Obstetrical Disorders

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Outline

- General Concepts
- Pregnancy-related disorders
- Trauma in the pregnant patient
- Complications during labor and delivery

Rule #1

- Exclude pregnancy in all patients between 10-55 except those with a hysterectomy.
- "I can't be pregnant" that can be pregnant
  - Tubal ligation
  - Regular menses

Rule #2

- All pregnancies are ECTOPICS until proven otherwise
- Previous Pregnancy History
  - 15-17% recurrence rate of ectopic pregnancies

Rule #3

- Fetal heart tones (FHT) are a vital sign in a pregnant patient.

History Pearls

- Previous Pregnancy History
  - 15-17% recurrence rate of ectopic pregnancies
- LMP wrong in 50% of cases

Physical Exam

- VS changes in pregnancy
  - HR **increases** 15–20/min
  - Systolic BP ↓ 5–10 mmHg, diastolic 10–15
- Fetal Heart Tones are a vital sign – Rule #3
- Focus on abdominal and pelvic exam
- Gestational age:
  - 12 weeks uterus just rising out of the pelvic , fetal heart tones
  - 20 weeks fundus at umbilicus

Diagnostic Evaluation

- Pregnancy test
  - Whole blood can be used for commercial POC urine tests!
- CBC, Coags
- Rh type and/or Type and Screen
- UA and culture
- Pelvic exam swabs for cultures
  - GC, Chlamydia, HSV, Wet Prep

Radiographic Studies and Pregnancy

American College of Radiology:

"…no single diagnostic test results in radiation doses that threaten the well-being of the developing embryo or fetus"

Radiology Tests

- >100 Rads = CNS abnormalities
- >10 Rads = Reduction of fetal growth potential
  - Chest X-ray 0.02 - 0.07 mrad
  - Abdominal KUB 100 mrad
  - Hip X-ray, single view, 200 mrad
  - CT head <1 rad
  - CT abdomen/pelvis 3.5 rad

Radiology Tests

- **NEVER** withhold imaging if clinically indicated
- **ALWAYS** shield the abdomen if possible

Pharmacology During Pregnancy

Pharmacology in Pregnancy

- All drugs cross placenta to some degree
- Key factor in determining teratogenicity is fetal EGA at exposure
  - Organogenesis (18-60 days post conception)

Pharmacology in Pregnancy

- FDA categories
  - A= controlled studies show no human risk
  - B= no evidence of risk to humans
  - C=risk cannot be ruled out
  - D=positive evidence of risk
  - X=contraindicated in pregnancy

"Safe Drugs"

- Antibiotics
  - Penicillins, cephalosporins, macrolides, nitrofurantoin
- Analgesics – acetaminophen and opiates
- Antiemetics
- Antihypertensives
  - Labetalol, hydralazine
  - Exceptions – ACE inhibitors, diuretics

Red Flag Drugs

- Anticonvulsants
  - most are teratogenic but must control seizures
- ACE inhibitors
- Corticosteroids
- Oral anticoagulants
- NSAIDs
  - Premature closure of ductus arteriosis

First Trimester Pregnancy-Related Conditions

Ectopic Pregnancy

- **Rule #2** – all pregnancies are ectopics…
- 95% fallopian tubes
- 17.4/1000 pregnancies
- 50% missed at 1st office visit
- 36% at 1st ED visit
- 3-5 % rate with gonadotropin therapy

Ectopic Pregnancy Risk Factors

- History of prior ectopic –7 fold increased risk
- PID – 6 fold increased risk
- Assisted reproduction
- IUD
- Smoking
- Recent elective abortion
- Older age

Ectopic Pregnancy Presentation

- Symptoms
  - Unilateral abdominal pain, amenorrhea
  - Vaginal bleeding
- Physical exam
  - Unilateral adnexal tenderness
- Upon rupture, syncope, severe pain, and hypotension may be present

