COMMON MEDICATIONS IN OBSTETRICS & GYNECOLOGY

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OBJECTIVES

- Common medications used in obstetrics
  - Indications
  - Risks
  - Benefits
- Common medications used in labor
  - Indications
  - Risks
  - Benefits
- Common medications used in gynecology
  - Indications
  - Risks
  - Benefits

COMMON MEDS IN OB

- Risk Factors
  - STD/PID, prior ectopic, tobacco use, ART, prior abort/tubal surgery
  - 50% ectopic pregnancies do NOT have risk factors
- Diagnosis
  - Quantitative hCG
  - Progesterone
  - Ultrasound

ECTOPIC PREGNANCY

- Methotrexate
  - Inhibits DNA synthesis, repair & cell replication
  - Targets rapidly proliferating tissues
  - First used to treat ectopic 1982
  - 71-94% effective in treatment ectopic pregnancy
  - Contraindications: Bfing, immunodeficient, liver disease, blood dyscrasia, active pulmonary disease, peptic ulcer, renal dysfx
  - Side effects: N/V, abdominal pain 2-3 d after treatment

- Risks
  - Side effects of medication
  - Treatment failure
  - Risk of tubal rupture
  - Need for surgical intervention
- Benefits
  - Avoidance of surgery
  - When compared with surgical treatment, no difference in overall tubal preservation, tubal patency, repeat ectopic or future pregnancies
1ST TRIMESTER ABORTION

- Mifepristone
  - Antiprogestrone causing decidual necrosis, cervical softening, uterine contractility
- Misoprostil
  - Prostaglandin E1 analogue
- FDA Regimen: 600mg mifepristone + 400mcg misoprostol 48h later
  - 92% effective in gestations up to 49d

- Misoprostil 800 mcg vaginally
  - Repeat dose 48 hours later if necessary
  - 84% effective at day 30


MISSED ABORTION

MEDICAL

- Inexpensive
- Avoidance of surgery
- Time to completion
- May require surgery
- Physical/emotional discomfort

SURGICAL

- Expensive
- Risks of surgery
- Immediate
- Physical/emotional discomfort

https://www.youtube.com/watch?v=5yACDJ0JTz0

DEPRESSION

Prevalence
17% adults (Women > Men)
Highest rates women 25-44y
10-16% pregnant women meet diagnostic criteria
- >50% have depressive symptoms
- 45% report chronicizing effects

- Unmarried Depression
- Posttrauma Risk
- LBV Issues
- Fetal Growth Restriction
- Postnatal Complications
- Inadequate/untreated psychiatric illness
- Poor compliance with prenatal care
- Inadequate nutrition
- Exposure to additional medication or herbal remedies
- Increased alcohol & tobacco use
- Increased maternal stress
- Increased maternal bonding
- Family environment disruption
CLASSIFICATION MEDS

- Class A
  - Controlled studies show no risk
- Class B
  - No evidence of risk in humans
- Class C
  - Risk cannot be ruled out
- Class D
  - Positive evidence of risk
- Class X
  - Contraindicated in pregnancy

TREATMENT DEPRESSION

- Limited evidence of teratogenic effects or adverse effects with BF
- Paroxetine (Paxil)
  - 1.5-2 fold risk congenital cardiac malformations (1st trimester)
  - Changed from Category C to Category D
- SSRI exposure late in pregnancy
  - Class C ("risk cannot be ruled out")
  - Transient neonatal complications
    - Jaundice, mild respiratory distress, TTN, weak cry, poor tone, NICU admissions

TREATMENT DEPRESSION

- Tricyclic Antidepressants
- Antipsychotic Antidepressants (bupropion, venlafaxine)
  - Bupropion class B but L3
- Psychotherapy
- Electroconvulsive therapy

POSTPARTUM DEPRESSION

- Major episode depression within 6 weeks postpartum
- Screening
  - Edinburgh Depression Scale, Beck Depression Inventory, Postpartum Depression Screening Scale
  - 68-100% detection rate
  - 78-90% specificity

DEPRESSION & BREASTFEEDING

- Medication exposure considerably than transplacental exposure
LACTATION RISK CATEGORIES

- L1: Safest
- L2: Majority of antidepressants
- L3: Moderately safe
- L4: Possible harm
- L5: Contraindicated

COMMON MEDS ON L&D

https://www.youtube.com/watch?v=wwQdoFIN6Vw

PAIN MANAGEMENT

- Epidural
  - Most effective
  - Low-dose local anesthetic + opioid
  - Labor prolonged 40-90 minutes
  - Twice-fold increased need for oxytocin augmentation
- Spinal
  - Long acting local anesthetic
  - Duration of action 30-250 minutes
  - Cesarean delivery, 2nd stage labor, rapid labor, PPROM

