



EM Clerkship: Gynecologic and Obstetrical Issues



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



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



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



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

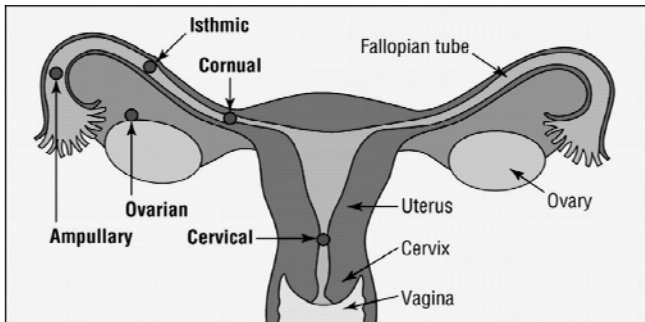
Miscarriage

- 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-