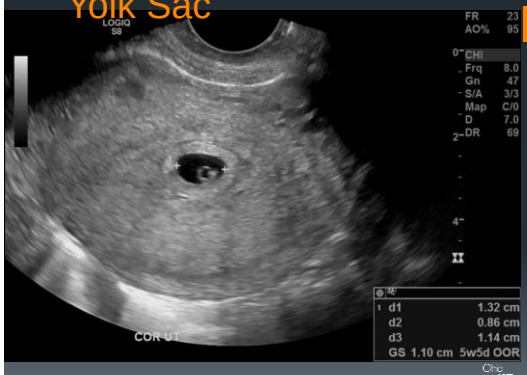
Ectopic Pregnancy Diagnosis

- Positive hCG
- hCG normally doubles every 1–3 days for first 6 weeks
- Fall, plateau MAY indicate an abnormal pregnancy
- Ultrasound=test of choice

Ectopic Pregnancy Diagnosis

- Discriminatory Zone
  - hCG level above which you should see an IUP.
    - Depends on your hospital lab and US tech skills and machines
  - Transvaginal US – 1,500-2,000
  - Transabdominal US – 4,000-6,500

Yolk Sac



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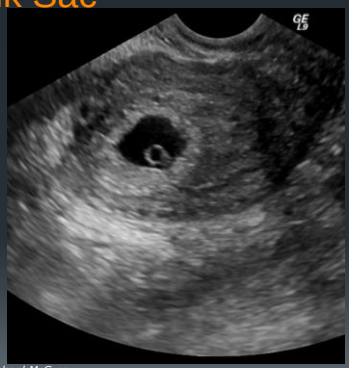
Yolk Sac



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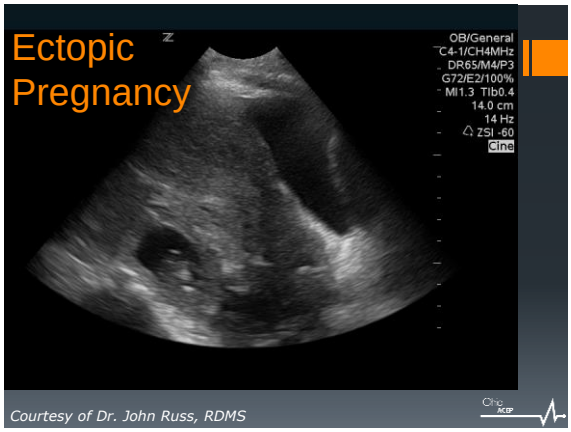
Ectopic Pregnancy



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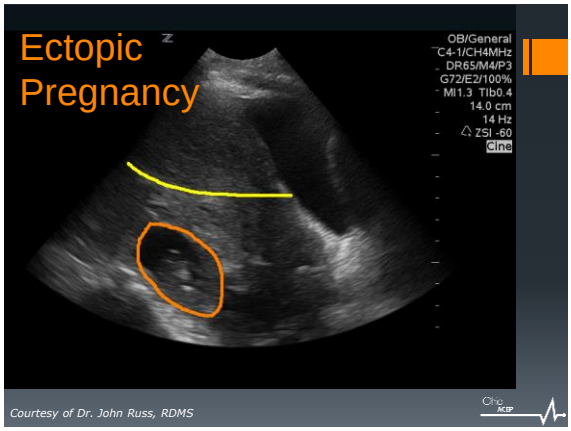
Ectopic Pregnancy



Courtesy of Dr. John Russ, RDMS

Ectopic Pregnancy Management

- Unstable patient
  - 2 large bore IV's
  - CBC, PT, PTT, platelets
  - Type and cross match
- Stable patient
  - Low suspicion and inconclusive testing
  - Outpatient follow up serial hCG and repeat ultrasound
- Treatment–Surgery vs. Medical

Ectopic Pregnancy Management

- Medical Treatment: Methotrexate
  - Stable patient with unruptured ectopic <4cm
  - Transient pelvic pain 3–7 days post therapy normal
  - Minimize # of pelvic exams

