

433 Teams

OBSTETRICS & GYNECOLOGY

Ectopic Pregnancy

Video notes + Case

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Objective:

- Define ectopic pregnancy.
- Identify the morbidity mortality rate of ectopic pregnancy.
- Mention the risk factors for ectopic pregnancy.
- Describe a diagnostic approach for ectopic pregnancy and highlight the importance of early diagnosis.
- Discuss the management of ectopic pregnancy.
- Differentiate between the obstetric and non-obstetrics causes of acute abdomen in pregnancy.



Video :

https://www.youtube.com/watch?v=AQBfRFmYQeA&index=10&list=PLy35JKgvOASnHHXni4mjXX9kwVA_YMDpq

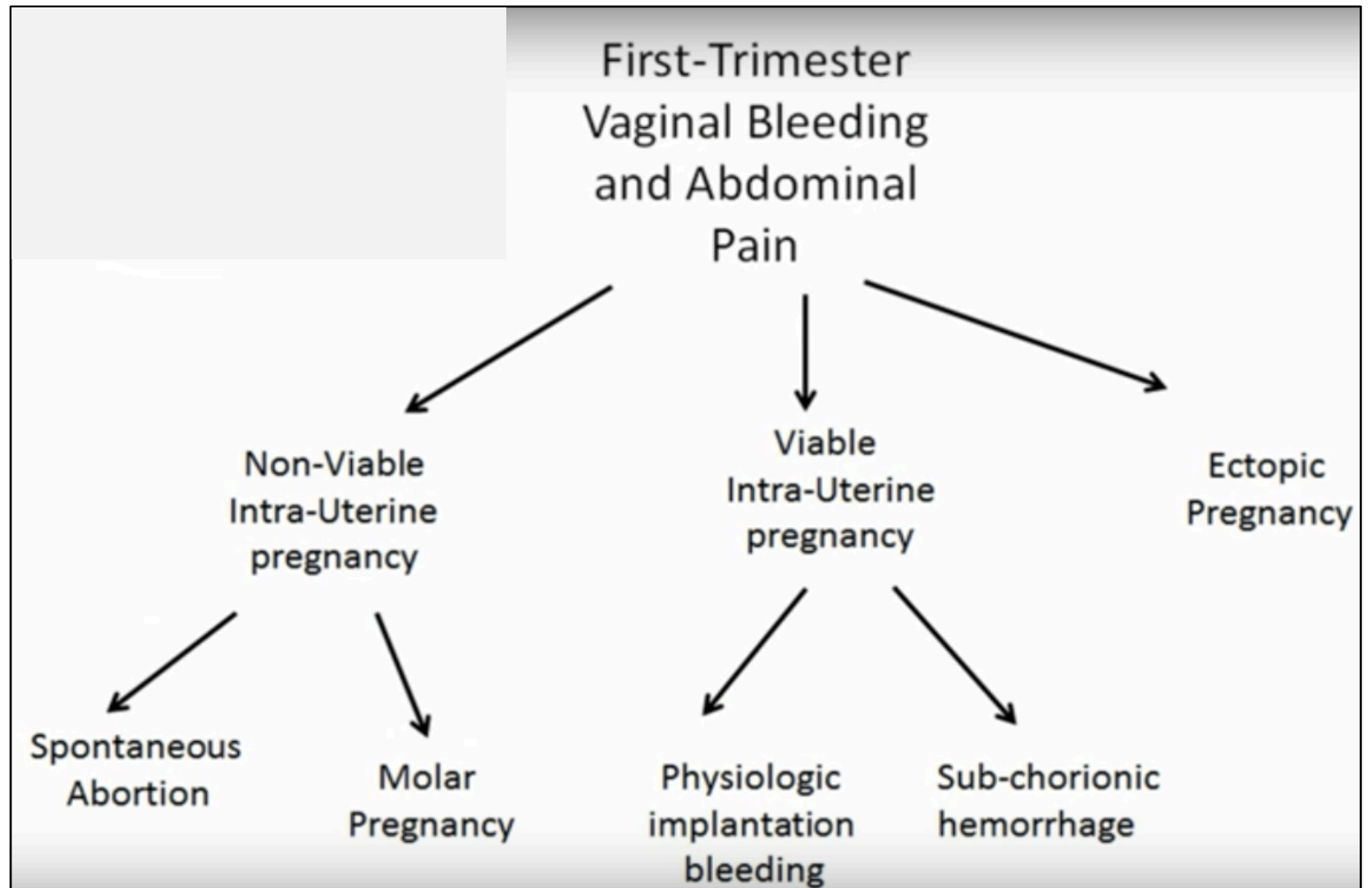
Ectopic pregnancy

Ectopic pregnancy : it is abnormal implantation out said intrauterine cavity

Location :

- 98% in fallopian tube (70-80% ampullory portion of tube)
- Ovary
- Cervix
- Abdomen

Lead to morbidity and mortality



Risk factors

1. **History of Ectopic pregnancy (highest risk factors)**
2. History of tubal surgery (tubal ligation)
3. History of chlamydial infection : cause tubal scarring, inflammation, and fibers deposition
