Objectives – OB-GYN

- Review how to evaluate and treat patients with:
  - Vaginal discharge
  - Pelvic pain
  - Vaginal bleeding

- Review emergent problems you should identify during pregnancy

Vaginal Discharge

- Vaginitis
  - Yeast
  - Bacterial vaginosis
  - Trichomoniasis
  - Atrophic
- Cervicitis
  - Gonorrhea
  - Chlamydia
  - Herpes
- Physiologic discharge

Therapies: Vaginitis

- Yeast vaginitis
  - clotrimazole 500 mg vaginally once OR
  - fluconazole 150 mg PO once

- BV
  - metronidazole 500 mg PO bid X 7 days OR
  - metronidazole 5 gm vaginally daily X 5 days

- Trichomoniasis
  - metronidazole 2 gm PO
  - Refer partners/no sex till treated

Diagnostic Criteria: Cervicitis

- Many WBC on wet mount
- Cervix looks friable and/or pus is visible
- DNA probe for gonorrhea or chlamydia is positive
- First-void urine OR cervical swab are acceptable samples

Therapies: Cervicitis

- Gonorrhea or chlamydia
  - **Treat for both**
  - Treat empirically: don’t wait for lab results
  - Have low threshold to treat
  - Refer partners/no sex until treated
  - Consider testing for HIV and syphilis
**Therapies: Cervicitis**

- For GC:
  - Ceftriaxone 125-250 mg IM once OR
  - Cefpodoxime 400 mg PO once
- For chlamydia:
  - Azithromycin 1 g PO once OR
  - Doxycycline 100 mg PO BID X 7 days

**Pelvic Pain**

- Broad differential
  - Ovarian cyst
  - Ovarian torsion
  - Pelvic inflammatory disease (PID)
  - Tubo-ovarian abscess
  - Ectopic pregnancy
  - Endometriosis
  - Dysmenorrhea
  - Mittelschmerz
- Other Ddx
  - UTI
  - Appendicitis
  - Gastroenteritis
  - Constipation
  - Kidney stones
  - Other GI causes
  - And many more...

**Pelvic Pain: Evaluation**

- Labs as indicated, check B-HCG, UA
- Physical exam includes pelvic exam
- Emergent ultrasound if concern for
  - Ectopic pregnancy
  - Tubo-ovarian abscess
  - Ovarian torsion
  - Hemorrhagic ovarian cyst
- If ultrasound positive for these, call OB

**Pelvic Inflammatory Disease**

- Spectrum of disease
- Infection of uterus and/or fallopian tubes, including tubo-ovarian abscess
- Gonorrhea, chlamydia, and polymicrobial including anaerobes are possible
- May lead to sepsis, ectopic pregnancy, chronic pelvic pain, and infertility

**Diagnosis of Pregnancy in the ED**

- Urine pregnancy test (screen): 25-50 mIU/ml
- Serum BHCG: 5 mIU/ml
  - First missed LMP: level 100
  - HCG increases 53% every 2D

**Diagnostic Criteria: PID**

Treat for PID if:
- Sexually active AND
- Pelvic pain AND
- Cervical motion tenderness OR uterine tenderness OR adnexal tenderness
Therapy: PID

- Consider inpatient therapy
  - Ill-appearing patients
  - Pregnant
  - Unreliable for treatment and/or follow-up
- For reliable patients, tolerating PO intake:
  - Ceftriaxone 250 mg IM once AND
  - Doxycycline 100 mg PO BID X 14 days AND
  - Metronidazole 500 mg PO BID X 14 days
- Refer partners/no sex until treated

Vaginal bleeding: Not pregnant

- Ddx includes
  - Dysfunctional uterine bleeding
  - Fibroids
  - Menorrhagia
  - Trauma or foreign body
  - Cancer

Vaginal bleeding: Early pregnancy

- 20% of pregnancies complicated by bleeding
- Threatened abortion
- Inevitable abortion
- Incomplete abortion
- Complete abortion
- Ectopic pregnancy

Miscarriage definitions

- Threatened miscarriage
  - HCG is appropriately high
  - Os is closed
- Inevitable/incomplete miscarriage
  - HCG may be low
  - Os is open
- Complete miscarriage
  - HCG is low
  - Bleeding has stopped
  - Os is closed

Miscarriage

- Caution with the term “abortion” with patients when discussing miscarriage: sensitive term
- First-trimester bleeding presents in ~25% of all pregnancies
- Of those, half will miscarry and half will proceed normally
- Experience of miscarriage may be agonizing emotionally, or may be a relief
- Be aware of range of reactions, and provide support as indicated for your patient

Ectopic Pregnancy

- Potentially life-threatening
- Usually occurs in weeks 6-10
- May have pain or bleeding or neither
- Physical exam not sufficiently sensitive
- Must do ultrasound if concerned
- HCG needs to be >1500 to see sac in normal pregnancy by transvaginal U/S (>6500 by transabdominal U/S)
Ectopic locations

Ectopic Pregnancy: Therapy
- May present in shock
  - Resuscitate
- Emergent OB-Gyn consult
- Inpatient surgery OR outpatient methotrexate
- Test Rh status and give Rhogam if (-)

Normal pregnancy
- Anatomic Changes
- Physiologic Changes
  - Cardiovascular, respiratory, hematological, renal, endocrine
- Maternal and fetal consequences

Pregnancy: Physiologic Changes
- Hyperdynamic: increased HR & CO, decreased SVR & BP, especially diastolic
- Hypervolemic: increased RBC & plasma volume; decreased Hct
- Hypercoagulable: increased fibrinogen and clotting factors, decreased PT, PTT
- Hyperpneic: increased minute ventilation, respiratory alkalosis

Urine in Pregnancy
- Dysuria
  - UTI/acute cystitis
  - STI/PID
  - Pyelonephritis: E coli 70%; empiric beta lactam; admission until stable/afebrile 24-48H
- Asymptomatic bacteriuria
  - Treat: Macrobid, Cefpodoxime, Augmentin, Fosfomycin (one dose)
  - Short course antibiotics

Trauma in Pregnancy
- BHCG for women childbearing age; consider effects of radiation
- Vital signs initially underestimate injury
- Early FAST; DPL supraumbilical
- Continuous cardiotocographic monitoring if >24wks
**Pre-eclampsia**

- Hypertension: >140/90
- Pre-eclampsia: hypertension + proteinuria
- Complications of pre-eclampsia:
  - HELLP syndrome: hemolysis, liver enzyme elevation, and low platelets
  - DIC

**Eclampsia**

- Pre-eclampsia plus
  - Seizures
  - Intracranial hemorrhage
  - Renal failure
  - Cardiac arrest
- Treatment
  - High dose IV magnesium
  - Usual therapies for seizures may not work

**Vaginal bleeding in late pregnancy**

- Abruptio placentae
  - Premature separation of placenta from uterine wall, painful
- Placenta Previa
  - Implantation of placenta in lower uterine segment, painless
- Initiation of labor with “bloody show”
- Give Rhogam if Rh-