First Trimester Bleeding

- 50% spot or bleed in first trimester
- 20% miscarry
- Once FHT heard, risk of miscarriage drops
- Causes of miscarriage
  - Fetal causes – most chromosomal abnormalities
  - Maternal factors–DM, incompetent cervix, uterine abnormalities
  - 90% of couples can have normal delivery

First Trimester Bleeding

- Threatened miscarriage
  - Bleeding with normal pelvic exam, os closed
- Inevitable miscarriage
  - Os open with excessive or prolonged bleeding
- Incomplete miscarriage
  - Some POC remain
- Complete miscarriage
  - All POC expelled
- Missed miscarriage
  - IUFD without expulsion of POC

First Trimester Bleeding

- Labs CBC, quant hCG , type and screen
- Rhogam for all Rh negative mothers
- Rho D immunoglobulin
  - Rh(d) antigen fully expressed at 30 days EGA
  - 25 µg/cc transfused fetal blood required for maternal sensitization (Kleihauer-Betke)
  - Standard dose 300 µg IM within 72 hrs of event
  - If untreated, 1st trimester miscarriage carries 2-3% risk of sensitization for subsequent pregnancies

Septic Abortion

- Retained POCs from missed or incomplete miscarriage
  - Polymicrobial
  - Bleeding, cramping, fever, nausea, malaise
  - Purulent discharge
  - Boggy, tender, enlarged uterus
- Treatment
  - Admission
  - Antibiotics-amp, gent, clinda
  - D & C

Hemorrhagic Corpus Luteum

- Normally corpus luteum persists until end of 1st trimester
  - 3-4 cm mass in adnexa
- May hemorrhage into itself or it may rupture → presentation may mimic ectopic
- Diagnosis by ultrasound

Uterine Incarceration

- Late first trimester – retroverted uterus
- Presentation
  - Rare
  - Severe rectal pressure and back pain
  - Urinary obstruction
  - Cervical prolapse
- Treatment
  - Knee flexed position with rectal or vaginal manipulation under general anesthesia

Hyperemesis Gravidarum

- Not just "bad morning sickness"
- Nausea and vomiting with
  - Weight loss with persistent vomiting → hypokalemia
  - Dehydration → ketonuria

Hyperemesis Gravidarum

- IV hydration
- Antiemetics
  - Class A doxylamine/pyridoxine
  - Class B metoclopramide, prochlorperazine, ondansetron
  - Class C promethazine but no known harm
- Glucose to break ketosis
- Pyridoxine (B6)
- Ginger

Second and Third Trimester Related Conditions

Eclampsia/Preeclampsia Etiology

- BP >140/90 with proteinuria
- >20 weeks gestation, <4 weeks post partum
  - Earlier in trophoblastic disease
- Occurs in 7% of pregnancies

Eclampsia/Preeclampsia Presentation

- Proteinuria, edema, hypertension
- Severe
  - SBP>160, DBP>110
  - Oliguria <40cc/hr
  - Cerebral or visual disturbances
  - Pulmonary edema
  - Cyanosis
- Eclampsia = seizures

Eclampsia/Preeclampsia Diagnostic Evaluation

- Fetal heart tones (Rule 3)
- CBC with peripheral smear
- Electrolytes
- LFTs

HELLP Syndrome

- **H**emolysis
  - abnormal peripheral smear, schistocytes, burr cells
- **E**levated **L**iver Function Tests
  - LDH > 600, Bili > 1.2, AST > 72
- **L**ow **P**latelets
  - Less than 100,000

Eclampsia/Preeclampsia Management

- Immediate obstetric consultation
  - Emergent delivery is definitive therapy
  - Hypertension controlled with
    - **HYDRALAZINE**
    - **LABETOLOL**
    - Sodium nitroprusside
    - Diuretics are contraindicated

