Vaginal Bleeding in Late Pregnancy

EMC 420: Maternal & Child Emergency Care

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Objectives

This lecture will enable you to discuss:

- Vaginal bleeding in the second half of pregnancy and to
- Epidemiology and risks for the causes of late pregnancy and third trimester bleeding
- Most common cause of third trimester bleeding
- Most life-threatening (to both mother and fetus) cause of third trimester bleeding
- The typical clinical presentations of these causes
- The urgency and need for ALS for these life-threatening complications
  - Prehospital treatment of third trimester bleeding

Causes of Bleeding in Pregnancy

- Early pregnancy
  - – Abortion
  - – Ectopic pregnancy
- Late pregnancy
  - – Abruptio placenta
  - – Placenta previa

Causes of Late Pregnancy Bleeding

- Life-Threatening
  - Abruptio placenta (more common)
  - Placenta previa
  - Ruptured uterus / uterine scar disruption
  - (vasa previa rupture) [FYI]
- Other
  - "show" (bloody show of early labor)
  - Vaginal trauma
  - Infection (cervical)
  - Cancer (cervical)

Placental Abruption

Pathophysiology:

- Premature separation of placenta from uterine wall
  - – Complete (high lethality)
    - Greater than 50% placenta : fetal demise
  - – Partial
    - Marginal sinus rupture
      - - Bleeding, but without abruption [FYI]
  - – Hemorrhage
    - Concealed or obvious hemorrhage

Mechanism of Abruption

Mechanisms (2):

- Spontaneous separation
- Trauma
  - – With direct abdominal trauma
  - – Without direct trauma (rapid deceleration)

Epidemiology of Abruption

Epidemiology:
- 1 - 2 % of all pregnancies

Risk factors
- Placental aging - insufficiency
  - Smoking or other substance abuse (e.g. Cocaine)
  - Pregnancy induced hypertension - preeclampsia
- Maternal disorders (platelet; metabolic)
- Hx of previous abruption
- Trauma

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Complications of Abruption

Complications (fetal +/or maternal death) :
- Maternal
  - Hemorrhagic shock
  - DIC
- Fetal
  - Immediate fetal death; stillbirth
  - Premature birth
  - Intrauterine growth restriction

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Presentation of Abruptio Placentae

History
- ["AP" : ***A*** bruptio ***P*** lacentae = ***A*** cute ***P*** ain]
- Contraction pain : during and ***between*** contraction
- Pain may be ***severe***, sudden, and usually constant
- +/- vaginal bleeding ; absent to heavy
- Past history of abruption

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Abruptio Placentae - Exam

Physical exam
- Abdomen very tender
- Uterus is tender and may feel tightly contracted
- Fetal heart tones may be absent
- Character of bleeding
  - Usually dark blood
- Pelvic exam must <u>not</u> be done

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Placenta Previa

- Prevalence
  - 1 / 200 – 600
- Incidence
  - Changing: occurring with increasing frequency
- Low lying placenta
  - Common (50%) at time of initial placental implantation
  - Migrates during pregnancy

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Maternal Complications of Previa

- Intra- and postpartum hemorrhage
  - Causes maternal death in about 0.03% of these case
- Cesarean delivery
- Associated with higher rates of
  - Septicemia
  - Thrombophlebitis

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Fetal Complications of Previa

- Most of the perinatal morbidity and mortality results from prematurity
- C section required for pregnancies with placenta previa
  - 47% of pregnancies with placenta previa must be delivered prior to full-term

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Pathophysiology and Etiology of Previa

- Reason the placenta implants in an improper position unknown
- Bleeding due to tearing of placental attachments during cervical dilation
- Lower uterine segment is unable to minimize bleeding. It is unable to:
  - Contract, and
  - Vasoconstrict

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Risk Factors for Placenta Previa

- More common in prior history of previa
  - As with abruption
  - 10-fold greater risk
- Advanced maternal age
- Extremely premature delivery (<25 weeks)
- History of previous perinatal death
- Interpregnancy interval >4 years are
- Hx of prior uterine abnormalities
  - Placental abruption
  - Cesarean section
  - Prior spontaneous or induced abortions

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Presentation of Placenta Previa

- Pain<u>LESS</u>, bright red bleeding
- Pain can occur with the contraction, of course (like anyone in labor)
  - Pain can occur with the contraction: either previa or abruption
  - Abruption has constant pain
- Do NOT do vaginal exam
- Dx: ultrasound
  - False negatives occur (i.e., specific, but not sensitive)

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Treatment of Previa

Signs of hemorrhage / signs of shock

- LLD position
- Unstable Patient or Fetus
  - High-flow O2 NRB
  - 2 large-bore IV NS WO to support BP
  - Blood draw (CBC; type and cross; Rh testing)
    - If still hypotensive transfuse with PRBCs (packed red blood cells)

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Summary

- Vaginal bleeding late in pregnancy may cause significant mortality and morbidity
- Clinical presentations may help determine the immediate treatment
- There is always the need initiate ALS for these life-threatening presentations

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