Fetomaternal Outcome in Pregnancies Complicated with Placental Abruption

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ABSTRACT

It was an observational study on "Fetomaternal outcome in pregnancies complicated with abruptio placentae". The objective was to identify the risk factors associated with abruption and to assess the impact of abruption on fetomaternal outcome. The study period was two years with effect from 01-11-2007 to 01-11-2009. It was conducted in Unit 111, Lady Willingdon hospital Lahore. A proforma was devised to collect data 100 patients of abruptio placentae presented in our study period. Fifty percent had pregnancy induced hypertension, twenty eight percent had anaemia, seven percent had polyhydramnios, ten percent had multiple pregnancy and five percent of the patients were smokers. 70 percent patients needed immediate invention. Prevalence of abruptio placentae was found to be 1.1percent. Perinatal mortality was 500/1000. 35 percent of live babies delivered with poor Apgar score. 8 percent of the fetuses had anaemia, 12 percent had neonatal jaundice, and 15 percent had respiratory distress syndrome.40 percent of the patients were delivered by caesarean section. 5 percent had caesarean hysterectomy. 10 percent had coagulopathy and 25 percent had postpartum haemorrhage. 35 percent were found to be anaemic on 3rd post partum day. There were five maternal deaths. It was discussed that abruptio placentae is a high risk situation. Majority of the predisposing risk factors are preventable. The outcome can be improved by reducing its incidence, patient education and by better obstetric care. It was concluded that abruptio placentae is associated with high morbidity and mortality. The risk factors associated with abruption are preventable.
Key words: abruptio placentae, abruption, fetomaternal outcome, maternal, perinatal, morbidity,

INTRODUCTION

An Abruptio placentae (placental abruption) is a condition in which there is premature separation of a normally situated placenta after 24 completed weeks of gestation[1]. It is one of the most common causes of antepatrum haemmorhage and causes 15 percent of the perinatal mortality[2]. The haemorrhage may be concealed or revealed. The concealed type is more hazardous. Abruption may be categorized as mild, moderate and severe depending upon the degree of placental separation and amount of haemorrhage. Advanced maternal age, high parity, smoking[3], hypertension and multiple pregnancies are common predisposing factors. Other risk factors are sudden decompression of the uterus, direct trauma, fibroids, uterine anomalies and placental abnormalities[4,5]. Abruption is diagnosed generally by clinical evaluation and ultrasound scan. Findings are further confirmed at delivery by direct visualization of the retro placental clots[2].

Purpose of our study was to reduce the maternal and perinatal morbidity & mortality related to abruptio placentae. It was anticipated that the results of this study will help us in the understanding of this serious obstetric problem and will enable us in making better management plans. Knowledge of the predisposing risk factors will enable us to eliminate or at least control them.

AIMS AND OBJECTIVES

1. To identify the preventable risk factors associated with abruptio placentae to enable us to reduce the morbidity and mortality.
2. To assess maternal morbidity and mortality related to abruptio placentae
3. To assess perinatal morbidity and mortality related to abruptio placentae

MATERIAL AND METHODS

It was an *observational study* conducted in Unit 111, Lady Willingdon Hospital Lahore. The *study period* was two years with effect from 01-11-2007 to 01-11-2009. One hundred patients of abruptio placentae presented in our study period. Patients with a confirmed diagnosis of placental abruption were included where as patients with other causes of antepartum haemmorhage were excluded from the study. Abruption was categorized as mild, moderate and severe depending upon the degree of placental separation and amount of haemmorhage.

Patient's age, parity, gestational age, presenting complaints and obstetric history were noted. Predisposing factors to be noted were hypertension, multiple pregnancy, polyhydramnios, smoking, anaemia, sudden decompression of uterus, direct trauma, fibroids and anomalies of uterus and placenta.