Eclampsia/Preeclampsia Management

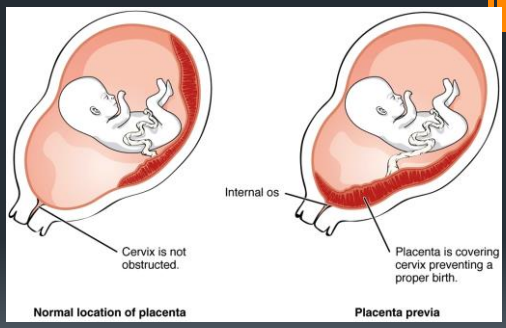
- Seizures=magnesium sulfate
  - 4-6 g over 15 min, then 2-3 g/hr
  - Monitor deep tendon reflexes, urine output, respiratory rate, blood pressure and fetal heart tones
- Alternative treatment
  - Benzodiazepines and phenobarbital
    - Beware of fetal sedation if emergent delivery
  - Phenytoin - relative contraindication

Case

- 27 year-old female with painless vaginal bleeding
  - Positive home pregnancy test, no prenatal care
  - About 20ish weeks by vague LMP
  - Prior C-section
  - Nontender abdominal exam with gravid uterus 3 cm above umbilicus

Placenta Previa Etiology

- Low implantation of placenta resulting in encroaching or covering of internal os
- 1:200 pregnancies



OpenStax College. Embryonic Development, OpenStax-CNX Web site. http://legacy.cnx.org/content/m46319/1.3/, Jun 4, 2013.

Placenta Previa Risk Factors

- Grand multips
- Advanced maternal age
- Previous history of C-section delivery
- D&C
- Elective abortions
- History of placenta previa

Placenta Previa Evaluation

- **DO NOT VAGINALLY EXAMINE ANY PATIENT WITH LATE PREGNANCY BLEEDING.**
- Diagnosis by ultrasound but transabdominal US only by EP
  - OB may do a TV US

Placenta Previa Management

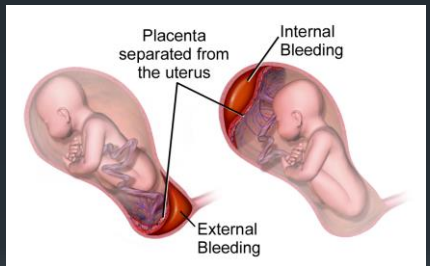
- Emergency Obstetric consultation
  - Focused on prep for C-section delivery
- 2 large bore IV's
- CBC, PT, PTT, platelets, Type and Cross
- Monitor fetal heart tones (Rule 3)

Case

- 37 year-old female 32 weeks pregnant with sudden onset of abdominal pain
  - Fell down 2 steps and now has severe abdominal pain
  - Presents with some vaginal bleeding

Abruptio Placenta Etiology

- Separation of placenta from site of uterine implantation



Abruptio Placenta (Placental Abruption)

Wikimedia. Blausen.com staff. "Blausen gallery 2014". Wikiversity Journal of Medicine.

Abruptio Placenta Risk Factors

- Cocaine
- Smoking
- Trauma
- Pregnancy induced or chronic hypertension
- Previous history of placenta abruption

Abruptio Placenta Presentation

- **Painful** bleeding
- Occasionally bleeding may be absent
- Severe cases may develop disseminated intravascular coagulation (DIC)

Abruptio Placenta Evaluation

- Ultrasound
  - Don't waste time transporting the patient to radiology
- **Fetal monitoring**
- Truly a clinical diagnosis

Abruptio Placenta Treatment

- Emergent Obstetric consultation
- 2 large bore IV's
- CBC, PT, PTT, platelets
- Oxygen
- Type and cross
- Serum for fetal hemoglobin (Kleinhauer-Betke)
- Fibrinogen, fibrin split products

Gestational Trophoblastic Disease

- Hydatidiform mole (complete or partial)
- Persistent/invasive GTD
- Choriocarcinoma
- Placental site trophoblastic tumors
- Incidence: 1/1000 (US)

