

# Perinatal Outcome in Patients Presenting With Placental Abruption at Term

JAMSHID FEROZE, UZMA RASHID, MALIHA HAMEED

## ABSTRACT

**Objective:** To determine the perinatal outcome in patients presenting with placental abruption at term.

**Materials & methods:** Sixty patients of abruptio placentae presenting at term were selected. Patients underwent a complete obstetrical clinical workup including history, general physical examination, abdominal and pelvic examination. Relevant investigations such as laboratory tests and imaging were performed. Patients were managed according to maternal and fetal condition. Any maternal and/or fetal complications were noted and recorded

**Results:** The mean age of the patients was 35 years. 15% patients were nulliparous and 85% patients were multiparous, 20% patients had pregnancy induced hypertension, 8% patients were smokers, 32% patients had multiple gestation and 12% patients were diabetic. 72% patients had vaginal delivery and 28% patients had cesarean section. 93% patients presented with abdominal pain and 63% patients presented with vaginal bleeding. USD evidence of abruption was found in 68% patients. Fetal mortality was 70%. 37% babies born had asphyxia neonatorum..

**Conclusion:** Abruptio placentae is common in women with advancing age, high parity, hypertensive disorders of pregnancy and smoking and is associated with adverse fetal outcome.

**Key words:** Abruptio placentae, antepartum hemorrhage, placenta previa

---

## INTRODUCTION

Abruptio placentae remain a major cause of perinatal morbidity and mortality globally, though of most serious concern in the developing world. As most known causes of abruptio placentae are either preventable or treatable, an increased frequency of the condition remains a source of medical concern.

Placental abruption is the premature separation of normally situated placenta after 24 completed weeks of gestation and before delivery of fetus. It is a self extending process with accumulating blood clots leading to more separation of placenta. The severe form (resulting in fetal death) has an incidence of about 1 in 500-700 deliveries<sup>1</sup>. It may be concealed or revealed.

Placental abruption occurs in 0.5% of singleton gestation<sup>2</sup> and incidence increases with twins and multiple fetuses<sup>3</sup>. In a study in Pakistan in 2006, perinatal mortality due to placental abruption was 62.5%<sup>4</sup>. Placental abruption is associated with 8.9 fold adjusted relative risk of still birth. This is compounded by the fact that outcome of fetus is poor; not only the immediate survival but also 15.4% of live birth infants do not survive<sup>5</sup>.

Basic cause is unknown but placental abruption is strongly associated with high parity, pre-eclampsia

and hypertension<sup>4</sup>. Greater degree of placental abruption is associated with worsening fetal outcome.<sup>6</sup> Babies are nine times more likely to be born with lower centile of weight in case of placental abruption<sup>7</sup>. In a study in Thailand in 2006, perinatal morbidity as asphyxia neonatorum was 16.6% and low birth weight was found in 65% of live born infants<sup>8</sup>.

Placental abruption is the major cause of antepartum haemorrhage, which complicates 4% of all pregnancies and is considered to be an obstetrical emergency. Lahore General Hospital is a tertiary care referral centre situated at the entrance of Lahore and most of the patients referred here are neglected cases handled by untrained personnel. The results of this study will help in making the definitive assessment and management plan for pregnancy with abruptio placenta and to reduce risk of perinatal mortality and morbidity.

## MATERIALS AND METHODS

This was a descriptive case series study, carried out in the department of Obstetrics and Gynaecology, Lahore General Hospital/PGMI Lahore. It was conducted over a period of six months from November 2009 to April 2010. 60 patients of abruptio placentae presenting at term were enrolled in the study using non-probability purposive sampling. Placental abruption was diagnosed based

---

*Department of Obstetrics and Gynaecology, Lahore General Hospital/PGMI Lahore  
Correspondence to Dr. Jamshid Feroze*

upon a history of abdominal pain, vaginal bleeding and ultrasonographic evidence of placental abruption. Patients with unexplained antepartum haemorrhage or co-existent placenta previa on ultrasound examination were excluded from the study.

