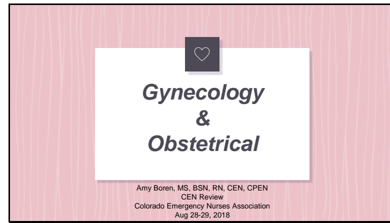
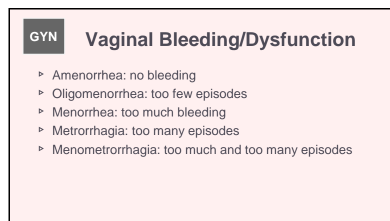
Slide 1



Slide 2

Slide 3



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Slide 4

Vaginal Bleeding/Dysfunction

- Normal <60ml/day for approx. 5 days
- Heavy bleeding: saturation of pad/tampon per hour for multiple consecutive hours or 12 tampons/day
- Postmenopausal bleeding consider malignancy

Typical pad holds 5-15ml, tampon 5-10ml
Assess: LMP, sexual/reproductive hx, contraception hx, pain, fever, link to intercourse
Quantity (spotting vs flow, #pad/tampons, comparison to normal menses), Quality: color, presence of clots/tissue

Slide 5

Vaginal Bleeding/Dysfunction

- Assessment
  - History
  - Quantity, duration, quality
- Workup
- Tx:
  - BCP
  - Iron (if anemic)
  - Monitor hemodynamics
  - Dilation and curettage

Workup: preg test, CBC, coags, tyroid/liver function, hormone levels (FSH, LH), UA, STI screening, pelvic US, pelvic exam

Slide 6

Vaginal Bleeding/Dysfunction

- Less than 21days between menses is considered dysfunctional
- Excessive, prolonged, bleeding
- Anovulation

Anovulation: Faluire of corpus luteum to develop. Lack of normal progesterone production→excessive estrogen□endomertrial hypoplasia, irregular endometrial shedding

Slide 7

GYN

Foreign Bodies

- Common objects
- R/O abuse
- Assessment
- Treatment
  - Pelvic exam, maybe US
  - Warm water irrigation
  - Forceps removal
  - Foley catheter beyond object
  - Abx and pain meds if appropriate

Abuse questions: intentional vs accidental, evidence of trauma, repeated incidents
Assess for pain (none expected), hx of repeated infections

Slide 8

GYN

Vaginal Infections

Criteria	Normal	Bacterial Vaginosis	Trichomonas Vaginitis	Candida Vulvovaginitis
Discharge	White or clear	Thin homogeneous, white, adheres to vaginal wall	Watery, yellow, green, gray **frothy**	White, cottage cheese, sticks to vaginal wall
Odor	None	Fishy	None or Fishy	None
Chief Complaint	None	Itching, foul odor	Abnormal discharge, dysuria, itching	Itching, burning, discharge

Possible causes: STI, Foreign bodies, chemicals, hormone changes, alteration of vaginal flora
Tx with abx

Slide 9

GYN

Vaginal Infections
Discharge Teaching

- Clean front to back
- Avoid sprays or douches
- Wear cotton underwear
- Remove wet clothing promptly
- Abstinence until tx complete
- Urinate after intercourse or swimming
- If taking Metronidazole (Flagyl), avoid ETOH

Slide 10

Sexually Transmitted Infections

GYN

- Herpes
- Gonorrhea
- Chlamydia
- Syphilis

Slide 11

STI: Herpes

GYN

- HSV-1vs HSV-2: no longer delineate—too much overlap
- Clear vesicles on an erythematous base
- 1st attack most severe. Infections will reoccur
- s/s last 2-3 weeks, but up to 6
- Infection triggers: UV light, fever, friction, trauma, stress, menses
- Teach patient not to touch vesicles, let rupture naturally. Safe sex practices
- Antiviral medications help s/s—no cure

Old differentiation
HSV-1: oral lesions (spread through oral contact/saliva)
HSV-2: genital lesions (sexual contact)

Slide 12

STI: Herpes

GYN

- Discharge Teaching
  - No intercourse during infection
  - Increased risk for cervical cancer
  - Keep lesions clean and dry
  - Loose clothing (prevent friction/irritation)
  - Soaks/sitz baths or cold packs