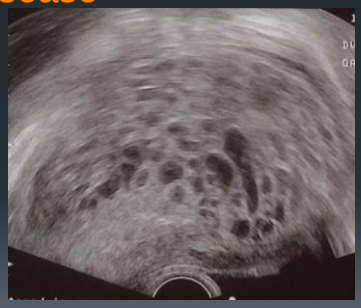
Gestational Trophoblastic Disease

- Clinical presentation
  - Vaginal bleeding
  - Enlarged uterus more than expected for dates
  - Pelvic pressure and pain
  - Theca lutein cysts
  - Anemia
  - **Hyperemesis gravidarum**
  - **Preeclampsia less than 20 weeks' gestational age**
  - Vaginal passage of hydropic vesicles

Gestational Trophoblastic Disease

- Diagnosis
  - B-hCG levels > 100,000
  - Ultrasound shows no fetal pole
    - "Bunch of grapes"
    - "Snowstorm"

Gestational Trophoblastic Disease



Wikimedia. Häggström, Mikael. "Medical gallery of Mikael Häggström 2014". *Wikiversity Journal of Medicine*

Medical Complications During Pregnancy

Changes in Normal Physiology and Anatomy: Cardiac

- CO increases by 30–50%
- CVP decreases to 4 mmHg by 3rd trimester
- HR increases 15–20 BPM
- SBP decreases 5–10 mmHg and DBP decreases 10–15 mmHg with nadir at end of 2nd trimester
- Vena cava compression occurs in 10–15% of patients when laying supine and flat

Changes in Normal Physiology and Anatomy : Respiratory

- Maternal O_2 increases by 15–20%
- Persistent alkalemia after metabolic compensation (pCO_2 27–32 mmHg)
- Decrease in FRC by 20–25%
- Earlier risk for hypoxemia

Changes in Normal Physiology and Anatomy: Laboratory

- Anemia (Hgb 10.2–11.6)
- Creatinine drops (>1.0 = abnormal)
- ESR markedly elevated
- Fibrinogen levels double
- pCO_2 27–32 mmHg
- D-dimer elevated

Urinary Tract Infection

- Most common medical complication in pregnancy
- Presentation
  - Suprapubic pain
  - Dysuria
  - +/- hematuria
  - Frequency
- Diagnosis
  - Urinalysis
  - Urine Culture: *E. coli, Klebsiella, Proteus*

Urinary Tract Infection

- Treatment: 7-10 day course
- **Safe antibiotics** in pregnancy: cephalosporins, nitrofurantoin, penicillins, macrolides, clindamycin
- **Not safe antibiotics**: streptomycin, doxycycline, tetracycline, all quinolones

Pyelonephritis

- 1-2.5% occurrence in all pregnancies
- 10% of patients will have documented bacteremia
- Requires admission
- Treatment: cephalosporin first-line
- 10-20% recurrence rate during pregnancy

Thromboembolism

- A Leading cause of maternal mortality
- 1.8 relative risk vs. non-pregnant females
- 5.5 relative risk in postpartum period

Thromboembolism

- Diagnosis
  - D-dimer not helpful as elevated in normal pregnancy
  - DVT evaluation, helpful if positive
  - Radiographic testing - CT vs. V/Q
- Treatment
  - LMWH preferred over heparin
  - Coumadin contraindicated

Aortic Dissection

- A leading cause of maternal death
- Hormonal and hemodynamic weakening of intima and media layers
- TEE test of choice over
  - MRI must lay supine for prolonged time, stability
  - CT radiation to mom and fetus
- ACE Inhibitors contraindicated

Cardiac Disease

- Becoming more prevalent
- Increasing maternal age with increased cardiac risk factors
- Congenital heart disease patients reach adulthood and become pregnant

Cardiac Disease

- Presentation mimics normal pregnancy changes
  - Dyspnea
  - Fatigue
  - Edema
- Results in delayed diagnosis and treatment

Cardiac Disease

- BNP rises normally in pregnancy but >300 pg/ml is abnormal
- Treatment unchanged from non-pregnant patients except no ACE inhibitors or diuretics