Demographic profiles like age, parity, were recorded. Patients were diagnosed from detailed history, clinical examination and relevant laboratory investigations and were managed according to standard protocol of the department. Mode of delivery was recorded. Perinatal outcome was measured in terms of perinatal mortality, asphyxia neonatorum and low birth weight.

The data was analyzed using SPSS version 10. Quantitative variables like age and parity were presented as mean. Qualitative variables like perinatal mortality, asphyxia neonatorum and low birth weight were presented as frequency and percentage.

## RESULTS

Sixty patients of placental abruption were selected for this study. The mean age of the patients was 35 years. There were 18(30%) patients of equal to or less than 30 years age, 27(45%) patients between 31 and 40 years of age, 12(20%) patients between 41 and 50 years of age and 3(5%) patients above 50 years of age. Among 60 patients, 9(15%) patients were nulliparous and 51 patients (85%) multiparous.

In the distribution of risk factors out of 60 patients, 12(20%) patients had pregnancy induced hypertension, 5(8%) patients were smokers, 19(32%) patients had multiple gestation and 7(12%) patients were diabetic. On the basis of mode of delivery, 43(72%) out of 60 patients had vaginal delivery and 17(28%) patients had cesarean section.

According to clinical presentation, 56(93%) patients presented with abdominal pain and 38(63%) patients presented with vaginal bleeding. USD evidence of abruption was found in 41(68%) patients where as abruption was missed by ultrasound in 19(32%) cases.

Out of 60 fetuses delivered, fetal mortality was 42(70%). 22(37%) of 60 babies born had asphyxia neonatorum and 46 (77%) had low birth weight.

Table 1: Distribution of patients by Mode of delivery (n=60).

Mode of delivery	n=	%age
Vaginal	43	72
Abdominal	17	28
Total	60	100

Table 2: Frequency of Fetal Mortality (n=60).

Fetal Mortality	n=	%age
Present	42	70
Not present	18	30
Total	60	100

Table 3: Frequency of asphyxia neonatorum (n=60).

Asphyxia Neonatorum	n=	%age
Present	22	37
Not present	38	63
Total	60	100

Table 4: Frequency of low birth weight (n=60).

Low Birth Weight	n=	%age
Present	46	77
Not present	14	13
Total	60	100

## DISCUSSION

Placental abruption is one of the serious obstetrical disorders occurring in 0.5% of singleton gestation and incidence increases with multiple gestation. However, the incidence seems to be much higher in our country as reported by a study conducted by Department of Obstetrics & Gynaecology, Liaquat University of Medical & Health Sciences, Jamshoro, Hyderabad (4.7%)<sup>9</sup>.

Major risk factors associated with placental abruption include cigarette smoking, high parity, maternal hypertension and advanced gestational age. Another important risk factor found to be associated with this moribund condition was multiparity, a reflection of poor family planning practices in Pakistan. Early marriages, lack of correct information and limited access to modern contraceptive methods, predisposes Pakistani women to give too early, too many and too frequent births<sup>10</sup>. Barriers like poverty, illiteracy and lack of empowerment for decision making, further limit their ability to plan their family. Strengthening of family planning services could yield better results.

Common clinical presentations of placental abruption include abdominal pain and vaginal bleeding. In more severe cases, placental abruption may manifest as disseminated intravascular coagulation (DIC) and shock due to concealed or revealed hemorrhage. Clinical diagnosis of placental abruption is strengthened by ultrasonographic findings in most cases. Ultrasound examination also serves to exclude placenta previa which may coexist with placental abruption. Management of the patient depends on patient's hemodynamic status, gestational age and status of the fetus and includes cesarean section in selected cases.

We studied 60 patients of placental abruption presenting at term and determined fetal outcome in these cases. In our study 51(85%) patients with placental abruption were multiparous. This figure is close to figure of 92% in a study conducted by Bibi S et al<sup>9</sup>.

In our study, pregnancy induced hypertension was found in 12(20%) patients which is more than when compared to study by Bibi S et al<sup>6</sup> but comparable to study conducted by Jabeen M et al<sup>11</sup>.