Two direct questions were asked from every patient of abruptio placentae: Did you know that bleeding in pregnancy has serious consequences? Did you know the benefits of early antenatal booking? The purpose of these questions was to judge the level of public awareness about consequences of antepartum haemmorhage and their understanding about early antenatal booking as the most important preventive measure.

Blood group, Rh factor, haemoglobin levels, liver and renal function tests, coagulation profile and obstetric ultrasound scan were considered to be the mandatory investigations for all these patients.

In order to assess fetal outcome, number of intra uterine deaths, neonatal deaths and poor apgar scores were recorded. Neonatal problems like jaundice, fetal anaemia, respiratory problems and need for admission in nursery were the important variables.

Maternal morbidity was assessed by urgent need to intervene by induction of labour or by caesarean section. Other variables were anaemia and need for blood transfusions, coagulopathy, renal shutdown and postpartum haemorrhage. Caesarean hysterectomy was taken as a serious morbidity. Maternal deaths were noted.

A comprehensive proforma was devised to record patient's profile, clinical details, results of investigations, management details and postnatal follow up of both the mother and the baby. Predisposing risk factors in each patient were recorded. Fetomaternal outcome in terms of morbidity and mortality was recorded Results were compiled from this data and were analyzed through SPSS 16. As there is no group comparison among the groups, so no significance test is applicable.

RESULTS

One hundred patients had abruption out of 9091 deliveries in the study period. Maternal age ranged between 16-42 years. Gravidity ranged from primigravida to gravida 10. Fifty percent patients were in the age of 30-40 years. Fifty percent patients were gravida five to seven. Sixty four percent patients had a gestational age over 37 weeks and only fifteen percent patients had a gestational age of less than 32 weeks at admission.

Only 15 percent patients had awareness about seriousness of antepartum haemmorhage and abruption. Only 10 percent patients were aware that early antenatal booking is an important preventive measure for an overall good obstetric outcome.

The most common presenting complaints were vaginal bleeding and abdominal pain. Fifteen percent patients gave history of abruption in previous pregnancies. Forty percent patients were in established labour and thirty percent were in a state of haemmorhagic shock at the time of admission.

Thirty percent patients were booked whereas seventy percent were unbooked. Thirty percent were managed conservatively whereas seventy percent needed immediate invention. Prevalence of abruptio placentae was found to be 1.1percent. Regarding predisposing factors, Fifty percent had pregnancy induced hypertension, twenty eight percent had anaemia, seven percent had polyhydramnios, ten percent had multiple pregnancy and five percent of the patients were smokers.

20 percent patients had severe abruption, 50 percent had moderate abruption whereas 30 percent had mild abruption. 60% had revealed haemorrhage, 10% had concealed whereas 30% patients had mixed haemorrhage.

Perinatal mortality was 500/1000. Regarding neonatal morbidity, eight percent of fetuses had anaemia, twelve percent had neonatal jaundice, and fifteen percent had respiratory distress syndrome. Overall thirty percent of live babies delivered with poor Apgar score. There were fifteen neonatal deaths and thirty five patients had intrauterine fetal death.

Predisposing factors associated with abruption placentae

Predisposing factors	frequency of patients	%age
Hypertension	50	50
Anaemia	28	28
Multiple pregnancy	10	10
Poly hydramnios	7	7
Smoking	5	5
Total	100	100

Standard deviation = 1.15378

Neonatal Morbidity

Morbidity	Frequency of neonates	%age
anaemia	8	8
jaundice	12	12
Respiratory problems	15	15
Need for ventilator	15	15
Oxygen dependant for more than 48 hours	20	20
Poor Apgar score	30	30
Total	100	100

Standard deviation = 1.65789

Fetal Outcome

Total no of babies delivered	100
No of babies delivered alive	50
No of dead born babies	35
No of early neonatal deaths	15

Perinatal mortality rate

	Alive babies	IUDs	Early neonatal deaths	Total
Frequency	50	35	15	100
Percentage	50%	35%	15%	100