Slide 13

GYN

STI: Syphilis

Multiple Stages

1. Chancre develops 10 days – 6 weeks of exposure
2. 2-8 weeks after chancre develops (palms and soles):
   - Rash on entire body including palms and soles
   - Mucus patches, fever malaise, body aches
3. Latent stage: diagnose with blood test. Can last 1 month – 20 years
   - Penicillin IM q week x3 weeks, unless allergic with anaphylaxis
4. Tertiary stage: destructive lesions on the aorta, CNS, and skeletal structures

Jarisch-Herxheimer Reaction

Jarish-Herxheimer Reaction: (malaise, fever, faintness, and intensification of rash) can occur within a few hours of treatment. Treat with aspirin. Warn patients about this reaction and reassure it is not an adverse reaction or allergy to penicillin
Alternate abx: doxycylin, cephtriaxone, Azithromycin (PCN is the best!)

Slide 14

GYN

STI: Gonorrhea & Chlamydia

- Thick yellow/white discharge
- Chlamydia in women
- If you find one, expect the other
- Antibiotics
  - Caution if using hormone birth control

Thick yellow to white discharge 2-7 days after exposure
CC: itching, discharge, abdominal pain, nausea, vomiting and cervical motion tenderness
Chlamydia can cause fertility problems and increases risk of pre-term labor
Treat with ciprofloxacin OR azithromycin AND doxycycline

Slide 15

GYN

Pelvic Inflammatory Disease

- N. Gonorrhoae & C. Trachomatis (Gonorrhea/chlamydia)
- At risk populations
- c/o abdominal pain and vaginal discharge
- Cervical motion tenderness
- Pelvic shuffle
- Antibiotics and STI teaching

Infection of endometrium, fallopian tubes, ovaries, pelvic connective tissue, or pelvic peritoneum
Caused by GC/Chlamydia
Risk factors: adolescent, multiple partners, high frequency intercourse, recent STI exposure, non-barrier contraception, IUD, recent gyn procedure, douching, smoking, proximity to menses (day 5-7)
c/o foul smelling discharge, dysuria, fever, vomiting. Pain increases with movement
No specific test for PID, clinical presentation

Slide 16

GYN

Endometriosis

- Hx of dysmenorrhea and cyclic abdominal cramping attacks
- Tx with analgesia and f/u with OB/GYN
- May require surgical intervention

Tissue grows outside the uterus on other organs or structure in the body

Slide 17

GYN

Ovarian Cyst

- Often rupture during intense activity
- Treat pain
- Follicle cyst
- Corpus Luteal Cyst

Fluid filled sac in the ovary, usually absorbs in 1-3 months
Thin walled so likely to rupture during activity/intercourse
NSAIDS or Opioids as appropriate
Follicle cyst: most common, likely during 1st week of cycle
Corpus Luteal cyst: less common, 2nd half of cycle, blood filled, monitor for hypovolemia/anemia

Slide 18

GYN

Sexual Assault/Battery

- Underreported
  - Fear
  - Shame
  - Future/continued abuse
- Nursing goal
  - Psychosocial support, help patient make informed choices, health maintenance. Consider offering a counselor/SAFE/SANE before law enforcement.
- ESI 2
- Limit caregivers

Slide 19

GYN

Sexual Assault/Battery

- Sexual Assault Nurse Examiner (SANE) or Sexual Assault Forensic Examiner (SAFE)
  - Special training on evidence collection and local law
  - Obtain hx and collect evidence
  - Patient treatment and f/u care
- Ask simple open ended questions
- Document in quotes
- Screen for date rape drugs (rapid UA)

Slide 20

GYN

Sexual Assault/Battery

- Evidence Collection
  - Everything is evidence
  - Single items in paper bags—secure tape with date, time, signature
  - Complete head to toe with detailed notes, drawings if necessary
  - UV light
    - Semen
    - Other evidence
  - Photographs: injuries, colposcopic images
  - Collect: skin, pubic hair, body hair, saliva, blood, finger nail clippings
  - Chain of evidence in documentation
- Discharge teaching

