

Maine Medical

PARTNERS

Women's Health

A department of Maine Medical Center

Placental Abruption

Definition:

- Placental separation, either partial or complete prior to the birth of the fetus
- Incidence 0.5 – 1% (4).
- Risk factors include hypertension, smoking, preterm premature rupture of membranes, cocaine abuse, uterine myomas, and previous abruption (5).

Diagnosis:

- Symptoms (may present with any or all of these)
 - Vaginal bleeding (usually dark and non-clotting).
 - Abdominal pain and/or back pain varying from intermittent to severe.
 - Uterine contractions are usually present and may vary from low amplitude/high frequency to hypertonus.
 - Fetal distress or fetal death.
- Ultrasound
 - Adherent retroplacental clot OR may just appear to be a thick placenta
 - Resolving hematomas become hypoechoic within one week and sonolucent within 2 weeks
- May be a diagnosis of exclusion if vaginal bleeding and no other identified etiology
- Consider in differential with uterine irritability on toco and cat II-III tracing, as small proportion present without bleeding

Classification:

- Grade I: Slight vaginal bleeding and some uterine irritability are usually present. Maternal blood pressure, and fibrinogen levels are unaffected. FHR remains normal.
- Grade II: Mild to moderate vaginal bleeding seen; tetanic contractions may be present. Blood pressure usually normal, but tachycardia may be present. May be postural hypotension. Decreased fibrinogen; with levels below 250 mg percent; may be evidence of fetal distress.

- Grade III: Bleeding is moderate to severe, but may be concealed. Uterus tetanic and painful. Maternal hypotension usually present. Fetal death has occurred. Fibrinogen levels are less than 150 mg percent with thrombocytopenia and coagulation abnormalities.

Evaluation:

- Consider hospitalization, depending on maternal-fetal condition
- For maternal hypovolemia and/or shock, see “complications”, below
- Rhogam if Rh neg
 - Consider Keihauer-Betke
- Maternal condition including vital signs assessed q 15 min – 1 hr
 - (BP may be normal if underlying hypertensive disorder)
- Urine toxicology – inform patient
- Ultrasound
 - Fetus - well-being, position, gestational age
 - Placenta – rule out placenta/vasa previa, possibly localize abruption

Method and timing of delivery:

Dependent on maternal and fetal condition and the status of the cervix.

- Immature fetus, mild abruption
 - An expectant approach may be followed.
 - Steroids if delivery is likely within 7 days, GA is between 34 0/7 to 36 6/7 weeks, and not previously administered
 - May consider trial of tocolytics
 - IF no fetal distress or maternal complications AND contractions are present
- Grade II abruption
 - Consider delivery (see below)
- Grade III
 - Deliver

Delivery management:

- Vaginal delivery may be attempted IF fetal heart tracing is normal and the uterus relaxes well between contractions, depending on cervical exam and age of gestation.
- Consider amniotomy to help stimulate labor.
- Fetal scalp electrode and intrauterine pressure catheter advised
 - Resting tonus higher than 15 mm Hg suggests poor prognosis and early resort to cesarean section is indicated if labor does not progress normally
- Caution with Pitocin
 - Uterine response may be erratic and the risk of uterine rupture is increased.

- Ensure operating room availability in anticipation of possible emergency C-section

Fetal considerations:

- Fetal death, stable mother – attempt vaginal delivery to minimize maternal morbidity.
- Definitive fetal distress - immediate abdominal delivery unless contraindicated by the mother's condition

Complications and therapy – Hypovolemia/Shock:

Maternal stabilization efforts should begin prior to proceeding to operative delivery

- **Activate massive transfusion protocol*****
- 2 large bore IV lines
- Fluid therapy well in excess of apparent blood loss, and blood transfusions as soon as available
- Massive transfusion lab panel - CBC, T and crossmatch, coag panel (incl INR, PTT, fibrinogen, platelets), CMP, Mg++, ionized Ca++.
- Risk of disseminated intravascular coagulation (DIC)
 - 10% of abruption cases, most common in severe abruption with fetal demise
 - Clot test (should clot within 6 min., last > 30 min) and coag panel.
- Monitor for ischemic necrosis of the kidney with strict hourly I&O's and Foley catheter.
- Consider central hemodynamic monitoring if oliguria (< 30 ml/hr) persists after volume expansion.

***** Postpartum hemorrhage guideline massive transfusion protocol reference**

- <https://mainehealth.org/-/media/mainehealth/pdfs/clinical-guidelines-and-resources/obstetrical-perinatal-guidelines/91918-postpartum-hemorrhage-guideline.pdf?la=en>

References:

1. Society for Maternal-Fetal Medicine (SMFM) Consult Series #44: Management of bleeding in the late preterm period. Am Journal Obstet Gynecol. 2018 Jan;218(1);B2-B8.
2. Gabbe S., Niebyl JR, Simpson JL. Obstetrics: Normal and Problem Pregnancies; p.579 Churchill Livingstone

3. Critical Care Obstetrics. Clark SL, Cotton DB, Hankins GDV, Phelan JP, p.186
Blackwell Scientific Publications
4. Ananth et al. Placental abruption in the United States. 1979 – 2001: Temporal trends and potential determinants. Am J Obste Gynecol 2005;192:191-8.
5. Ananth et al., Placental abruption and its association with hypertension and prolonged rupture of membranes: A methodologic review and meta-analysis. Obstet Gynecol 1996;88:309-18.