VAGINAL BLEEDING IN PREGNANCY

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INTRODUCTION

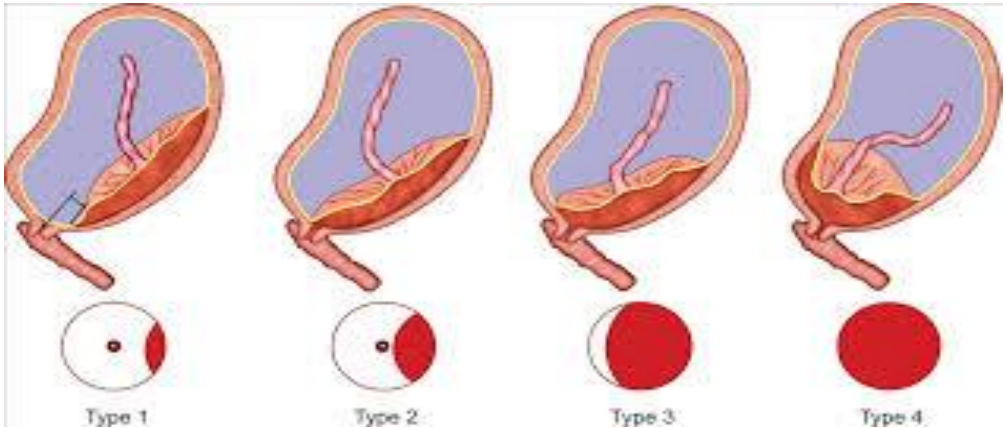
- Bleeding from the vagina is a common event at all stages of pregnancy.
- The source is virtually always maternal, rather than fetal.
- The clinician typically makes a provisional clinical diagnosis based upon the patient's gestational age and the character of her bleeding (light or heavy, associated with pain or painless, intermittent or constant).

causes

1. Placenta praevia.
2. Placental abruption.
3. Local causes:
   - cervical ectropion/cervical trauma.
   - local infection of the cervix/vagina.
   - cervical polyps/cervical cancer.
4. Undetermined origin.
5. Rare cause: torn from vasa paevia (fetal origin).

PLACENTA PREVIA

- Placenta previa refers to the presence of placental tissue that extends over the internal cervical os.
- Because this can lead to severe antepartum and/or postpartum bleeding, placenta previa is associated with high risks for preterm delivery and maternal and fetal/neonatal morbidity.
- If the placental edge covers or is <2 cm from the internal os in the second trimester, follow-up ultrasonography for placental position is indicated at 32 weeks of gestation.



- At the 32-week follow-up examination:
  - If the placental edge is ≥2 cm from the internal os, the placental position is reported as normal and additional follow-up ultrasound examinations for placental position are not indicated.
- The possibility of placenta accreta spectrum should be excluded, given its association with placenta previa.
- If present, antepartum management of placenta previa-accreta spectrum is the same as for placenta previa, but delivery risks are substantially greater. Cesarean delivery is scheduled earlier in gestation than for previa alone, and preoperative preparation includes planning for cesarean-hysterectomy.
- Among women who did not receive a previous course of antenatal corticosteroids for standard obstetric indications at some point during the pregnancy, we administer a course 48 hours before a scheduled cesarean delivery at less than 37 weeks of gestation.

- We perform a cesarean delivery at 36+0 to 37+6 weeks in pregnancies with uncomplicated placenta previa.
- An actively bleeding placenta previa is a potential obstetric emergency.
- These women should be admitted to the Labor and Delivery Unit for maternal and fetal monitoring, and the anesthesia team should be notified.
  - Goals — The major goals in managing a patient with an acutely bleeding placenta previa are to:
    - Achieve and/or maintain maternal hemodynamic stability
    - emergency cesarean delivery is indicated

- Maternal BP, PR, RR, peripheral oxygen saturation, and urine output are closely monitored.
- Tachypnea, tachycardia, hypotension, low oxygen saturation, and air hunger are signs of hypovolemia.
- The fetal heart rate is monitored continuously for patterns suggestive of hypoxemia or anemia.
- Blood loss is quantified. Accurate estimation of vaginal blood loss is difficult to determine visually, particularly when blood is partially saturating or soaking towels, maternity pads, or gauze sponges or dripping onto the floor .
- One or two large bore intravenous lines are inserted and crystalloid (RL or NS) is infused to achieve/maintain hemodynamic stability and adequate urine output (at least 30 mL/hour).
- Transfusion of blood products in a woman with an actively bleeding .

- Acute hemorrhage may not be associated with an immediate reduction in either blood pressure or hematocrit in an otherwise healthy young woman.
- clinicians should have a low threshold for ordering a transfusion in patients with antepartum hemorrhage once the diagnosis of placenta previa is made.
- Failure to rapidly correct tachycardia or hypotension with a normal saline bolus or a hemoglobin value <10 g/dL should prompt immediate transfusion.
  - Suggest transfusing two to four units of typed and crossed PRBC, without fresh frozen plasma or platelets as long as the fibrinogen level is >250 mg/dL and the platelet count is >100,000/microL.
    - Our goal is a final hemoglobin value >10 g/dL.
  - If the patient fails to stabilize, we initiate a massive transfusion protocol . If a massive transfusion protocol is not available, type O Rh-negative blood should be administered until type-specific or typed and cross-matched blood is available.

