** c/o Dr. Kothadia, Flat no. 8, Sudesha Vihar, Satrasta, Solapur-413001, Maharashtra, India

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**Inclusion criteria:**

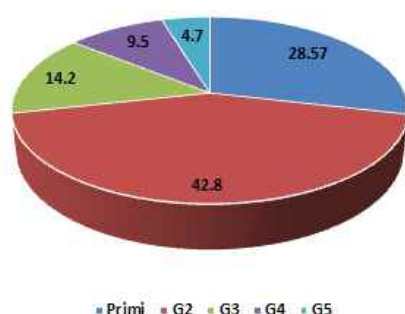
- All typical cases of abruption placenta were included.
- Also, those cases in which placenta previa and other causes were ruled out after clinical, per speculum and USG examination were also taken.

**Procedure:**

- The data was collected regarding patients' parameters like gestational age at presentation, parity, age of the patient, previous LSCS chronic HTN, anemia, GDM, h/o of recurrent abruption.
- Wherever possible, data from relevant lab tests and imaging investigations was documented.
- Patients cardiocotography and obstetric ultrasonography were studied.
- Our hospital has protocol of weighing retroplacental clots of noticing the nature of clots (fresh/old). This information was also recorded.
- Information on the manner of delivery, complications, and subsequent care, such as blood transfusions and ventilator management, was also documented.
- Various maternal problems such as PPH, DIC, ARF, shock, pulmonary edema etc. were taken into account.
- The indicators relevant to neonatal outcome were not included in this study.
- Once all the data was collected, and the findings were analyzed.

**Results:****Table 1: Age wise distribution of patients**

Sr. No.	Age Groups	Percentage (%)
1	<20 years	9.5%
2	20 to 25 years	19%
3	26 to 30 years	47.6%
4	>30 years	23.8%

**Chart 1: Parity wise distribution****Table 2: Maternal Complications**

Sr. No.	Complications	Percentage (%)
1	PPH	38%
2	DIC	9.5%
3	ARF	19%
4	Shock	9.5%
6	Others	23%

**Discussion:**

Placental abruption is one of the most life-threatening complications of pregnancy, since it has a negative impact on both the mother and the baby. The intensity of the bleeding and the degree of placental detachment determine the signs and symptoms of abruption.

The prevalence of pre-eclampsia and chronic hypertension was 38 percent, which is similar to the 42 percent reported by Sibai et al.[6]

Women who have had a prior caesarean procedure have a higher risk of placental abruption. This is consistent with earlier results by Nayama et al, who found that the rate was 19 percent in their research and 14.2 percent in ours.[7]

The likelihood of abruption was raised by chronic hypertension. It was 9% in our sample, which agrees with Zetterstorm and colleagues' estimate of a twofold rise.[8]

According to Cleary –Goldman et al., women over the age of 40 are 2.3 times more likely to have abruption. Our research found no link between abruption and maternal age.

The most prevalent consequence was postpartum haemorrhage, which was followed by acute renal failure, DIC, and shock.

Prenatal checkups, prompt referrals, timely caesarean sections, anaemia correction, and generous blood and blood component transfusions are all recommended. Low perinatal and maternal morbidity and death can be reduced with a strong neonatal intensive care unit.

**Conclusion:**

- Severe pre-eclampsia, persistent hypertension, eclampsia, and multiple pregnancies are all risk factors for abruption placenta.
- Antenatal care, which detects risk factors such as PIH, is critical in lowering the rate of abruption placenta.

- It is critical to diagnose and treat abruptio placenta as soon as possible in order to prevent maternal morbidity.
- Early identification and active care can help to decrease morbidity.
- For a better maternal and foetal outcome, obstetricians, intensivists, and neonatologists must work together.

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