In our study 5 out of 60 patients (8%) were smokers, multiple gestations was found in 19(32%) patients and 7(12%) patients had diabetes mellitus. Vaginal delivery was the most common mode of delivery occurring in 43(72%) patients and cesarean section was performed in 17(28%) patients which is comparable to study conducted by Sarwar I, Abbasi AN, Islam A<sup>12</sup>.

In our study, vaginal bleeding was the most common presentation in 38(63%) of patients which is less than study conducted by Hossain et al<sup>13</sup>. As compared to the study by Nagina Fatima Liqat, Tabussum Shoaib, Samia Shuja<sup>4</sup>, fetal mortality (including still births as well as early neonatal deaths) was higher in our study i.e. 42 (70%) but close to study by Liaqat et al.

In our study asphyxia neonatorum was found in 22(37%) of live born neonates who were almost double than in study by Pitaphrom A, Sukcharoen N<sup>14</sup>.

In our study, low birth weight was found in 46(72%) of births which is close to study by Pitaphrom A, Sukcharoen N F and Bibi S<sup>9</sup>.

## CONCLUSION

Abruptio placentae is common in women with advancing age, high parity, hypertensive disorders of pregnancy and smoking. As abruptio placentae is a major risk factor for maternal and foetal morbidity and mortality, efforts should be taken to reduce the risk factors for this problem. All women at risk should be strictly followed up and prompt action should be taken to reduce perinatal mortality and morbidity. Antenatal services should be provided to all women especially to poor socioeconomic class. Early intervention, expeditious delivery and strengthening

of safe motherhood services particularly in rural areas, will help to prevent and reduce the gravity of the situation.

## REFERENCES

1. Decherney AH, Nathan L. Current obstetric and gynecologic diagnosis and treatment. 9<sup>th</sup> ed. New York: McGraw-Hill; 2003.
2. Toivonen S, Heinonen S, Anttila M, Kosma VM, Saarikoski S. Obstetric prognosis after placental abruption. *Fetal Diagn Ther* 2004; 19: 336-41
3. Alexander, Greg R., Rouse, Dwight J., Kirby, Russell S., Salihi, Hamisu M., Aliyu, Muktar H., Bekan, Brigitte. Perinatal mortality associated with abruptio placentae in singletons and multiples. *Am J Obstet Gynecol* 2005; 193:198-203
4. Liaqat NF, Shoaib T, Shuja S. A study of abruptio placentae. *J Surg Pak* 2006; 11(1):27-30.
5. Naheed I. Abruptio placentae (study of maternal and fetal outcome). *Pak Postgrad Med J* 1998; 9:104-7
6. Saadia Z, Khan AZ, Nahid F. Fetal Outcome varies with different grades of Placental Abruption. *Ann King Edward Med Coll* 2003; 9(1):40-2.
7. Ananth CV, Smulian JC, Demissie K, Vintzileos AM, Knuppel RA. Placental abruption among singleton and twin birth in the United States risk factor profile. *Am J Epidemiol* 2001; 153:771-8
8. Pitaphrom A, Sukcharoen N. Pregnancy outcomes in placental abruption. *J Med Assoc Thai.* 2006 Oct;89(10):1572-8
9. Bibi S, Pir MA, Yousfani S. Risk factors and clinical outcome of placental abruption: a retrospective analysis. *J Pak Med Assoc* 2009; 59:672.
10. Bibi S, Memon A, Memon Z, Bibi M. Contraceptive knowledge and practices in two districts of Sindh, Pakistan: A hospital based study. *J Pak Med Assoc* 2008; 58: 254-8.
11. Jabeen M, Gul F. Abruptio Placentae: risk factors and perinatal outcome. *J Postgrad Med Inst Oct - Dec* 2004;18(4):669-76.
12. Sarwar I, Abbasi AN, Islam. Abruptio placentae and its complications at Ayub Teaching Hospital Abbottabad. *J Ayub Med Coll Abbottabad.* 2006 Jan-Mar;18(1): 27-31.
13. Hossain N, Khan N, Sultana SS. Abruptio placentae and adverse pregnancy outcome. *J Pak Med Assoc* 60:443; 2010.
14. Pitaphrom A, Sukcharoen N. Pregnancy outcomes in placental abruption. *J Med Assoc Thai* 2006 Oct;89 (10):1572-8.