

ULTRASOUND

LECTURE SERIES

Ectopic Pregnancy

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Objectives

By the end of the presentation, the viewer will be able to:

- Understand the role of sonography in the diagnosis of ectopic pregnancy
- Know the spectrum of sonographic findings that prompt suspicion of ectopic pregnancy
- Understand how ultrasound guides the management and treatment of the patient at risk for ectopic pregnancy

Topics

1. Sonographic signs of early intrauterine pregnancy (IUP; in the absence of fetal pole)
2. Location of ectopic pregnancy
3. Sonographic findings associated with ectopic pregnancy: appearance and accuracy (sensitivity and specificity)
 - Adnexal mass
 - Cul-de-sac fluid
 - Empty gestational sac
 - Other
4. Use of color Doppler ultrasound in diagnosing ectopic pregnancy
5. Correlation between biochemical testing (eg, β -human chorionic gonadotropin [hCG]) and ultrasound findings
6. Interstitial ectopic pregnancy
7. Cervical ectopic pregnancy
8. Cornual pregnancy

Review Questions

1. Which of the following do you expect to see with transvaginal ultrasound at a gestational age of 5 weeks 2 days based on the patient's last menstrual period?
 - A. Only a gestational sac.
 - B. A gestational sac and a yolk sac.
 - C. A gestational sac, a yolk sac, and a fetal pole.
 - D. An empty uterus.
2. An IUP is seen with a good double decidual sign on transabdominal ultrasound. No pregnancy was seen on ultrasound 3 days before. Which of the following values represents the expected β -hCG level in mIU/mL?
 - A. >2500 .
 - B. >5000 .
 - C. >1500 .
 - D. <700 .
3. What is the most likely adnexal finding when an ectopic pregnancy is diagnosed?
 - A. Normal ovaries only.
 - B. Normal ovaries with a nondescript separate mass.
 - C. A double-ring or bagel sign.
 - D. A gestational sac with a yolk sac and fetal pole with or without cardiac activity.
4. All of the following suggest an ectopic pregnancy except:
 - A. Fluid collection in the uterus and β -hCG of 4000 mIU/mL.
 - B. No IUP with a moderate amount of echogenic fluid in the cul-de-sac.
 - C. Normal scan with β -hCG of 400 mIU/mL.
 - D. Adnexal mass with fluid collection in the uterus.
5. Which color flow Doppler assessment is most useful for differentiating an ectopic pregnancy from a corpus luteum cyst?
 - A. Flow resistance.
 - B. Flow velocity.
 - C. Tubal ring.
 - D. None of the above.