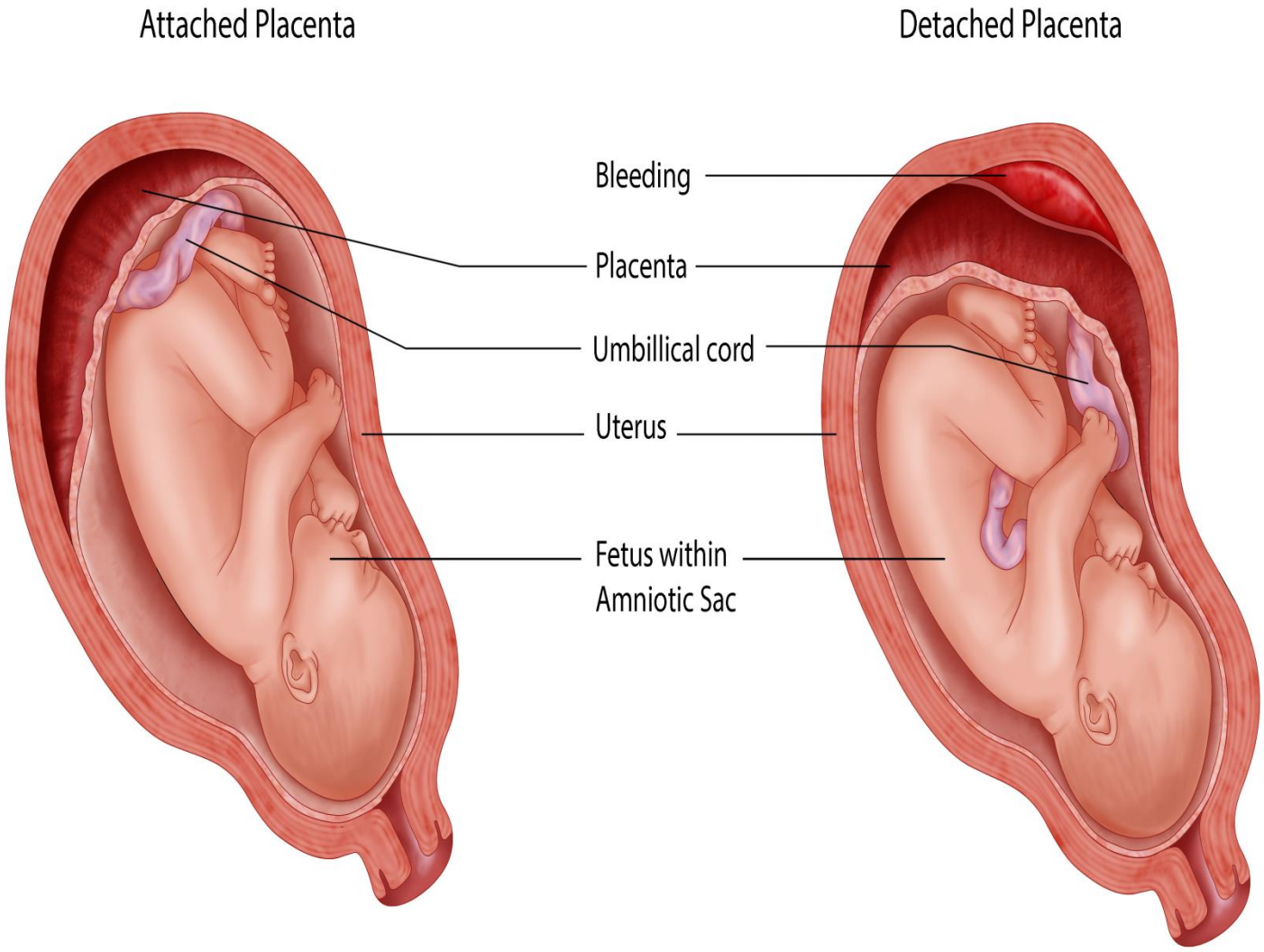
- If the patient continues to bleed, we suggest using the same blood product transfusion ratios used for patients with severe hemorrhage of other etiologies: a 1:1:1 ratio. Point-of care testing with TEG or ROTEM, if available, can be used to guide blood product replacement.
- If delivery is not imminent, we continue transfusion until the patient has stabilized, bleeding is decreased, and hemoglobin is at least 10 g/dL. However, if delivery is imminent, a preoperative or intraoperative target hemoglobin of 8 g/dL is reasonable.
- ***Tranexamic acid*** is generally not administered before delivery because it freely crosses the placenta. However, it has been recommended for treatment of antepartum and intrapartum bleeding related to several inherited bleeding disorders. Fetal/neonatal harm has not been reported, but data are limited.