Cardiac Dysrhythmias

- Increased risk over non-pregnant patients
- Adenosine safe for SVT
- Cardioversion, transcutaneous, transvenous pacing all safe but use as little energy/current as possible
- All other anti-dysrhythmics class C but avoid amiodarone if possible

Cardiac Arrest

- Displace uterus to the LEFT
- Chest compressions higher on the chest
- Expect a difficult airway
- No changes to defibrillation energy doses or medications in ALCS algorithms

Peri-mortem Cesarean Section

- Best chance of fetal survival is maternal resuscitation…
- Best chance of maternal survival is fetal delivery
  - 12 of 20 women had ROSC immediately after fetal delivery
  - 9 of 12 infants delivered within 5 minutes of maternal arrest had normal neurologic outcomes

Peri-mortem Cesarean Section

- Predictive values for success
  - EGA > 28 weeks
  - Less than 10 min from maternal death to delivery
  - Maternal cause of death not chronic hypoxia
  - Fetal status prior to maternal death
  - Quality of maternal resuscitation

Peri-mortem Cesarean Section

- **After FOUR minutes of maternal arrest, i.e. two cycles of ACLS**
- **Goal of fetal delivery FIVE minutes** after maternal arrest
- In other words, you have **ONE minute** to deliver the fetus

Peri-mortem Cesarean Section

- Classical vertical incision "stem to stern"
- Get baby out, clamp cord
- Now resuscitate mom and baby…

Pneumonia

- 1:2000 incidence
- Can be associated with preterm labor
- Varicella pneumonia
  - Rash followed by respiratory distress
  - Chest x-ray diffuse miliary or nodular infiltrates
  - Maternal mortality 11-33%

Asthma

- May worsen, improve, or remain stable during pregnancy
- Remember, PCO_2 levels fall in pregnancy, so a level of 40 in asthma indicates retention
- Treatment same as non-pregnant
  - Beta-agonists, magnesium safe in pregnancy
  - Risk-benefit with steroids as Class C/D

HIV in Pregnancy

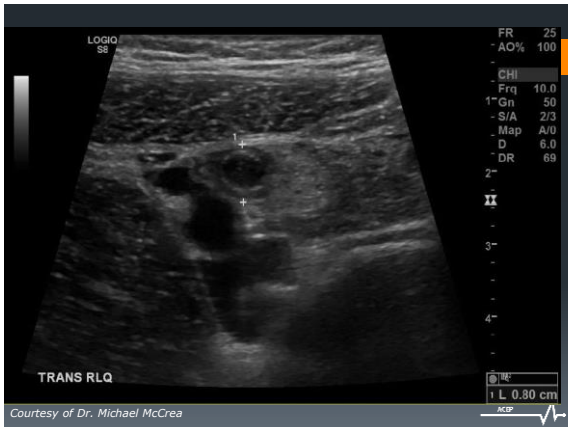
- Vertical transmission rate 25-59%
- Risk of transmission ↑viral load and ↓CD4
- Multi-drug regimen decreases transmission
  - Minimum treatment with zidovudine (AZT)

Appendicitis

- No increased risk over non-pregnant population but increased morbidity secondary to frequently delayed and misdiagnosis
- Presentation
  - Difficult history – lower abdominal pain, nausea, vomiting
  - Normal WBC in pregnancy 12-15k
  - McBurney's point moves

Appendicitis

- Ultrasound initial test of choice
  - CT if needed, MRI becoming increasingly used
- Preterm labor frequent after surgery
- Don't wait too long to involve surgery
  - Perforation 2-3x more likely in pregnant patients
  - Fetal mortality 20 - 35% with perforation
  - Fetal mortality 0 - 1.5% without perforation



