Ectopic Pregnancy

DEBRA MOYNIHAN WHNP, MSN
CAROLINA OB/GYN
MURRELLS INLET, SC

Definition:
- Abnormal pregnancy that implants outside the uterus
  - Tubal – most common
  - Cervical
  - Abdominal
  - Ovary – very rare
- Interference in normal ovum transport
  - Fertilized egg is unable to properly move through the fallopian tube to the uterus
Ectopic Pregnancy

- Incidence:
  - In the U.S. 20 in 1,000 (1 in 50) pregnancies is ectopic
  - A leading cause of maternal mortality
  - Mortality in U.S. has decreased over the years, but the actual number of ectopic pregnancies has increased
    - Related to factors associated with infertility
      - Chronic salpingitis
      - Earlier detection by ultrasound
      - Sensitive B-HCG assays

Ectopic Pregnancy

- Causes/Risk Factors:
  - Prior infection of the fallopian tubes (50% of all cases)
  - Previous ectopic pregnancy
  - Structural defects of the tubes
  - Endometriosis
  - Tubal surgery
    - Reversal
    - Tubal ligation
      - Following RTL – most likely to occur 2 or more years after procedure
Ectopic Pregnancy

- Other risk factors:
  - IVF
  - IUD with progesterone
    - 6 – 10 fold ectopic pregnancy rate in patients who become pregnant compared with copper-containing IUDs
  - Oral contraceptives
    - Most commonly the "minipill"
  - Morning after pill – "emergency contraception"
  - Complications of a ruptured appendix

Ectopic Pregnancy

- Signs & symptoms
  - Amenorrhea
  - Lower abdominal pain
    - Can be unilateral
    - As pregnancy progresses, can become sharp & severe
    - Patient experiences more generalized discomfort
  - Low back pain
  - Vaginal bleeding or spotting – most common symptom

Ectopic Pregnancy

- Other symptoms:
  - GI disturbances
  - Malaise
  - Syncope
  - Hypotension
  - Tachycardia
  - Hyperpnea
  - Rigid abdomen
Ectopic Pregnancy

- Most CLASSIC symptom is pain radiating to shoulder (Kehr’s sign)
  - May indicate abdominal bleeding causing phrenic nerve irritation
    - Abdominal bleeding leads to shock
    - Shock is the 1st symptom in 20% of the cases

Ectopic Pregnancy

- Clinical presentation
  - Amenorrhea 60-85%
  - Vaginal bleeding 55-84%
  - Abdominal pain 50-100%
  - Rebound tenderness 40-50%
  - Adnexal mass 30-70%

Ectopic Pregnancy

- Presentation may be atypical
  - Many report vague or subacute symptoms
  - Amenorrhea may not be obvious – spotting may mimic normal menses
  - Ectopic pregnancy should be considered when any woman of childbearing age reports mild or severe abdominal symptoms
    - Sometimes symptoms don’t correlate with the severity of the condition
      - Mild S&S may occur with massive hemorrhage
Ectopic Pregnancy

- Physical exam
  - Abdominal exam may reveal unilateral tenderness in the adnexa
  - Pelvic exam will reveal a normal appearing cervix, but most likely there will be marked tenderness
  - There may be vaginal tenderness and the vaginal vault may be bloody
  - Uterus may be slightly enlarged and soft

Ectopic Pregnancy

- Diagnostic tests
  - Serial B-HCG levels are drawn
    - Normal pregnancy – levels double q 48-72 hours
    - Low or abnormal rising levels are suggestive of ectopic
  - Ultrasound
    - B-HCG > 1300-1400 mIU/ml @ 35 days gestation and the pregnancy is intrauterine, a gestational sac should be present
    - Absence of a sac is suggestive of ectopic
  - Culdocentesis
    - MD inserts a needle through the vaginal wall into the cul-de-sac and withdraws fluid, if present. Nonclotted blood indicates hemorrhage

Ectopic Pregnancy

- Differential diagnosis
  - Intrauterine pregnancy
  - Recent spontaneous abortion
  - Ovarian cyst or tumor
  - PID
  - Acute appendicitis
  - Bowel related disorders
Ectopic Pregnancy

- Treatment
  - Dependent on the symptoms, location of implantation and whether the fallopian tube is intact or ruptured
  - Medical (nonsurgical management) is preferred if the tube is not ruptured
    - Methotrexate – clears trophoblastic tissue and may avoid the need for laparoscopy
  - Patient criteria
    - Must be hemodynamically stable
    - Mass must be unruptured and measuring <4 cm in diameter
    - Must be reliable in committing to required follow-up care
    - No contraindications to methotrexate treatment

- Contraindications to methotrexate include:
  - Known sensitivity to methotrexate
  - Breastfeeding
  - Hematologic abnormalities (severe anemia, thrombocytopenia, or leukopenia)
  - Immunodeficiency states (e.g., HIV)
  - Alcoholism or evidence of chronic liver disease
  - Renal disease
  - Active pulmonary disease
  - Peptic ulcer disease

- Methotrexate dosage
  - 50 mg/m² of body surface area given IM
  - May be repeated in one week if B-HCG levels are not decreasing

- Common side effects
  - Abdominal cramping first 2–3 days
  - Vaginal bleeding or spotting
  - N/V and indigestion
  - Fatigue, lightheadedness, dizziness
  - Headache, body aches
  - Low grade fever
Ectopic Pregnancy

• Severe side effects in short term therapy are uncommon but include:
  o Alopecia
  o Photosensitivity
  o Stomatitis
  o Hepatotoxicity
  o Pulmonary fibrosis
  o Bone marrow suppression

Ectopic Pregnancy

• Patient instructions
  o Must discontinue
    • Prenatal vitamins and other products containing folic acid (e.g. orange juice)
    • Alcohol use
  o Penicillin & NSAIDs should be used with caution
  o No intercourse
  o Should refrain from
    • Gas producing foods
    • Sun exposure

Ectopic Pregnancy

• Monitoring of Patient
  o Prior to methotrexate injection
    • B-HCG level, CBC, CMP, Blood type, RH, and antibody screen
  o Day 4 – repeat B-HCG level
  o Day 7 – B-HCG level, CBC, CMP
    • Should be a 15% decline in B-HCG level, if not, repeat injection and protocol
  o If levels dropping appropriately, bi-weekly B-HCG levels until < 100, then weekly until < 10
  o If no decline in B-HCG levels after 2-3 doses of methotrexate, must consider surgical intervention
Ectopic Pregnancy

- Medical treatment is contraindicated in patients with B-HCG levels > 10,000 IU/L or fetal heart activity
- Associated with increase in failure rates and the risk of tubal rupture is substantially increased
- May be the initial treatment of choice for most women, but not necessarily the best option in all cases.
- Avoids surgery and anesthesia
- Some women may prefer surgical treatment

Ectopic Pregnancy

- Surgical treatment
  - Laparoscopy
    - Indicated when B-HCG levels are not dropping after methotrexate
    - B-HCG levels > 10,000IU/L
    - Fetal cardiac activity
    - Surgical removal of pregnancy (salpingostomy) with intent to save fallopian tube, but not always possible.
  - Laparotomy
    - Indicated in uncontrolled hemorrhage or hemodynamic instability
    - Salpingectomy may be necessary for many tubal pregnancies
    - Compromises future fertility

Ectopic pregnancy

- Prevention
  - Appropriate screening
    - History & physical
    - Number of sexual partners
    - Early detection and prompt treatment of gonorrhea and chlamydia
  - Patient education
    - Limiting sexual partners
    - Use of condoms to prevent infections
    - Selection of appropriate contraception
Ectopic Pregnancy

Thank you