- Most women who initially present with symptomatic placenta previa respond to supportive therapy, as described above, and do not require immediate delivery .
- In observational series, 50 percent of women with a symptomatic previa (any amount of bleeding) were not delivered for at least four weeks. Even a large bleed does not preclude conservative management.
- Cesarean delivery is indicated for:
  - Active labor
  - A category III fetal heart rate tracing unresponsive to resuscitative measures.
  - Severe and persistent vaginal bleeding such that maternal hemodynamic stability cannot be achieved or maintained.
    - Bethametasone
    - MGSo4
    - Rhogam

PLACENTA ABRUPTION

- Definition:
  - bleeding following premature separation of a normally situated placenta prior to delivery after 20 w.
- Incidence: 5% of pregnancies.
- Primary cause of Placenta Abruption: Unknown
- Several associated condition :
  - Increase in Age & Parity
  - Preeclampsia & Chronic Hypertention
  - PROM
  - Multifetal Gestation
  - Smoking, Cocaine
  - Prior Abruption
  - Uterine Myoma
  - PHA

Placental Abruption

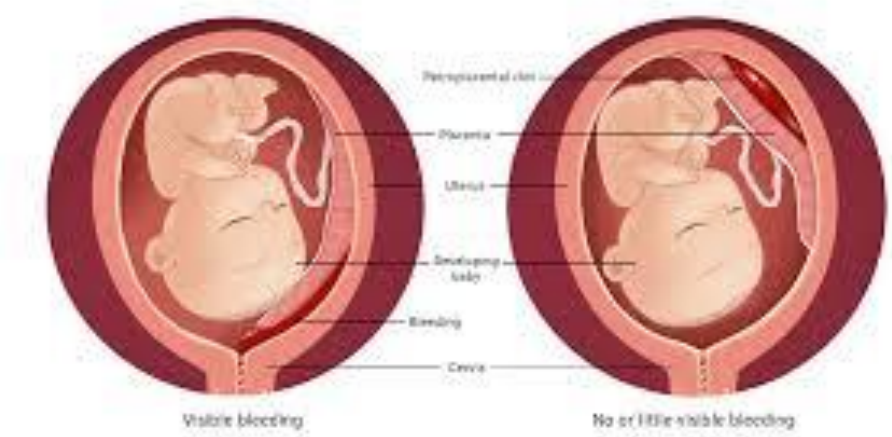


- Classification:
  - Revealed type : Bleeding is Revealed
  - Concealed type : No obvious bleeding
  - Mixed type : 1 & 2

- In the Concealed type (20%), the hemorrhage is confined whitin the Uterine cavity, detachment of the placenta may be complete and complications are often severe.
- In the revealed type (80%), blood drains through the cervix, placental detachment is more likely to be incomplete and the complications are fewer and less severe.
- Complications :
  - **Maternal: Maternal Mortality , Hypovolemic Shock, Renal Failure, DIC, Post partum Hemorrhage, Complication of Massive transfusion.**
  - **Fetal: Fetal Death , Hypoxic Injury , IUGR, Neonatal Anemia, Congenital Malformation**

Signs & symptoms

- Vaginal bleeding: 78%
- Uterine tenderness: 66%
- Back pain: 60%
- Fetal distress: 22%
- Hypertonus: 17%
- Fetal Demise : 15%



Diagnosis

- Basis of diagnosis consists of :
  - History & physical examinations
  - Triad of external bleeding through cervical OS. Uterine or back pain and fetal distress should be of high suspicion.
  - Defer digital cervical examination until placenta previa & vasa previa are ruled out.
  - Ultrasound : Limited value but for large abruptions hypoechoic areas seen underlying placenta.

Lab test :

- CBC , BG &Rh , UA, LFT, RFT, PT, PTT, Fibrinogen , FDP

Management :

- Large bore IV access obtained
- Fluid resuscitation
- Foley Catheter
- Close monitoring of maternal VS
- Continous FHR monitoring
- Rh D immonoglobulin administered to Rh (-) patients

- **Term gestation, hemodynamically stable:**
  - Plan for vaginal delivery with CS for usual indications
  - Follow serial hematocrit & coagulation studies
  - Continuous fetal monitoring
- **Term gestation, hemodynamic instability:**
  - Aggressive fluid resuscitation
  - Transfuse packed RBC, fresh frozen plasma & platelets as needed
  - Maintain Fibrinogen level > 150 mg/deciliter, hematocrit > 25% & platelet over 60000/µ L
  - Urgent CS unless vaginal delivery is imminent
- **Preterm gestation hemodynamically stable:**
  - In absence of labor, preterm AP should be followed with serial USG for fetal growth
  - Steroids should be given to promote fetal lung maturity If maternal instability or fetal distress arises delivery should be performed, if not labor can be induced at term
- **Preterm gestation hemodynamically unstable:**
  - Delivery should be performed after appropriate resuscitation

- Placenta Abruption is an important cause of fetal and maternal morbidity and mortality.
- The etiology is poorly understood , various management options are however available.

- The principle of initial assessment of the patients condition and subsequent planned management aimed at resuscitation and prolongation of pregnancy if possible or immediate delivery either for fetal or maternal indications.


Thank You!