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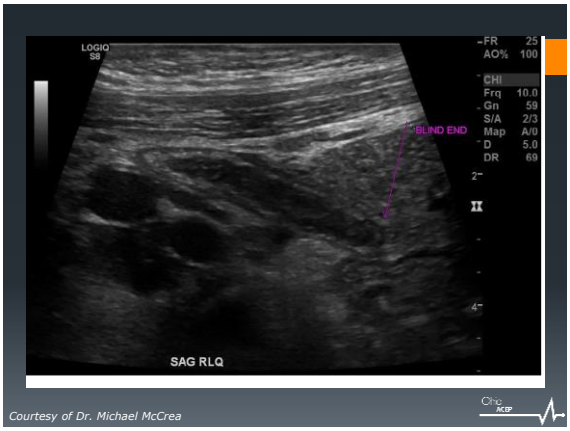

Courtesy of Dr. Michael McCrea

Cholecystitis

- 1:1000 pregnancies
- Clinical presentation again clouded by pregnancy – heartburn, nausea, food intolerance
- Diagnosis by ultrasound
- Treatment
  - Conservative with delayed surgery if possible
    - IV hydration, NPO, Antibiotics
  - 2nd trimester ideal if surgery is needed

Bowel Obstruction

- Occurs in third trimester or post-partum
- No differences in presentation
- Prefer serial exams and repeat abdominal series over CT if possible
- Treatment unchanged
  - NPO, NG placement, surgical consultation, admit

Trauma in Pregnancy

Trauma in Pregnancy

- MATERNAL DEATH IS THE MOST COMMON CAUSE OF FETAL DEATH
- FETAL ASSESSMENT IS SECONDARY TO MATERNAL RESUSCITATION
  - But fetal well being is a marker of maternal health

Trauma in Pregnancy Primary Survey

- Airway
  - consider early intubation, it will be difficult
- Breathing
  - 100% Oxygen due to decreased FRC and increased O2 use
  - Chest tubes 1-2 rib spaces higher
- Circulation
  - FHT Rule 3
  - Place patient in left lateral decubitus position or manually displace uterus to left
  - Maternal BP is preserved at expense of placental circulation
  - Changes in BP and HR occur only after 1.5L

Trauma in Pregnancy Secondary Survey

- Pregnancy history
- Estimation of gestational age
- Palpation of uterus
- Early administration of monitoring
  - Minimum of 4 hours for patients > 20 WGA
- Sterile speculum exam
  - Ferning, nitrazine paper, blood, cervix
- Bimanual exam

Trauma in Pregnancy Evaluation

- Do not withhold imaging studies
- DPL
  - Supraumbilical approach if uterus palpable above pubis
  - Open or mini-laparotomy technique preferred over closed Seldinger
- Ultrasound safe but remember does does not rule out abruption

Trauma in Pregnancy Blunt Trauma

- 60% due to MVCs
- ACOG endorses the use of three-point safety restraints
- Major threat is placental abruption
  - 2-4% in minor trauma, 30% in major trauma
  - Clinical symptoms unreliable and often absent
    - Vaginal bleeding, abdominal pain, tenderness, back pain
  - US screening - sensitivity < 50%

Trauma in Pregnancy

- Uterine rupture
  - Fetal mortality ~100%
  - Maternal mortality 10%
  - Risk factor - previous C-section
  - Signs and symptoms similar to abruption
    - Uterine tenderness with irregular contours, palpable fetal parts, +/- vaginal bleeding
  - In unscarred uterus, rupture tends to be posterior and often associated with bladder injury

Trauma in Pregnancy Penetrating Trauma

- Gunshot more common than knife
- Pregnancy specific injury patterns with developing gestational age
- Decisions for operative and nonoperative management made by trauma team and obstetrician

Complications During Labor and Delivery

Premature Labor

- Cervical change with contractions prior to 37 WGA
- Risk Factors: PROM, local infection, cervical incompetence, uterine abnormalities, over distended uterus, fetal abnormalities, faulty presentation, IUFD, maternal disease
- Treatment-hydration, beta agonists, monitoring

Preterm Rupture of Membranes

- 90% of term and 50% of preterm patients will be in labor 24 hours after ROM
- Determination
  - pH vaginal fluid increases 4.5-6.0 to 7.1 to 7.3
  - Ferning
- Prolonged ROM > 24 hours