Interventions and Discharge teaching: clothing to wear home, pregnancy and STI prevention, follow up with GYN and mental health counselor

Slide 21

GYN

Trauma

- Consensual?
- Non-judgmental care
- Intestinal Perforation (OR if needed, hemodynamics, abx)
- Water Pressure Injuries (laceration or hemorrhage, OR if needed, abx)
- Straddle injuries (ice, monitor hematoma)

Slide 22

GYN

Bartholin Cyst

- Blocked Bartholin gland
- Not an infection, but can get infected
- To tx or not to tx
  - Maybe none
  - I&D with drain for 2-4wks
  - Surgical removal

Glands at 4 and 8 o'clock

Slide 23

Obstetrical

23

Slide 24

OB

Pregnancy Norms

- Hypervolemic
- Resting HR increases by 10-20bpm
- Supine Hypotension
- Increased RR and O_2 needs

- Pregnancy patients can loose 30-40% of their volume before their BP show significant change
- HR increases to meet metabolic demand and increase cardiac output
- At 20 weeks the uterus can compress the aorta causing hypotension (pale, N/V, diaphoretic)
  - Displace uterus by tilting pt or manual displacement if unable to tilt

Slide 25

OB

Pregnancy Pearls

- Subtract 3 months form LMP and add 7 days for EDC
- FHT should be 120-160
- FHT can be heard at 10-14 weeks
- Continuous fetal monitoring at 20 weeks
- pH of amniotic fluid is 7.5 (urine is 4.6-6.2)

Slide 26

OB

Pregnancy Pearls

- Fundal Height
  - 12 weeks: symphysis pubis
  - 20 weeks: umbilicus
  - 36 weeks: costal margin

A fundus palpated between the umbilicus and the xiphoid process is considered viable

Slide 27

OB

Ectopic Pregnancy

- s/s abd pain, fatigue, dizziness, lightheadedness or syncopy
- Typically presents at 4-8 weeks
- Obtain βHCG
- ESI 2
- Treatment maybe surgical or methotrexate
  - Stop prenatal vitamin

- Ectopic pregnancy: fertilized ovum implants outside of the uterus
- Typical onset 4-8 weeks, up to 12
- The antidote for methotrexate is folate with is in prenatal vitamins

Slide 28

OB

Hyperemesis Gravidarum

- Severe vomiting <20 weeks
- Peaks at 8-12 weeks
- s/s: malnutrition, dehydration, >5% weight loss, metabolic acidosis, hypokalemia, alkalosis, and constipation
- Complications
- Risk factors

- Severe vomiting before the 20th week
- Complications: GI bleed, Mallory-Weiss tears, Boerhaave's esophageal disruption (ruptured esophagus—gastric contents can leak into chest cavity), Wernicke's encephalopathy (thiamine deficiency)
- At risk: primiparous, young, non-smoking, multiple gestations, hx of hydatidiform mole, underweight

Slide 29

OB

Abortions

- Threatened
- Inevitable
- Incomplete
- Complete
- Missed
- Septic

Spontaneous abortion: loss of fetus before <20 weeks or fetal weight of 500g (500ml bag NS)
Risk factors: infection, advanced maternal age, malnutrition, substance abuse
Threatened: slight vaginal bleeding, mild uterine cramping, <u>closed cervical os</u>
Inevitable: moderate vaginal bleeding, moderate cramping, <u>open cervical os</u>
Complete: slight vaginal bleeding, moderate cramping, closed cervical os, complete expulsion of all POC

Missed: slight vaginal bleeding, mild cramping, closed cervical os but prolonged retention of POC
Septic: foul smelling vaginal bleeding/discharge, no contractions, cervical os, fever and s/s of infection

Slide 30

OB **Abortions**

- RhoGAM if Rh negative
- Manage Hemodynamics
- Oxytocin or Methergine for hemorrhage
- Patient Education
  - Quant Preg
  - Threatened: bedrest and pelvic rest until bleeding resolves, no tampons, save clots/tissue, return if needed
  - Complete: same as above, check temp x4/day, cramping expected

