

## The Effect of Abruption Placentae on Perinatal Outcome of Pregnancy

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### Abstract

Abruption placentae is defined as the premature separation of the placenta from the uterus. A significant cause of third-trimester bleeding associated with fetal and maternal morbidity and mortality, placental abruption must be considered whenever bleeding is encountered in the second half of pregnancy.

If the bleeding continues, fetal and maternal distress may develop. Fetal and maternal death may occur if appropriate interventions are not undertaken. The severity of fetal distress correlates with the degree of placental separation. In near-complete or complete abruption, fetal death is inevitable unless an immediate cesarian delivery is performed.

**Keywords:** Pregnancy; Abruption placentae; Newborn; Etiology

### Introduction

Abruption placenta is a complication of pregnancy immediate cesarean delivery is performed. It is the most common pathological cause of late pregnancy bleeding. In humans, it refers to the abnormal separation after 20 weeks of gestation and prior to birth. It occurs on average in 0.5%, or 1 in 200, deliveries. Placental abruption is a significant contributor to maternal mortality worldwide; early and skilled medical intervention is needed to ensure a good outcome, and this is not available in many parts of the world [1,2].

The primary cause of placental abruption is usually unknown, but multiple risk factors have been identified. However, only a few events have been closely linked to this condition. The risk of recurrence of abruption placentae is reportedly 4%-12%. If the abruption placentae in 2 consecutive pregnancies, the risk of recurrence rises to 25%. If the abruption is severe and results in the death of the fetus, the risk of a recurrent abruption and fetal demise is 7% [3].

Risk factors in abruption placentae include the following: maternal hypertension - most common cause of abruption, occurring in approximately 44% of all cases, maternal trauma (e.g. motor vehicle collision (MVC), assaults, falls)-Causes 1.5%-9.4% of all cases, cigarette smoking, alcohol consumption, cocaine use, short umbilical cord, sudden decompression of the uterus, premature rupture of membranes, delivery of first twin, idiopathic (probable abnormalities of uterine blood vessels and decidua), previous placental abruption, chorioamnionitis, prolonged rupture of membranes (24 h or longer), maternal age 35 years or older, maternal age younger than 20 years, male fetal sex, low socioeconomic status, elevated second trimester maternal serum alpha-fetoprotein (associated with up to a 10-fold increased risk of abruption), subchorionic hematoma [4-9].

Fetal morbidity is caused by the insult of the abruption itself and by issues related to prematurity when early delivery is required to alleviate maternal or fetal distress. Delivery is required in cases of severe abruption or when significant fetal or maternal distress occurs, even in the setting of profound prematurity. In some cases, immediate delivery is the only option, even before the administration of corticosteroid therapy in these premature infants. All other problems and complications associated with a premature infant are also possible. Treatment depends on the amount of blood loss and the status of the fetus. If the fetus is less than 36 weeks and neither mother nor fetus is in any distress, then they may simply be monitored in hospital until a change in condition or fetal maturity whichever comes first [5].

Immediate delivery of the fetus may be indicated if the fetus is

mature or if the fetus or mother is in distress. Blood volume replacement to maintain blood pressure and blood plasma replacement to maintain fibrinogen levels may be needed. Vaginal birth is usually preferred over caesarean section unless there is fetal distress. Caesarean section is contraindicated in cases of disseminated intravascular coagulation. Patient should be monitored for 7 days for PPH. Excessive bleeding from uterus may necessitate hysterectomy [6,7].

The prognosis of this complication depends on whether treatment is received by the patient, on the quality of treatment, and on the severity of the abruption. Outcomes for the baby also depend on the gestational age. In the Western world, maternal deaths due to placental abruption are rare; for instance a study done in Finland found that, between 1972 and 2005 placental abruption had a maternal mortality rate of 0.4 per 1,000 cases (which means that 1 in 2,500 women who had placental abruption died); this was similar to other Western countries during that period. The prognosis on the fetus is worse, currently, in the UK, about 15% of fetuses die following this event. Without any form of medical intervention, as often happens in many parts of the world, placental abruption has a high maternal mortality rate [8].

The baby may be born at a low birth weight. Preterm delivery (prior to 37 weeks gestation). The fetus may be deprived of oxygen and thus suffer from asphyxia. Placental abruption may also result in fetal death, or stillbirth. The newborn infant may have learning issues at later development stages, often requiring professional pedagogical aid [10].

### Conclusion

Fetal and maternal death may occur if appropriate interventions are not undertaken. The severity of fetal distress correlates with the degree of placental separation. In near-complete or complete abruption, fetal death is inevitable unless an immediate caesarian delivery is performed.

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