Side Effects Regional Anesthesia

- Hypotension
  - Incidence at time of onset: 10-50%
    - 20-50% (spinal), 28-61% (labor epidural) (epidural)
    - 8% incidence of transient FHR deceleration
    - Ephedrine, position change, fluid bolus
  - Postdural puncture headache
  - Analgesics, topics, headache, hydration
  - Blood pressure: 50% require
  - 40-70% effective

Common Side Effects Regional Anesthesia

- Fever (24% nulliparous)
- Pruritis
- Inadequate pain relief (39%)
- Additional opioid usage

Rare Side Effects Regional Anesthesia

- Total spinal blockade
- Hematoma
- Bleeding disorders, thrombocytopenia
- Allerists
- Neurotoxity
PAIN MANAGEMENT

- Local Anesthetic Agents
  - Lidocaine: 20–40 min duration
  - Pudendal block
- Parenteral Agents
  - Meperidine: most widely used, increased n/v, neonatal depression
  - Fentanyl: short half-life
- Nitrous Oxide
- General Anesthesia
  - Loss maternal consciousness
  - Readily cross placenta
  - >8 minutes to delivery time associated w/neonatal depression
  - Mortality rate 32 per million births vs 1.9 per million births using regional anesthesia
  - Failed intubation, pulmonary aspiration

COMMON MEDS IN GYN

- Birth control pills
- OrthoEvra patch
- Nuvaring

CONTRACEPTION

- Depo Provera (FDA black box warning)
  - Birth control shot every 3 months
  - Very effective with failure rate 2–3%
  - Evidence shows partial or full recovery of BMD after discontinuation
  - Pregnancy decreases BMD by 2–3%
  - Breastfeeding decreases BMD by 5–10%
  - Means: safe, effective form of birth control and recommend daily exercise, adequate calcium and vitamin D intake

NEXPLANON

- Copper IUD
- Effective for 10 years

PARAGUARD

- Radiopaque
- 68 mg etonogestrel
- Effective 3 years
- Backup contraception for 1 week
- 10-20% remove for bleeding irregularity

- Mechanism of action
  - Interferes with sperm transport & fertilization
  - Does not interfere with implantation
**PARAGUARD**
- FDA approved for Emergency Contraception
- If inserted within 72 hours of unprotected sex, at least 75% decreased risk pregnancy

**PROGESTERONE IUDS**

**SKYLA**
- Polyethylene “T”
- 13.5 mg levonorgestrel
  - Releases 14 mcg/d
  - Effective 3 years
- FDA approved for amenorrhea

**MIRENA**
- Polyethylene “T”
- 52 mg levonorgestrel
  - Effective 5 years
  - Releases 20 mcg/d
- FDA approved for menorrhagia

**DEBUNKING IUD MYTHS**
- It is safe to place IUDs in nulliparous women
  - No studies show increased risk of PID in this population
- It is safe to place IUDs in adolescents
- No evidence that IUD use associated with future infertility
- No major advantage to insertion with menses
- Backup contraception for 1 wk with mina, skylla, nexplanon unless inserted w/menstrual menses; immediately after childbirth or abortion or immediately upon switching from another hormonal contraceptive

**EMERGENCY CONTRACEPTION**

**Plan B**
- Initiate within 72 hrs unprotected intercourse
- If no menses in 21 days, then evaluation

**Paraguard**
- Initiated within 7 days unprotected intercourse

**Options for emergency contraception**

<table>
<thead>
<tr>
<th>Method</th>
<th>Dose</th>
<th>Reported efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levonorgestrel</td>
<td>0.75 mg given twice, 12 hours apart or 1.5 mg given all at once</td>
<td>~95% reduction of pregnancy prevented</td>
</tr>
<tr>
<td>Emergency plus progesterone (-plan b regimen)</td>
<td>0.75 to 1.0 mg depending on weight and body fat distribution; levonorgestrel in adolescents, younger women, 12 hours after intercourse</td>
<td>~95% reduction of pregnancy prevented</td>
</tr>
<tr>
<td>Mifepristone</td>
<td>Single 600 mg tablet</td>
<td>95% to 100% reduction at least 99% percent</td>
</tr>
<tr>
<td>Copper intrauterine device</td>
<td>Inserted within 120 hours after intercourse</td>
<td>~95% reduction of pregnancy prevented</td>
</tr>
<tr>
<td>Emerine</td>
<td>Single oral dose of 37 mg</td>
<td>~95% to 98% reduction</td>
</tr>
</tbody>
</table>

*Not available for emergency contraception in the United States.*
**GARDISIL**

- Gardasil
  - 3 injections over 6 mos
  - Protects vs HPV 6, 11, 16, 18
    - HPV 6 & 11 cause 90% condyloma
    - HPV 16 & 18 cause 70% cervical cancer
  - Administer between 11-26 yrs
    - Variable insurance coverage
  - 70% protection vs cervical cancer & condyloma

