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Original Research Paper

Gynaecology

MATERNAL & FETAL OUTCOME OF ABRUPTIO PLACENTA

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ABSTRACT

Objectives: To determine the fetal-maternal outcomes and Risk Factor Distribution in cases of Abruptio Placentae.
Design: A descriptive cross-sectional hospital-based study
Methods: 50 pregnant women who presented with clinical features of AP were included.
Results: The mean age in the study population was 26.2 years. 34(68%) were unregistered. 9 women (18%) had bad obstetric history. Incidence of AP was higher in anemic women 41 (82%) and multi-parous 36 (72%). PIH was associated in 33 (66%) and use of tobacco was in 6 cases (12%).C-section was the commonest mode of delivery 26(52%). Most of the women (98%) survived and there were only one maternal deaths. Anemia (86%) PPH (4%), DIC (4%) shock (2%) & renal failures (2%) were the common complications seen. There were 26 in utero-death (52%).
Conclusion: Improved attendance to antenatal care and timely management of risk factors may reduce the risk of abruptio placentae and associated adverse feto-maternal outcomes. Better equipped obstetric and neonatal units to improve both maternal and perinatal outcomes are warranted.

KEYWORDS : Abruptio Placenta, Anemia, Fetal-maternal Outcomes

Introduction

The placenta is an organ that connects the developing fetus to the uterine wall. Uterine contractions at the time of birth cause the separation of the placenta (1,2).

Placental abruption is classically defined as complete or partial premature separation of a normally situated placenta from the uterine wall before delivery (3). It is one of the causes of antepartum hemorrhage (4). Obstetric hemorrhage remains one of the major causes of maternal death in developing countries (5) Both the words placenta for cake in reference to its round, flat appearance in humans & abruption from Abruptionem meaning "a breaking off" have been taken from latin, in Latin abruptio placentae means "riding as under of the placenta" (6).Abruptio placentae is an important cause of vaginal bleeding in the latter half of pregnancy, the incidence of abruption peaks at 24 to 26 weeks of gestation (7). Abruptio placenta has a heterogeneous pathophysiology and cannot reliably be predicted, however it occurs in 0.5 – 1.0% of all pregnancies (8-11) and 1.2% in twin pregnancies worldwide (12). Despite heightened awareness of placental abruption, it still remains largely unpredictable and therefore also unpreventable, however multiple risk factors have been identified & one or more may be present at a time (13). Although several risk factors are known, the etiopathogenesis of placental abruption remains speculative and unexplained. (14). Placental abruption has also been associated with preterm labor (15). A number of clinical and epidemiological studies have identified predisposing risk factors for placental abruption. Maternal thrombophilia's have been associated with placental abruption in a systematic review of seven studies (16). The common signs and symptoms of abruption are vaginal bleeding, uterine and abdominal pain and tenderness, abnormal uterine contractions, premature labour, maternal hemodynamic instability, fetal distress and fetal death (17, 18).

Methodology

The study was carried out in 50 Cases. All pregnant women of 28 weeks or more as per LMP with bleeding p/v and diagnosed as Placentae Previa were included. Cases with Genital Tract Trauma or Lesion of Genital tract were excluded. The triad of sudden onset of abdominal pain, bleeding P/V and tense and tender uterus constituted the clinical diagnostic criteria. Diagnosis was confirmed on the presence of retro placental clot, which was used to estimate the amount of bleeding and severity of abruption.

Results

The mean age in our study population was 26.2 years with 86% cases in 20-30 years age group. Three patients (6%) had history of AP in the past and another 3 (6%) had past history of PIH. Only one patient was a known diabetic for last five years. Six patients (12%) reported consuming tobacco, 4 in chewable form and another 2 with smoking habit.

38 mothers presented with less than 37 weeks gestation. Pain (80%) and bleeding (78%) were the commonest symptom in the patients with APH.33 (66%) cases had hypertension and 20 (40%) cases had clinical features of eclampsia. Anemia was the most important clinical finding in 86%. (Table-1). 27mothers (54%) were given blood transfusion.