Check temp to monitor for infection, return for temp >38.1 (100.6)
Return for increasing pain or bleeding, fever, foul odor
Psychosocial support or grief counseling

Slide 31

OB **Preeclampsia & Eclampsia**

- HTN, proteinuria (late sign), non-dependent edema (>20 weeks)
- Eclampsia = seizure and/or coma
- Placental dysfunction
- Risk factors
- Tx: Magnesium Sulfate, benzodiazepines,

- SPB >140, DBP >90 or >30 SSBP and >15 DBP from baseline (x2 4-6 hours apart with pt on her side)
- Preeclampsia → eclampsia if untreated
- Risk factors: personal/family hx of preeclampsia, HTN, extremes of reproductive age (<20 or >40), multiple gestations, diabetes, lupus
- Maintain systolic BP between 90-100

Slide 32

Preeclampsia & Eclampsia

- Assess: BP, hyperreflexia
- Tx: Magnesium Sulfate, benzodiazepines, antihypertensives
- Reduced activity or bedrest
- Return to ED for HA, vision change, increased swelling of face/hands, contractions, bleeding.

Hyperreflexia Brachial or Achilles, look for clonus
Tx clonus with $MgSO_4$ until clonus is no longer present
Monitor for HELLP

Slide 33

HELLP Syndrome

- Severe preeclampsia = HELLP
- **H**emolysis, **E**levated **L**iver Enzymes, and **L**ow **P**latelets
- HELLP → Eclampsia
- Tx: $MgSO_4$
  - Monitor for toxicity
  - Q15 vitals
  - Antidote: Calcium Gluconate

s/s: N/V, HA, RUQ pain, vision changes, swelling in extremities and face, decrease urine output, anxiety, hyperreflexia
Monitor for signs of toxicity: loss of patellar reflex, resp depression, cardiac arrest
Other meds: Benzos (for seizures)
Antihypertensives (hydralazine, labetalol, nitroprusside)

Slide 34

Preterm Labor

- Uterine contractions > 6/hr
- Abdominal/low back pain/pressure
- Vaginal bloody show or bleeding
- Cervical dilation or effacement
- Interventions
  - Tocolytics and glucocorticoids

Assess: LMP, EDC, Preg hx, dilation/effacement of cervix, contractions
Interventions: US—confirm gestational age, bedrest, cerclage, maternal/fetal monitoring, prep for delivery
Tocolytics: delay birth 24-48 hours
Glucocorticoids: hasten fetal lung maturinty

Slide 35

OB **Emergent Delivery**

- Signs
- If you see the cord
- Pant breathing
- Preserve the perineum
- Check for cord around neck
- Suction?
- 2 cord clamps?
- Wait for the placenta

Signs: fully effaced and dilated cervix, palpable fetal parts in pelvic floor, bulging of the perineum, widening of the vulvovaginal area
If you see the cord: 1. alleviate pressure—manual, trendelenburg, knee chest position. 2. high flow O2 3. cover cord with moist NS gauze. 4.instruct pt not to push.
Preserve the perineum: squeeze tissue together to prevent tearing, counter pressure on the head. Don't pull baby. After head delivered check for the cord around neck and slide off if needed.
Suction only if needed, mouth before nose (1 hole before 2 holes)
Clamp the cord? Wharton's jelly (natural clamp from cool room)
Wait for placenta (5-30min)—don't rush it or tug

Slide 36

OB **Emergent Delivery Care of Neonate**

- Dry and Stimulate and **WARM**
- If not breathing use BVM (no O_2)
- After 30 seconds check a pulse
- If less than 60 begin CPR
- If 60-100 continue BVM
- IO no recommended
- Drugs are not usually a priority

Stimulate by drying—then flick feet or rub back
Initial neonate pulse ox 60%
Breathe 2, 3, breathe 2, 3
Compression ration 3:1 (90 compressions to 30 ventilations in 1 min) 1&2&3&breathe, 1&2&3&breathe

Slide 37

OB

Emergent Delivery APGAR Score

	0	1	2
Heart Rate	Absent	<100	100 bpm
Respiratory Rate	Absent	Irregular, slow	Crying good
Muscle Tone	Flaccid	Some flexion	Active motion
Reflex Irritability	No response	Grimace/Weak cry	Sneeze, cough, cry
Color	Blue	Pink body/blue extremities	Pink