Perinatal loss is 50%. Standard deviation = 0.72995

Maternal Morbidity

Morbidity	Frequency of mothers	%age
Postpartum anaemia (in addition to intra operative transfusions)	35	35
Postpartum haemorrhage	25	25
Puerperal pyrexia	12	12
Transfusion reactions	10	10
Coagulation disorders	10	10
Caesarean hysterectomy	5	5
Acute renal failure	3	3
Total	100	100

Standard deviation = 1.72199

Maternal morbidity was quiet high as well. Forty percent of the patients were delivered by caesarean section and the most common indication for this was fetal distress Five percent had caesarean hysterectomy. Ten percent had coagulopathy and twenty five percent had postpartum haemorrhage. Thirty five percent were found to be anaemic on 3rd post partum day. There were five maternal deaths, one due to renal failure and four due to disseminated intravascular coagulation.

DISCUSSION

According to the international literature, the prevalence of abruption varies from 1-2%[6] whereas in our study it turned out to be 1.1 percent. Although this is in accordance with the international literature, there is a need to reduce it. Fifty percent of the patients with abruptio placentae were in the age range of 30-40 years and those patients had a high parity as well. (Fifty percent patients were gravida five to seven) The affect of age and parity as seen in our study is in according with the national and international literature[4,5].. This means that an effective patient education program coupled with good family planning services can help in decreasing the incidence of abruption in our community.

Fifteen percent patients gave history of abruption in previous pregnancies. It means that our study showed a recurrence rate of 15 percent which is in accordance with international literature[6]. It means that abruptio placenta is a high risk situation with a very high recurrence rate.

Regarding predisposing factors, Fifty percent had pregnancy induced hypertension, twenty eight percent had anaemia, seven percent had polyhydramnios, ten percent had multiple pregnancy and five percent of the patients were smokers. *All of these predisposing risk factors are preventable* or at least controllable with better antenatal care. Patients should be helped in cessation of smoking and anaemia should be corrected while they are not pregnant or not later than 2nd trimester of pregnancy. An early antenatal booking can help in better management of pregnancy induced hypertension, polyhydramnios and multiple pregnancies. In this way, a serious obstetric condition can be reduced to minimum if not eliminated. Or should it still stay unpreventable?[7].

Perinatal mortality was 500/1000. (35 intrauterine deaths and 15 early neonatal deaths out of 100 cases).Most common neonatal morbidities were neonatal jaundice, anaemia, and respiratory distress syndrome. Overall thirty percent of live babies delivered with poor Apgar score. This shows a very poor fetal outcome, which however is consistent with literature[8].

Maternal morbidity was quiet high as well. Forty percent of the patients were delivered by caesarean section. Five percent had caesarean hysterectomy. Ten percent had coagulopathy and twenty five percent had postpartum haemorrhage. Thirty five percent were found to be anaemic on 3rd post partum day. There were five maternal deaths.

The question arises how we can decrease this high morbidity and mortality related to placental abruption?

This can be decreased by a public awareness program along with better obstetric care[9]. Patients have to be educated to limit size of their families by using family planning methods and they should complete their families before the age of thirty years. Patients have to be educated for early antenatal booking. In this way the prevalence of abruption can be reduced. With early booking, risk factors can be treated and controlled. We will have to improve and integrate obstetric care to avoid delay in referrals to tertiary care level hospitals[10]. Blood transfusion services have to be improved to save maternal lives. There is an urgent need to improve and expand neonatal care. These has to be made at community level if we wish to achieve results at national level.

CONCLUSION

It was concluded that abruptio placentae is associated with high morbidity and mortality both for the mother and the baby. Most of the risk factors associated with it are preventable. Late antenatal booking, lack of antenatal care, poor patient education, and delays in referral to tertiary care level hospital were important contributors to poor feto-maternal outcome. There is a need to concentrate on these issues at national level. This will help in decreasing the incidence of abruptio placentae and the morbidity and mortality associated with it.

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