First & Third Trimester Bleeding

Jason Bell, MD/MPH
Medical College of Georgia
Department of OB/GYN

First Trimester Bleeding

• Causes:
  – Abortion (miscarriage)
  – Ectopic Pregnancy
  – Polyp
  – Cancer
  – Trauma (i.e. sexual intercourse)

Abortion

• Definition- fetus lost before 20 weeks gestation, or less than 500 grams
  • Threatened
  • Complete (total)
  • Incomplete
  • Inevitable
  • Missed
  • Septic
  • Elective

Threatened Abortion

• Presumed with any bleeding seen in the first half of pregnancy
• Very common approximately 1 in 4-5 woman have bleeding during the first half of pregnancy
• Nearly half of the woman that bleed will ultimately abort
• Bleeding often stops after few days to weeks
• Cervical os is closed

Complete

• Complete expulsion of all products of conception
• Cervical os is closed
Incomplete

- Partial expulsion of some products of conception (POC)
- Abortions prior to 10 weeks often expel all POC, however those longer in duration will not always be complete
- Bleeding with this type of abortion can be very heavy
- Treatment of choice is a D&C
- Cervical os is open

Inevitable

- This is signaled by either gross rupture of membranes or the vaginal bleeding associated with cervical dilatation
- Likelihood of carrying pregnancy to term is very unlikely
- May attempt bed rest but if any signs of infection than D&C should be performed
- Cervical os is open

Helpful way to Remember

The I’s are open and the T’s are closed

Where is this?

Ectopic Pregnancy

- Pregnancy that implants outside of the uterine cavity
  1. Fallopian Tube
  2. Ovary
  3. Cervix
  4. Abdominal cavity

Ectopic Pregnancy

- Prevalence- higher among non-white women of all age groups
- Range is approximately 1:100 some believe approaching closer to 1:50
- Risk Factors:
  - High- tubal surgery, tubal sterilization, prior ectopic pregnancy, IUD
  - Moderate- infertility, history of STDs, multiple partners,
  - Slight- prior pelvic surgery, smoking, douching
Ectopic Pregnancy

• Diagnosis
  – Quantitative Beta HCG
  – Ultrasound
    • Transvaginal u/s- beta 1500 mIU/ml
    • Abdominal u/s- beta 5000 mIU/ml
  • Transvaginal u/s can diagnose nearly 90 percent of ectopic pregnancies
  • Cuidacentesis, serum progesterone levels

Ectopic Pregnancy

• Treatment
• Medical
  – Methotrexate (chemotherapy)- effects the rapidly proliferating trophoblast
  – Need to be hemodynamically stable, reliable, good liver function, <6wks, not >3.5cm, beta less than 15000 mIU/ml
• Surgical
  – Laproscopic vs laprapyomy

Where is this?

Food for thought

15% of total cardiac output flows through the pregnant uterus in the third trimester. That's 1 L per minute.

Third Trimester Bleeding

• Placental abnormalities
• Trauma
• Cancer
• Uterine Rupture
• 5 percent of all pregnant patients have some report of bleeding in the third trimester
• Of those with hemorrhage, about one half will be diagnosed with placental abruption or placenta previa

Etiology of third trimester bleeding

• Cervical
  – During cervical dilation of labor “bloody show”
  – Mass or neoplasia
• Placental
  – Abruptio placenta: painful contractions, uterine tenderness, “hectic” labor pattern, alterations in fetal and maternal vital signs
  – Placenta previa: painless, may bleed with or without labor
• Fetal
  – Vasa previa: ruptured fetal umbilical vessels lying across the os.
Ventura County Medical Center
Clinical Practice Guideline
Evaluation of First Trimester Bleeding

The contents of this clinical practice guideline are to be used as a guide. Healthcare professionals should use sound clinical judgment and individualize patient care. This CPG is not meant to be a replacement for training, experience, CME or studying the latest literature and drug information.