Score	Prognosis
7-10	Good
4-6	Moderate
0-3	Poor

- Assess at 1min and 5min
- Predicts what resources an infant will need and prognosis
- Fair game to ask you to calculate an APGAR

A-appearance/skink color
P-Pulses
G-grimace/reflex/cry
A-activity/muscle tone
R-resp rate

Slide 38

OB

Abruptio Placenta

- Premature separation of the placenta from the uterus disrupting circulation → fetal demise
- Dark red vaginal bleeding
- Sudden onset sharp pain
- Signs of shock

Slide 39

OB

Placenta Previa

- Placenta attaches to lower uterine wall blocking the cervical os
- Painless bright red bleeding
- TX (same as abruptio placenta):
  - monitor/correct hemodynamics
  - Avoid pelvic exam in 2nd and 3rd trimester
  - Prepare for delivery: vaginal or c-section
  - Pain control
  - admit

Slide 40

OB **Postpartum Hemorrhage**

- Late PPH 24 hours—6 weeks
- Retained products—common cause
- Monitor/treat hemodynamics
- Likely go to OR and Admit
- Interventions

Interventions: tx hemodynamic issues, supplemental O2, uterine massage, uterotonic medications (oxytocin, methylergonovine, carboprost)

Slide 41

OB **Disseminated Intravascular coagulation (DIC)**

- MS change, oliguria, ARDS, prolonged PT, low platelets, and low fibrinogen
- Circulatory stabilization (RBCs, platelets, fibrinogen, coagulation factors)
- Treat underlying cause (trauma or PPH)

DIC reviewed in Medical Emergencies lecture

Slide 42

OB **Postpartum Infection**

- Fever >38° on any 2 days during the first 10 days
- Endometritis
  - Staphlococcus, streptococcus, gram negative organisms
  - Gentamicin and clindamycin
- Wound Infection
  - Wound care and broad-spectrum antibiotics

Slide 43

Postpartum Infection

OB

- Mastitis
  - Usually staph
  - Treatment
    - Frequent milk removal
    - Adequate fluids and nutrition
    - Rest, ice, analgesics

Slide 44

Medications

OB

- Magnesium Sulfate
- Methotrexate
- Methergine

MgSO4: for HELLP syndrome, monitor for toxicity, antidote—calcium gluconate
Methotrexate: use to complete abortions, antidote is folate
Methergine: prevents/controls bleeding, smooth muscle constrictor, helps expel POC/retained placenta, contraindicated with HTN, give PO, IV, or IM

Slide 45

Trauma

OB

- Uterine Rupture
  - High risk of maternal/infant mortality
  - Sudden onset sharp pain
  - Asymmetry of uterus
  - Slowing/absent fetal heart tones
  - Possible vaginal bleeding
- Propper seatbelt use
- Follow TNCC algorithm
- Kleihauer-Betke test

Asymmetry of uterus: can palpate 2 masses or fetal extremities
Seatbelt: under the belly, over the hips. Shoulder strap between breasts and to the side of the belly
KB test: measures if fetal blood has entered maternal circulation

Slide 46

OB

Trauma

- Head injury and Hemorrhagic shock leading cause of maternal death
- Placental abruption and preterm delivery leading cause of mortality in fetal death
- Chest tube placement is 1-2 intercostal spaces higher
- Increased risk of aspiration

Slide 47

OB

Trauma

- Supine hypotension
- The 5 min rule
- ACLS interventions don't change
- Monitor for fetal distress (FHT or toco)
- Cardiac and fetal monitoring should be done for a minimum of 6hr post trauma

Supine hypotension-tilt 15 degrees either direction
5min rule: in an arrest situation a fetus at >24 weeks must be delivered within 5 min to optimize fetal and maternal outcome
ACLS: do not delay compressions, defib, or meds—amiodarone is feto-toxic
A gravid pt has higher blood volume so signs of fetal distress will indicate shock before BP changes

Slide 48

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