4. **3 episodes of PID : the ratio of Ectopic pregnancy to intra uterine pregnancy 1:3**
5. Smoking : decrease cilia in fallopian tube
6. 50% of patients with Ectopic pregnancy doesn't have risk factors

Diagnosis

Need high index of suspicions

- **Classical symptoms :**

amenorrhea, Vaginal bleeding, Abdominal pain

- **By serial 48 hours beta HCG measurement :**

- Help to detriment if this is : Viable intrauterine pregnancy , Non-Viable intrauterine pregnancy , Ectopic pregnancy
- Beta-HCG should increase 50% over 48 hours interval
- When : Beta-HCG is above 1500-2000 : intrauterine pregnancy should be seen by transvaginal ultrasound

- **transvaginal ultrasound**

Treatment

Medical :

Methotrexate

Contraindications:

Absolute Contraindications:

Hemodynamic instability

Liver or Kidney abnormalities,

Active lung disease

Breastfeeding

Inability to comply with required

follow-up beta HCG testing

Relative Contraindications:

Fetal cardiac activity

High beta HCG level

(>5000)

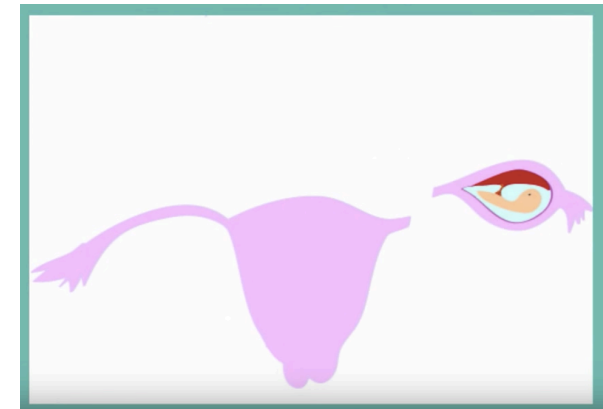
Large ectopic size (>3.5 cm)

Surgical :