Table 1-Maternal morbidity

	N = 50	%
PPH	2	4%
ARF	1	2%
DIC	2	4%
Anemia	43	86%
Hypovolemic Shock	1	2%
Blood Transfusion	27	54%

Caesarian was performed in 26 cases (52%). One patient had to undergo laparotomy due to ruptured uterus. With prompt management all but one mother survived (98%). The woman who died had multiorgan failure including renal failure, DIC, Shock and deranged liver function tests.

64% newborn were low birth weight (<2.5 kg). 26 babies (52%) had intrauterine death. Amongst live births prematurity was the commonest morbidity (54.2%). 6 of the live births died in the first week. 4 of the 6 neonatal deaths had weight less than 1000gm and only one had weight above 2000 gm.

Table2: Fetal Outcome in Cases of Abruptio Placentae:-

Outcome	No of Patients	Percentage
IUD	26	52.0
Preterm	25	96.2
Term	1	3.8
Alive at Birth	24	48
Birth asphyxia	2	8.4

Neonatal death	7	29.2
Preterm	13	54.2
Term	11	45.8
Perinatal Death	33	66

A total of 33 perinatal deaths were observed. Various risk factors for perinatal deaths were analyzed and weight below 1500gms, gestation less than 32 weeks and retroplacental clot more than 500 ml were the most significant predictors whereas maternal age and sex of the baby were not significant predictors.

Discussion

In our study majority of cases (86%) were in the age group 20-30 years, which is in contrast to the majority of the studies in the West which proved an association between higher maternal age (>35 years). (19,20). Placental abruption is prevalent in younger obstetric population in India.

Most of the women were multiparous (72%) as also reported in other Indian studies (21, 22). Similarly majority of patients were anaemic (86%) like other studies (22). This high frequency of anaemia could be due to predisposing nutritional deficiency and then superimposed by abruption. Tobacco use was 12% in our study whereas another study from India showed 63% association (23). In our study we saw an association between diabetes and abruption in mere 2% patient. Other maternal complications in our study were PPH (4%), DIC (4%), shock(2%) and Renal failure (2%). The observed maternal death rate 2% related to abruptio placentae in our study is above the maximum acceptable rate of 1% signifying need for strengthening intensive care in our and similar facilities.

In our study 64% women with pregnancies complicated by abruptio placentae delivered an infant with low birth weight. When compared to other Indian studies LBW was reported to be 56.6% and 55.6% in studies from Mumbai and Kerala respectively (20,22). The high risk of low birth weight delivery among women with abruption placentae may be explained by the effect of preterm birth due to premature termination of pregnancy performed by clinicians due to severity of abruptio placentae or effect of intrauterine fetal growth retardation. Fetal mortality seems to be due to abruption itself, its risk factors as well as the prematurity. This high perinatal mortality(66%) is comparable with other studies.

Perinatal mortality and morbidity can be reduced by identification of risk factors, good antenatal care, improved nutrition, careful vigilance of risk cases and timely decisions.

Conclusion

Our results provide clinicians with important information to consider when counselling women during prenatal care about the risk factors for abruptio placentae, early identification of women at risk of abruptio placentae and develop individual follow up plan with specific intervention. Improved attendance to antenatal care and timely management of these factors may reduce the risk of abruptio placentae and associated adverse feto-maternal outcomes. Furthermore, better equipped obstetric and neonatal units to improve both maternal and perinatal outcomes in this setting are warranted.

Predictors of adverse fetal maternal outcomes should closely be monitored with prompt delivery as well as having adequate maternal-neonatal intensive care facilities so as to improve chance of survival and reduce hospital stay. Further research is required to determine the reasons of excess males in pregnancies complicated by placental abruptio and long-term follow-up study would be useful in future studies.

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