Emergency Delivery

- Transport to OB in mom's uterus preferred if not imminent delivery
- If cervical dilation > 6 cm prepare for delivery
  - IV
  - CBC
  - Type and screen
  - Monitor fetal heart rate
- Neonatal team/OB

Mechanics of Emergent Delivery

- Complete cervical dilation
- Dorsal lithotomy position preferred
- Gentle perineum stretching
- Episiotomy
- No maternal pushing after head delivered
- Palpate fetal neck -check for nuchal cord and reduce if needed before delivery of shoulders

Mechanics of Emergent Delivery

- Deliver shoulders
  - Gentle downward traction to ease shoulders
  - If resistance, pressure suprapubically
  - Control posterior shoulder
- Stable grip
- Sterile cutting of cord

Management of Shoulder Dystocia

- Impaction of anterior shoulder behind pubic symphysis
- Turtle sign–head against perineum
- McRobert's maneuver – hyperflex maternal hips
- Suprapubic pressure (Rubin I)
- Rotational maneuvers
  - Woods' Corkscrew maneuver
  - Rubin II
  - Reverse Woods' corkscrew

Management of Shoulder Dystocia

- Manually deliver posterior arm with episiotomy
- Fracture clavicle intentionally
- Gaskin position – mom on "all fours"
- Zavanelli maneuver – manually push fetus back up into uterus and prepare for emergent C–section

Breech Presentation

- DO NOT pull on the fetus
- Mom push normally until baby delivered to umbilicus then NO MORE pushing
  - Support baby elevated sacrum anteriorly
- Deliver arms, posterior first, rotate, other arm
- Suprapubic pressure to FLEX the fetal head

Cord Prolapse

- Place the patient in Trendelenburg and manually elevate the presenting cord
- DO NOT push cord back in
- DO NOT pull on the cord
- Maintain manual elevation until emergent C–section is completed

Postpartum Management

- Delivery of placenta
  - Pulling on cord risks inversion of uterus
  - Placenta separation – gush of blood and lengthening of cord
- Uterine atony – explore uterine cavity, uterine massage, oxytocin, Methergine, carboprost, misoprostol
- Check for lacerations and repair episiotomy

Postpartum Complications

- Endometritis
  - fever, abdominal pain and foul smelling lochia
  - cultures, broad–spectrum antibiotics and hospitalization
- Mastitis
  - Inflammation , swelling of breast +/– fever and chills
  - Staph aureus
  - Keep breast feeding or pumping – will not hurt baby

Summary and Pearls

Rules

- Rule #1 – All female patients are pregnant until proven otherwise
- Rule #2 – All pregnant patients have an ectopic pregnancy until proven otherwise
- Rule #3 – Measure fetal heart tones

Ectopic Pregnancy

- Remember rule #2
- Sudden onset, UNILATERAL pelvic pain with nausea and vomiting
- Get the ultrasound
- Know discriminatory zone numbers to help answer disposition questions
- Methotrexate indications – stable, unruptured, and less than 4 cm, otherwise surgery!

Pre-eclampsia/Eclampsia

- Know diagnostic criteria
- Control HTN with labetalol, hydralazine
- Magnesium, magnesium, more magnesium!
- OB for emergent delivery

Placental Previa

- **PAINLESS** vaginal bleeding
- NO pelvic exam
- NO transvaginal US

Abruptio Placenta

- **PAINFUL** vaginal bleeding after abdominal trauma
- Ultrasound does NOT rule out abruption
- Fetal monitoring is the answer!

Admission Problems in Pregnancy

- **P**regnancy, ectopic
- **P**elvic Inflammatory Disease (PID)
- **P**lacenta **P**revia
- **P**lacental abru**P**tion
- **P**neumonia, Varicella and Influenza
- **P**reterm labor
- "**P**uking" (hyperemesis gravidarum)
- **P**ulmonary embolism
- **P**yelonephritis
- "**P**ump and **P**ipe" **P**roblems – cardiovascular