VAGINAL BLEEDING – FIRST TRIMESTER

20-40% of all pregnancies have bleeding in the first trimester. Half with bleeding will miscarry at < 12 weeks. Most common causes of bleeding are ectopic pregnancy, threatened or impending miscarriage, physiologic (related to implantation of the pregnancy), cervical, vaginal or uterine pathology. Other rarer causes include trophoblastic disease, and carcinomas. 80% of spontaneous abortions (SAB's) occur in the 1st trimester.

EVALUATION:
Determine extent of bleeding. If symptomatic or if vital sings unstable- patient needs immediate resuscitation (2 large bore IVs, orthostatics, HgB, Type and Screen, fibrinogen, platelets, PT, PTT)

History:
- Menses history (LMP, normal/light/heavy). Late period suggests conception 1 month ago.
- Contraception/ pregnancy history/ medications/ recent febrile illness
- Recent abortion attempts
- History of tubal surgery, PID, IUD, Depo Provera, minipill, history of infertility, and smoking (increased risk of ectopic pregnancy; bleeding typically appear six to eight weeks after a missed period).
- Onset/duration/severity of pain and bleeding
- Tissue passage (send to pathology if available). Hamburger like=tissue, liver like=clot
- Rubella immunization/ABO and Rh types
- General health/chronic disease

Physical:
- Vital signs, orthostatic vitals
- General physical exam for cardiopulmonary health, signs of acute abdomen
- Speculum exam: severity of bleeding, condition of cervix (friable, tissue passed, os open, purulence, polyps), cul-de-sac bulging? Get GC/Chlam, wet prep, Group B Strep
- Bimanual exam: size/position/texture of uterus, tenderness, and pelvic mass. Midline pain suggests miscarriage. Lateral pain suggests ectopic
- Doppler: FHT at 10-12 wks EGA increased likelihood of IUP and rules out SAB
- Float test: tissue floats, clot doesn't. May visualize villi.

Additional tests:

- All patients need UPT, blood type, Rh
- Remember Rhogam, if necessary.(50μg for ≤ 12 wks; 300μg for >12 wks)
- If fetal heart rate heard, no additional tests absolutely needed, depending on H&P.
- If no fetal HR heard, βHCG and US to be considered. If suspect ectopic, ultrasound immediately [see ectopic pregnancy section]
- β-HCG
  - <1500 and less than 50% increase in 48 hours, repeat ultrasound
  - >1500 and increasing, but no sac on ultrasound, consider ectopic
  - <1500 and declining, likely ectopic
- Progesterone level <5 ng/ml nonviable, >25 ng/ml viable

Gestational Age in Relation to U/S Landmarks and Serum HCG Levels

Gestational Age by Menstrual Age	Transabdominal Landmarks	Transvaginal Landmarks	Serum HCG ml/U/ml
Less then 5 weeks	None	Possible gestational sac	1000 to 1800
6 to 7 weeks	Gestational sac 5 to 8 mm	Gestational sac 5 to 8 mm with yolk sac	1800
7 weeks	5 to 10 mm embryo in 25 mm gestational sac	Same as transabdominal	Greater than 20, 000
8 weeks	Cardiac motion when embryo reaches 20 mm	Same as Transabdominal	

MANAGEMENT DEPENDING ON CAUSE OF BLEEDING:

1. Ectopic Pregnancy: (see ectopic pregnancy section)
   98% tubal
   EMERGENCY!!!! Potentially life threatening--hospitalize or closely observe as protocol followed (medical vs. surgical management depend on weeks/size of gestation)

2. Spontaneous abortion: (see definitions under SAB section)
   - Threatened Miscarriage-uterine bleeding, closed os, gestational sac, fetal cardiac activity
     - Expectant management, risk of SAB 16% at <8wks, 2-4% at 12 wk
     - Follow-up promptly if pain or bleeding increases
   - Incomplete – uterine bleeding, before 12 weeks, retained products of conception, open os
     - Expectant management. D&C, follow βHCG levels
   - Missed Abortion – In utero death of fetus before 20th week of gestation with retention of pregnancy for prolonged period of time. Closed os

    - Expectant management or medical or surgical management (laminara & aspiration, D&C)
    - No absolute criteria for D&C, Consider with psych stress, bleeding
    - Observation/close follow-up reasonable. Concerns include infection, molar degeneration, severe bleeding
- Complete Miscarriage - usually before 12 weeks of pregnancy, entire contents of uterus expelled. Os may be closed or open.
    - No intervention needed

3. Physiologic bleeding during pregnancy
    - Usually occurs during expected menses, usually lighter than menses
    - May be implantation bleed
    - Expectant management

4. Subchorionic hemorrhage
    - 30% miscarriage rate
    - Often seen on US as wedge or crescent shaped lucent area next to chorionic sac—hemorrhage-undermining placenta more likely to have SAB

5. Friable Cervix
    - Usually noted on exam of cervix
    - Distinguish between infection (GC, Chl, BV, trich, yeast) and dysplasia/ cancer, polyps, or hypervascularity of pregnancy
    - Treat infection, reassure pt that no intrauterine process is occurring

6. Hydatidaform Mole: (see Molar pregnancy section)
    - Need prompt D&C, serial hCG, f/u 12 months with contraception

REFERENCES: ALSO, Uptodate.com, Current medical dx and treatment 2003