1. Salpingectomy :

Remove of entire fallopian tube

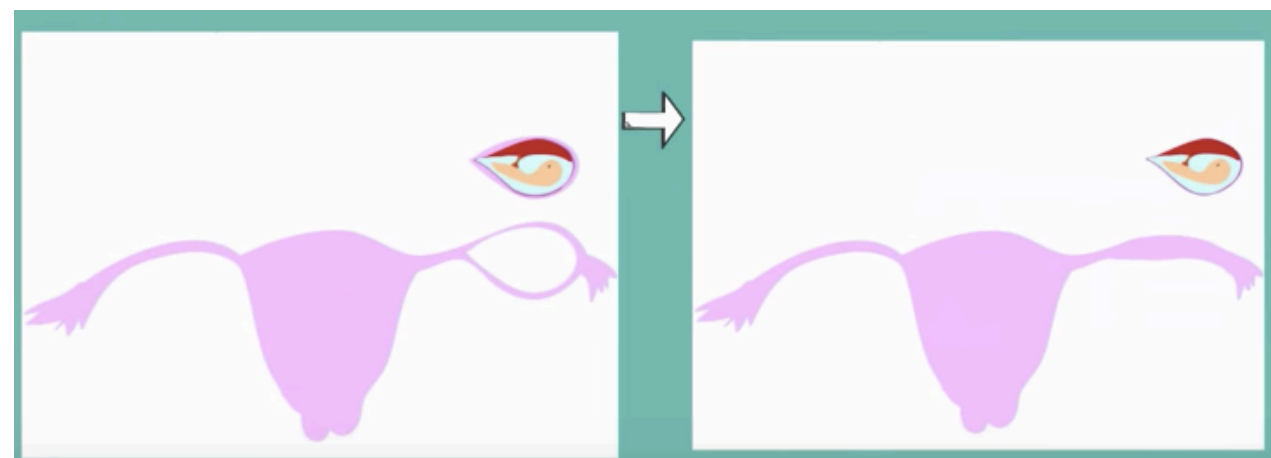
No need to B-HCG follow up



2. Salpinostomy:

small hole in fallopian tube to remove pregnancy

B-HCG follow up to ensure entire ectopic pregnancy has been removed



Case

A 36-year-old G1P0010 woman presents to the office with onset of light vaginal bleeding, which she feels is not her menstrual period, and mild right lower quadrant pain, which she rates as 2/10. The pain is intermittent and crampy, and is not associated with urination. There is no nausea or vomiting. The patient's last bowel movement was yesterday and was normal in consistency without blood or black color.

Note that the LNMP was not given in the clinical case to see if the students ask about this. You can tell them that the LNMP was 7 weeks ago.

Her past medical history is notable for no allergies, no medications, and two hospitalizations. The first was eight years ago for lower abdominal pain which was thought to be due to pelvic inflammatory disease and which resolved with antibiotics. The second was for a left ectopic pregnancy that required surgical removal of her left tube.

Review of systems and family history are unremarkable. Social history reveals that she is mutually monogamous with a male partner without contraception. Physical examination shows an anxious appearing female with a temperature of 99.2 F, orally, a BP of 105/62, and a pulse of 95. Examination of her abdomen reveals normal bowel sounds. There are no masses, organomegaly, distention, or rebound tenderness. She has mild discomfort in the right lower quadrant. Pelvic examination reveals right adnexal tenderness without adnexal masses. Uterus is of normal size and there is discomfort on cervical motion. The rectal exam is negative with heme negative stool.

Qs

1. What is the differential diagnosis for this patient? What aspects of her history and physical examination might lead you to be suspicious of an ectopic pregnancy? (*indicates signs or symptoms for teaching case)

- Differential Diagnosis:
- Obstetrical:
 - ✘ Ectopic pregnancy
 - ✘ Incomplete, completed, or missed abortion
 - ✘ Threatened abortion
- Gynecological:
 - ✘ Ovarian cyst
 - ✘ Adnexal torsion
 - ✘ Pelvic inflammatory disease
 - ✘ Endometriosis
- Other Non Ob/Gyn:
 - ✘ Appendicitis
 - ✘ Inflammatory bowel disease
 - ✘ Urinary tract infection
 - ✘ Bladder stone
- Symptoms or clinical presentation may include:
 - Abdominal pain (95-100%)*
 - Abnormal uterine bleeding (65-85%)*
 - Amenorrhea (75-95%)
 - Signs or physical findings include:
 - Abdominal tenderness* (80-90%)
 - Adnexal tenderness* (75-90%)
 - Normal uterine size* (70%)
 - Adnexal mass (30-50%)

Ectopic pregnancies often have an atypical presentation and can have extensive overlap with other abdominal and pelvic disorders.

Key Teaching Point: Any sexually active woman in the reproductive age group who presents with pain, irregular bleeding, and/or amenorrhea should have ectopic pregnancy as part of the initial differential diagnosis. pain is common but is not always the presenting symptom in ectopic pregnancies.

