A Study to assess and compare patients characteristics and maternal and perinatal outcome in pregnancy complicated by APH due to placenta praevia and placenta abruption at teaching hospital, Bikaner, Rajasthan

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Abstract
Background: Placenta praevia and Abruptio placenta are the two major causes of antepartum haemorrhage worldwide and in India as well. They contribute significantly to obstetric haemorrhage, which is a leading cause of maternal mortality in India.

Methods: The material for this study comprises of 200 cases of antepartum haemorrhage admitted in PBM Hospital, Bikaner from Dec.2015 to Nov.2016. Out of 200 cases of APH 100 cases were of placenta praevia and 90 were of abruptio placenta.

Results: Maximum case of placenta praevia and abruption placenta in <20 Yrs age group. Maximum case of placenta praevia in multipara. 38.18% case of placenta praevia delivered by LSCS.

Conclusion: Antepartum haemorrhage is a major cause of maternal and perinatal morbidity and mortality which could be prevented by early registration, regular antenatal care, early detection of high risk cases, and early referral to higher centre.

Keywords: Antepartum haemorrhage, abruption placentae, placenta praevia, post partum haemorrhage.

Introduction
Placenta praevia and Abruptio placenta are the two major causes of antepartum haemorrhage worldwide and in India as well. They contribute significantly to obstetric haemorrhage, which is a leading cause of maternal mortality in India. Placenta praevia which is an implantation of the placenta in the lower uterine segment below the presenting part covering or lying very close to internal os has an incidence of 1 in 200 pregnancies. Risk factors associated with it are grandmultiparity, advancing maternal age, multiparity, multiple pregnancies, history of previous placenta praevia, previous uterine curettage, prior uterine scar, smoking and use of cocaine. Abruptio placenta which is the premature separation of a normally implanted placenta from the uterine wall prior to delivery has an incidence of 1 in 120 pregnancies. Associated risk factors are hypertension in pregnancy, rapid decompression of an over distended uterus, trauma, increasing parity and maternal age, history of abruptio placenta, smoking and cocaine use.
Placenta praevia and abruptio placenta account for one fourth of all perinatal mortalities and have been associated with prematurity as well as fetal growth restriction. They have also been associated with maternal mortalities and morbidities like hypovolaemic shock, disseminated intravascular coagulation, ischaemic damage of distant organs like the pituitary and kidneys and couvalaire uterus.

Material and Methods
The material for this study comprises of 200 cases of antepartum haemorrhage admitted in PBM Hospital, Bikaner from Dec.2015 to Nov.2016. Out of 200 cases of APH 100 cases were of placenta praevia and 90 were of abruptio placenta. After taking an informed consent, patient were kept under surveillance until delivery and the consequences of pregnancy were evaluated by close observation and follow up.

Inclusion Criteria
- Patients with bleeding per vagina after 28 weeks of gestation and above till the end of second stage of labour.
- APH due to placenta praevia or abruptio placenta.

Exclusion criteria
- Gestational age less than 28 weeks.
- Bleeding other than placenta praevia or abruptio placenta.

Results

Table no.1. Age distribution.

| Age group (Yrs) | Placenta praevia | Abruptio placenta |
|----------------|------------------|-------------------|
|                | No | %   | No | %   |
| <20            | 50 | 45.45 | 59 | 65.55 |
| 21-25          | 43 | 39   | 22 | 24.22 |
| 26-30          | 12 | 10.90 | 5  | 5.55  |
| 31-35          | 5  | 4.54  | 4  | 4.44  |
| Total          | 110| 100  | 90 | 100   |
| Mean age       | 26.65 |     | 25.23 |     |
| SD             | 4.46  |     | 4.65  |     |

Table no.2. Gravida wise distribution of cases.

| Gravida | Placenta praevia | Abruptio placenta |
|---------|------------------|-------------------|
|         | No   | %   | No   | %   |
| 1       | 18   | 16.36 | 33   | 36.67 |
| 2-4     | 72   | 65.45 | 49   | 54.44 |
| >4      | 20   | 18.18 | 8    | 8.89  |
| Total   | 110  | 100  | 90   | 100   |

Table no.3. Risk factor wise distribution of cases

| Various risk factor            | Placenta praevia | Abruptio placenta | P-value |
|--------------------------------|------------------|-------------------|---------|
| Previous caesarean section     | 30   | 27.27 | 5      | 5.55    | .001    |
| History of evcution            | 19   | 17.27 | 6      | 6.66    | .074    |
| History of trauma              | 0    | 0     | 4      | 4.44    | .093    |
| Hypertension in present pregnancy | 5   | 4.5   | 40     | 44.44   | .0001   |

Table .4. Maternal complication

| Maternal complication          | Placenta praevia | Abruptio placenta | P-value |
|--------------------------------|------------------|-------------------|---------|
| Malpresentation                | 6    | 5.45   | 5      | 5.55    | .652    |
| LSCS                           | 42   | 38.18  | 40     | 44.44   | .70     |
| Blood transfusion              | 64   | 58.18  | 36     | 40.00   | .135    |
| PPH                            | 28   | 25.45  | 26     | 28.89   | .796    |
| Hypovolemic shock              | 18   | 16.36  | 18     | 20      | .709    |
| ICU                            | 3    | 2.72   | 13     | 14.44   | .011    |
| HELLP Syndrome                 | 0    | 0      | 3      | 3.33    | .189    |
| DIC                            | 1    | 0.90   | 6      | 6.66    | .828    |
| Death                          | 2    | 1.81   | 1      | 1.11    | .856    |

Table .5 Perinatal outcome

| Perinatal outcome          | Placenta praevia | Abruptio placenta |
|----------------------------|------------------|-------------------|
| Healthy                    | 74   | 67.27  | 47     | 52.22  |
| Neonatal death             | 17   | 15.45  | 17     | 18.88  |
| IUD                        | 9    | 8.18   | 14     | 15.15  |
| SB(still born)             | 10   | 9.09   | 12     | 13.13  |
| P-value = 0.196            |      |        |        |        |

Discussion
In the day to day practice, an obstetrician has to tackle life threatening condition of APH and take a timely judicious decision of terminating pregnancy, keeping in mind the welfare of both the mother and the fetus without exposing either of them to undue risk.

Maximum cases of placenta praevia and abruptio placenta were in age <20 yrs. Which is similar to Pedowitz et al and Das et al studies.
Incidence of APH in multigravida were more common than primigravida in our study. Cotton et al\textsuperscript{7} high incidence in multipara. In our study 38.8% cases of placenta praevia were delivered by C. section. All obstetricians agree that early and timely caesarean section improve perinatal salvage in patients with abruption placentae\textsuperscript{8}.

In present study the incidence of PPH is 25.45% in placenta praevia which is correlated with the study conducted by Cotton et al\textsuperscript{7}. Maternal mortality due to placenta previa is 1.81% and due to abruption is 1.00%. Similar to study done by Pedowitz et al\textsuperscript{5}

**Conclusion**

Antepartum haemorrhage is a major cause of maternal and perinatal morbidity and mortality which could be prevented by early registration, regular antenatal care, early detection of high risk cases, and early referral to higher centre. Good facilities for caesarean section, availability of blood banks. Use of contraceptives can improve maternal and perinatal outcome of APH.

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