Clinical Presentation: First Trimester Pregnancy, Pelvic Pain or No Fetal Heart Tones

**STEP ONE**
Confirm pregnancy with Urine HCG
Pelvic Exam - IS CERVICAL OS OPEN?

**OS CLEARLY OPEN**
Manage as incomplete Abortion

**UNSTABLE PATIENT**
Heavy Vaginal Bleeding, pain, exam with tender abdomen/pelvis, Peritoneal signs

- Start 2 large bore IVs
- Blood for Type and Screen, Hgb, Rh, Quant HCG
- Emergent UTZ unless it delays going to OR

**STABLE PATIENT**
Mild-Moderate Vaginal Bleeding, limited pain, exam with minimal to no tenderness

1. Blood for Type and Screen, Hgb, Rh, Quant HCG
2. Ultrasound to be arranged by MD

**Ultrasound Findings**

- Ectopic Pregnancy
- Indeterminant Findings
  - No Intrauterine Pregnancy
  - NO Adnexal Mass, or Free Fluid Minimal Pain
  - Beta-HCG $>1500-2000$
  - High Likelihood of Ectopic 
  - OB-Gyn consult
- Normal Intrauterine Pregnancy

- Adnexal Mass
- Free Fluid
- Significant Pain
- OB-Gyn Consult

- Beta-HCG $<1500$
  - 1) 48 hour follow-up with exam and quant. Beta-HCG
  - Or
  - 2) OB-Gyn consultation

Prepared by: Robert Lefkowitz, MD
Placental Abruption

- Definition: separation of placenta from implantation site before the delivery of the fetus
- Incidence about 1%
- Perinatal mortality 20-35%
- Subsequent pregnancy: 10-30% recurrence

Risk Factors

- Cigarette smoking
- Maternal age
- Grand parity
- PPROM
- Cocaine use
- Maternal hypertension
- Trauma
- Rapid decompression of hydramnios
- Short umbilical cord
- Thrombophilies
- Uterine leiomyomas
- Multiple gestations

Diagnosis

- Vaginal exam (speculum)
- Ultrasound (only about 50%)
- Clinical presentation

Signs & Symptoms

- Anything goes!
- Typical pattern:
  - Abdominal pain (esp between contractions)
  - Irregular uterine contractions
  - Bleeding (but hemorrhage can be concealed)
  - Alteration in fetal and maternal vital signs
  - Elevated uterine baseline tone
  - Tender uterus

Treatment

- Delivery
- Unless stable mom, stable and preterm baby, and small clot
- Vaginal delivery if fetus is dead

Complications

- DIC
  - 10% of abruptions
  - 30% if fetus had expired
- Couvelaire uterus
  - Blood extravasates into musculature and collects beneath the stroma
  - Usually no need for hysterectomy
Placenta Previa

• Definition: the placenta is located very near or over the internal os
• Types:
  – Total: internal os is completely covered
  – Partial: internal os is partially covered
  – Marginal: the edge of the placenta is at the margin of the internal os
  – Low-lying placenta: placenta is in the lower uterine segment but the placenta edge does not reach the edge of the internal os

Risk Factors for Placenta Previa

• Maternal Age
• Multi-parity
• Smoking
• Previous previa (5%)
• Increased parity (grand multip 5%)
• Previous cesarean
• Multifetal gestation

Sentinel Bleed

• One third will bleed prior to 30 weeks
• Painless bleeding
• May be spontaneous or occur with intercourse or vaginal exam

Signs & Symptoms

• Painless bleeding
• Soft uterus
• Fetal malpresentation
• Typical ultrasound with doppler imaging
Diagnosis

- Ultrasound 15-20% diagnosis at 15-20 wk scan have previa but 95% resolve

Management

- Activity restriction
- No intercourse!!!!!!!!!!!!!!!!!!!
- Delivery if severe
- Cesarean delivery after 35-36 weeks

Vasa Previa

- Fetal vessels lie over the os
- Associated with a velamentous cord insertion
- Must be very cautious with ROM because my rupture fetal vessels
- Fetal blood volume = 130 cc or 30cc/kg
- Incidence 1:30000
- Management: Deliver!

Uterine Rupture

- Definition- uterus communicates with the abdominal cavity (complete) or is separated from it by the visceral peritoneum (incomplete)
- Most common cause of uterine rupture is separation of prior cesarean scar
- Type of prior scar is the key factor
- LTCD ~1%, LVCD ~4-8%, CCD ~8-10%
- Big deal because of the increased rate of C/S in the US/worldwide: VBAC
- 50% mortality or severe morbidity