- 57 million doses administered (June 2006 to March 2013)
  - 22,000 adverse events reported
    - 92% non serious (fainting, pain, swelling)
      - "Based on all of the information we have today, CDC recommends HPV vaccination for the prevention of most types of cervical cancer"

**HERPES TREATMENT**

- **First Episode**
  - Acyclovir 400mg tid x 7-10d
  - Acyclovir 200mg 5x/d x 7-10d
  - Famciclovir 250mg tid x 7-10d
  - Valacyclovir 1g bid x 7-10d

- **Episodic Therapy**
  - Acyclovir 400mg tid x 5d
  - Acyclovir 800mg bid x 5d
  - Acyclovir 800mg tid x 2d
  - Famciclovir 125mg bid x 5d
  - Famciclovir 1000mg bid x 1d
  - Valacyclovir 500mg bid x 3d
  - Valacyclovir 1g qd x 5d

- **Suppressive**
  - 70-80% ↓ recurrences
  - Acyclovir 400mg bid
  - Famciclovir 250mg bid
  - Valacyclovir 500mg – 1 g qd

**SYPHILIS TREATMENT**

- PCN 2.4 million U IM
- Jarisch-Herxheimer Reaction
  - Acute febrile reaction with HA, myalgia w/in 24 hrs of treatment
  - May induce labor or cause fetal distress
- Partner Treatment
  - Exposure w/in 90 d
  - Exposure >90 days if no testing available or unsure follow-up
  - Reexamine clinically & serologically 6 & 12 months posttreatment
- If persistent symptoms or sustained 4-fold ↑ in titers, treatment failure or reinfection
  - Retreat with PCN 2.4 MU IM qweek x 3 wks
  - Lumbar puncture for csf analysis
**Syphilis Treatment**

- **Non-Pregnant**
  - Doxycycline 100mg bid x 14d
  - Tetracycline 500mg qid x 14d
  - Ceftriaxone 1g qd x 8-10d
  - Azithromycin 2 grams

- **Pregnant**
  - **DESENSITIZE**
  - **Inpatient**
  - Oral regimen easier/safer
  - Takes 4 hours
  - Obs 30 min before parenteral admin

**Chlamydia Treatment**

- Azithromycin 1 gram OR
- Doxycycline 100mg bid x 7 days
- Erythromycin 500mg qid x 7 days
- Ofloxacin 300mg bid x 7 days
- Levofloxacin 500mg daily x 7 days

No sex for 7 d from treatment & until partners treated
Test of cure 3-4 wks after treatment if pregnant

**Gonorrhea**

- Treatment
  - Ceftriaxone 125mg IM x 1 OR
  - Cefixime 400mg po x 1
  - PLUS CT treatment

**PID Treatment**

- **Criteria for Hospitalization**
  - Surgical emergency cannot be excluded
  - Pregnant
  - Non-compliant
  - Unable to tolerate po meds
  - Tuboovarian abscess

**PID Treatment (In-Patient)**

- Cefotetan 2 g IV q 12 OR Cefoxitin 1 g IV q 6 hrs
- Doxycycline 100mg po q 12
- Alternative Regimens
  - Clarithromycin 500mg IV q8
  - Gentamicin 2mg/kg load then 1.5mg/kg q8
  - Ampicillin/Sulbactam 5g IV q8 + doxycycline 100mg q12
- IV therapy until 24 hrs after clinical improvement then doxycycline to complete 14 days therapy
  - If TOA, consider adding clindamycin or metronidazole

**PID Treatment (Out Patient)**

- Reevaluate in 72 hrs
  - If no improvement, confirm diagnosis, consider inpt tx
  - Ceftriaxone 250mg IM x 1 + doxy 100mg bid +/- flagyl 500mg bid x 14d
  - Cefoxitin 2g IM x 1 + Probenecid 1g po x 1 + doxy 100mg bid +/- flagyl 500mg bid x 14d
  - If parental cephalosporin not feasible and prevalence of GC low, then levof 500mg daily or ofloxacin 400mg bid +/- flagyl x 14 days
HUMAN PAPILLOMA VIRUS

Patient Applied Treatment

- Podofilox 2x/d x 3d, no treatment x 4d (up to 4x)
  - 45-90% cleared
  - 30-60% recurrence rate
- Imiquimod qhs 3x/week up to 16 wks
  - 70-85% cleared
  - 5-20% recurrence rate

Physician Applied

- Cryotherapy q1-2wks
  - 90% cleared; 40% recur
- TCA
  - 60-80% cleared
- Surgical excision
- Laser therapy
- CUSA

MENOPAUSE

Nonhormonal Options

- SSRIs
- Paroxetine (PDE)
- Gabapentin
- Clonidine
- Phytoestrogens

Systemic HRT

- Estrogen + Progesterone
- Estrogen
- Progestin
- Midcycle

Risks

- Thromboembolic
- Breast cancer

Local HRT

- Estrace/Premarin vaginal cream
- Vagifem
- Osphenia

Questions?

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