FIRST TRIMESTER BLEEDING

- Implantation - implantation of the embryo in the endometrium
- Cervical lesion – polyps
- Ectopic pregnancy
- Ovarian torsion
**Types of Abortion**

- Threatened abortion
- Inevitable abortion
- Incomplete abortion
- Complete abortion

- Missed abortion
- Septic abortion
- Induced abortion
THREATENED ABORTION

- Bleeding in the first trimester
  - No loss of fluid or tissue with closed cervix

- 50% of threatened abortion proceed to spontaneous abortion

- Those that carry pregnancy to viability is at an increased risk for preterm delivery or an infant with low birth weight
INEVITABLE ABORTION

- Gross rupture of membranes (leaking amniotic fluid), bleeding with cervical dilation

- Uterine contractions usually associated
INCOMPLETE ABORTION

- Internal cervical os opens and allows for passage of blood
- Products remain entirely in utero or can be extruding from the dilated os
  - Can be removed by ring forceps
- < 10 wks fetus and placenta come out together
- > 10 wks retained placenta can remain in os

- Hemorrhage from the incomplete abortion can be severe or fatal
COMPLETE ABORTION

- Spontaneous passage of all products of conception and a closed internal cervical os
MISSED ABORTION

- Retention of a failed intrauterine pregnancy for an extended period of time
  - Closed cervical os
  - Usually 2 mos

- Normal appearing early pregnancy symptoms:
  - N/V, breast tenderness, amenorrhea

- Uterus remains stationary in size → smaller

- Treatment: Expectant management, medical or surgical treatment
  - Risks of retained fetus: DIC, septic abortion
**Recurrent Abortion**

- Three or more consecutive spontaneous abortions

- Risk of spontaneous abortion based on chance is 15% for 1st sab, 2.3 % 2nd sab, 0.34% in 3rd sab.

- **Risk factors**
  - Genetic factors
  - autoimmune abnormalities (antiphospholipid syndrome)
  - anatomic abnormalities (septate uteri, Asherman syndrome)
Recurrent Abortion

- **Prognosis**: Majority of women with this diagnosis who attempt pregnancy will have successful outcomes.

- **Treatment**: Karyotyping of both parents: 3% chance that one parent has a balanced chromosomal translocation.
- **Uterine anomalies**: Operative hysteroscope.
- **Autoimmune abnormalities**: Antiphospholipid antibodies (heparin and low dose aspirin).
INDUCED ABORTION

- Medical or surgical termination of pregnancy before the time of fetal viability
- Roe vs Wade in 1973 – abortion legal for nonviable fetus
- In 2007, 827,609 induced abortions were reported by CDC

Indications
1. Maternal life saving procedure:
   - Cardiac decompensation
   - Advanced hypertensive vascular disease
   - Invasive cervical carcinoma
2. Rape or Incest
3. Significant fetal anomalies
4. Elective
INDUCED ABORTION

Surgical methods

- First trimester
  - Suction dilation and curettage

- Second trimester
  - Suction dilation and extraction
INDUCED ABORTION

- Outpatient medical abortion
  - Pregnancies less than 49 days

- Three types of medical abortion
  - Mifepristone (RU-486): inhibits progesterone receptors – thins uterine lining and prevents embryo from staying implanted and growing
  - Methotrexate: folate antagonist
  - Misoprostol: Prostaglandin E1 – stimulates uterine contraction and expulsion of uterus
INDUCED ABORTION

Complications
- Bleeding
- Uterine perforation
- Cervical laceration
- Hemorrhage
- Incomplete removal of products of conception
- Infection

Consequences for future pregnancies
- Neither fertility, increased 2nd trimester spontaneous abortion, or subsequent ectopic pregnancies are affected.
- Multiple sharp curettage abortion – increased risk of placenta previa
SEPTIC ABORTION

- Complete or incomplete abortion, induced abortion, criminal abortion
- Organisms: anaerobic bacteria, *Haemophilus influenzae*, *Campylobacter jejuni*, group A strep
- Symptoms
  - Uterine infection
  - Peritonitis, endocarditis
  - Sepsis, shock, hemorrhage
  - Acute renal failure
- Treatment: Broad spectrum parenteral antibiotics, IVF, evacuation of the uterus
Questions?