Qs

2. What are the risk factors for ectopic pregnancy and which of these risk factors does the patient have (* indicates patient risk factors for teaching case)?

- Previous ectopic pregnancy (approx 10 times increase)*
- History of pelvic inflammatory disease, gonorrhoea, or chlamydia infections*
- History of previous gyn or abdominal surgery*
- Sterilization failure
- Endometriosis
- Congenital uterine malformation
- Assisted reproductive technology
- Older age (35-44 y/o are 3 times higher risk than younger women)*

Key Learning Point: Diagnosing and managing a patient with an ectopic pregnancy can be difficult. Knowledge of the risk factors can heighten the clinician's suspicion and may determine the direction of the investigation. Ectopic pregnancy is the leading cause of pregnancy-related death in the first trimester.

3. Where can ectopic pregnancies occur and how frequently does this happen?

- Ampullary, 80%
- Isthmic, 12%
- Fimbrial, 5%
- Cornual/Interstitial, 2%
- Abdominal, 1.4%
- Ovarian, 0.2%
- Cervical, 0.2%

Key Learning Point: Ectopic pregnancies do not have to be confined to the fallopian tube.

Qs

4. What initial test would you order for this patient to assist you in narrowing down your diagnosis?

- Quantitative β -hCG (in order to rule in or rule out an intrauterine pregnancy with transvaginal ultrasound, the β -hCG needs to be greater than 1500 mIU/ml)

Key Learning Point: Confirming pregnancy is critical in the diagnosis of ectopic pregnancy. If this test is not ordered in a timely manner it can lead to significant morbidity and mortality.

5. If this patient's test is positive, what tests could be helpful in making a more definitive diagnosis?

- STAT CBC (to check for anemia that may indicate intra-abdominal bleeding)
- Transvaginal ultrasound to look for intrauterine pregnancy or extrauterine pregnancy (assuming that the quantitative β -hCG > 1500mIU/ml an ectopic pregnancy can be diagnosed if there is no evidence of an intrauterine pregnancy on transvaginal ultrasound)
- Serial Quantitative β -hCG levels: If the level is equivocal and the ultrasound is not helpful, monitoring the β -hCG level rise in 48 hours can aid in distinguishing between a viable intrauterine pregnancy and non-viable intrauterine pregnancy or ectopic pregnancy. In viable early intra-uterine pregnancy, hCG levels will usually rise by at least 66% in 48 hours. A β -hCG level less than 66% should cause suspicion of ectopic or non-viable intrauterine pregnancy. Patients who are stable where the diagnosis is unclear can be followed by serial β -hCG levels and, when levels have reached high enough for ultrasound to be effective, can have repeat ultrasounds
- Serum progesterone level may be helpful in some situations.

Key Learning Point: If a diagnosis of ectopic pregnancy is suspected, it is critical to ensure that the patient is stable. The next step in confirming the diagnosis is to perform the necessary tests. Ultrasound and serial β - hCG are essential tests in determining whether a pregnancy is intra-uterine or extra-uterine when the diagnosis is uncertain.

Qs

6. What options are available for the management of ectopic pregnancy?

- Check for Rh status and give Rh negative women Rho-GAM to prevent isoimmunization
- Medical treatment: methotrexate
- Hemodynamically stable patient
- Quantitative β -hCG (higher failure rate if β -hCG is greater than 5,000 mIU/ml thus multiple doses may be required)
- No fetal heart beat seen outside of the uterus
- Ectopic gestation that is not too big (usually <3.5cm).
- Cooperative patient who will be sure to return for appropriate follow up and blood work
- Surgical treatment: Laparoscopy or Laparotomy with or without conservation of the fallopian tube
- Expectant management is an option if β -hCG is low and decreasing and patient is willing to take the risk of tubal rupture and hemorrhage.

Key Learning Point: Management of ectopic pregnancy is determined by the patient's history and physical examination as well as ultrasound and laboratory investigations.

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