Learn simply

Placental Abruption

Passion profession same

Suspect the diagnosis of placental abruption[1]

- Perform a history and physical exam[2]
- Presence or absence of risk factors[3]
- Confirm gestational age
- Perform continuous fetal heart rate and contraction monitoring and confirm fetal wellbeing
- Exclude other causes of antepartum hemorrhage[4]

Perform an ultrasound[5]

Is the bleeding excessive and/or is the woman hemodynamically unstable?

Yes

Initiate treatment without delay

- **Admit to hospital**
- **Place 2 large-bore iv lines**
- **√ CBC, T&S, coagulation screen**[6]
- √ urine toxicology screen[3]
- Urgent MFM, anesthesia consultation
- **Fluid and blood product resuscitation**

Consider immediate delivery regardless of gestational age[7]

No

Initial management

- Admit to hospital
- √ CBC, T&S, coagulation screen[6]
- √ urine toxicology screen[3]
- IV access, active T&S
- Consider MFM, anesthesia consultation
- Fluid and blood product resuscitation

Further management depends on gestational age

Previable (<24 weeks)

Consider outpatient management

- Regular prenatal visits
- Serial ultrasound examinations for assessment of fetal growth and amniotic fluid volume assessment
- Treat underlying cause (manage hypertension, encourage cessation of smoking and cocaine abuse)

24-36 weeks

Continued expectant management[8]

- *Consider pelvic rest until bleeding stops for >1 week*
- **Inpatient care if bleeding; consider outpatient care if minimal and infrequent bleeding**
- IV access and active T&S at all times if inpatient
- Anesthesia, NICU, and MFM consultation
- **Administer antenatal corticosteroids**
- **Serial ultrasound examinations**
- Consent for cesarean and possible need for further surgery (hysterectomy) and blood transfusion[9]

≥36 weeks

Proceed with delivery[10]

- Given the unpredictable nature of placental abruption, **immediate delivery should be considered**[9]
- Documentation of fetal lung maturity is not necessary
- Consent for cesarean delivery and possible need for further surgery (hysterectomy) and blood transfusion[9]

1. Placental abruption refers to premature separation of a normally implanted placenta from the uterine wall. The bleeding that results may be revealed vaginally (in 80% of cases) or concealed within the uterus. Abruption that is clinically recognized complicates 1% of all pregnancies. Abruption that is severe enough to result in the death of the fetus occurs in 1 in 420 deliveries.

2. Signs and symptoms of placental abruption may include vaginal bleeding (80%), uterine tenderness or back pain (65%), and nonreassuring fetal heart rate monitoring (60%).

3. Other findings include frequent, hypertonic contractions and preterm labor. Bleeding is of maternal origin. Uterine tenderness suggests extravasation of blood into the myometrium (Couvelaire uterus).
4. The amount of vaginal bleeding may not be a reliable indicator of the severity of the hemorrhage since bleeding may be concealed. Serial measurements of fundal height and abdominal girth are useful to monitor large retroplacental blood collections. Rarely, placental abruption may be an incidental finding on routine ultrasound. When a woman presents with antepartum hemorrhage, pelvic examination should be avoided until placenta previa is excluded on ultrasound.

1. Preeclampsia is the most common risk factor and is found in 50% of women with placental abruption. Other risk factors for placental abruption include prior placental abruption (recurrence rate is 10% after one abruption, 25% after two abruptions), blunt trauma, smoking, cocaine, uterine anomaly or fibroids, multiparity, advanced maternal age, preterm premature rupture of the membranes, chorioamnionitis, possibly thrombophilias, and rapid decompression of an overdistended uterus (such as multiple pregnancy or polyhydramnios).

2. Other causes of antepartum hemorrhage include placenta previa vasa previa early labor, and genital tract lesions (cervical polyps or erosions).

3. Placental abruption is a clinical diagnosis. An ultrasound should be performed to exclude placenta previa, confirm gestational age, document estimated fetal weight and amniotic fluid volume, and confirm a live fetus. Sonographic evaluation will fail to reveal >50% of placental abruptions; however, in cases in which bleeding is visualized sonographically, the likelihood of abruption is very high.
4. The risk of stillbirth correlates with the extent of placental separation; stillbirth rates are high with >50% separation. Placental abruption is also associated with a twofold increase in fetal growth restriction and an increased rate of congenital anomalies. Port-wine discoloration of the amniotic fluid at the time of amniocentesis or cesarean delivery is highly suggestive of placental abruption
5. When abruption is severe enough to result in the death of the fetus, blood loss may be >50% of maternal blood volume and coagulation defects can develop rapidly. Up to 5 liters of blood may extravasate into the myometrium, with little or no revealed bleeding. The release of placental thromboplastin into the maternal circulation can trigger disseminated intravascular coagulation (DIC) and is also strongly uterotonic. Coagulopathy is uncommon with a surviving fetus.

1. Emergency cesarean delivery may be needed. Contraindications to emergency cesarean include a previable fetus (<23–24 weeks), intrauterine fetal demise, maternal hemodynamic instability or uncontrolled coagulopathy, or failure to obtain maternal consent for surgery. Even in the setting of fetal death or previability, however, cesarean may be indicated if hemorrhage is so extensive that the life of the mother is at risk.

2. The goal of antepartum management is to maximize fetal maturation while minimizing risk to mother and fetus. Hospitalization is indicated to evaluate the maternal and fetal conditions. Nonreassuring fetal testing ("fetal distress") and excessive maternal hemorrhage are contraindications to expectant management, and may necessitate immediate cesarean irrespective of gestational age.

3. However, most episodes of bleeding are not life-threatening. With careful monitoring, delivery can be safely delayed in most cases. Outpatient management may be an option if the bleeding is small and infrequent and if the woman can maintain proximity to a hospital. Placental abruption is a relative contraindication to tocolysis.

4. Serial ultrasound examinations are useful to follow the appearance of the placenta, fetal presentation, amniotic fluid volume, and fetal growth. Women with a very early abruption can develop chronic abruption-oligohydramnios sequence (CAOS).

1. Postpartum hemorrhage should be anticipated following a severe placental abruption. Uterine contractility is impaired by fibrin degradation products, thus uterine atony may occur. Persistent atony despite the administration of uterotonics may require a hysterectomy. Maternal deaths from abruption occur most often postpartum, when ongoing blood loss occurs in patients with inadequate correction of hemorrhagic shock and coagulopathy.

2. Acute renal tubular and cortical necrosis may result in addition to renal ischemia from hypovolemia.

3. Mode and timing of delivery depend on the condition and gestational age of the fetus, the condition of the mother, the amount of associated hemorrhage and the state of the cervix.

4. Labor with extensive placental abruption may be rapid due to the persistently hypertonic uterus. Early amniotomy may expedite delivery. Oxytocin can be initiated, if needed. If vaginal delivery does not appear imminent, cesarean delivery may be indicated.