

Typical Ectopics and Its Sisters: An Imaging Review of Ectopic Pregnancy

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Introduction:

Ectopic pregnancy is a potentially life-threatening gynecologic emergency, responsible for 5-10% of pregnancy-related deaths, and remains a leading cause of maternal mortality during the first trimester. It occurs when a fertilized egg implants outside the uterine endometrium, most commonly in the fallopian tube (95%). Less frequent implantation sites include the ovary (3%), cervix (1%), and prior cesarean or myomectomy scars (1%). Rupture typically occurs between 6–10 weeks of gestation, making early detection crucial. Diagnosis is often challenging due to non-specific symptoms, such as abdominal pain and vaginal bleeding, which can mimic other conditions. First-line imaging includes grayscale and color Doppler ultrasound via both transabdominal and transvaginal approaches, while MRI is reserved for equivocal or complex cases.

Methods:

We present an image-rich review focused on the evaluation of ectopic pregnancy, highlighting common imaging findings across various types. A retrospective analysis identified five confirmed cases of ectopic pregnancy at a tertiary care center. Each case was classified according to ectopic subtype (interstitial, adnexal, cesarean scar, or cervical) based on imaging features, clinical presentation, and relevant laboratory results. Representative ultrasound and MRI images were selected to illustrate key diagnostic signs and distinguishing features.

Results:

This case series highlights clinical presentations, risk factors, and laboratory trends that should raise a radiologist's suspicion. Diagnostic pitfalls are discussed, particularly in differentiating ectopic pregnancies from mimicking conditions such as early intrauterine pregnancies and corpus luteum cysts. Key ultrasound findings—such as the sliding sign to distinguish adnexal ectopics from the ovary—are illustrated. MRI features, including myometrial thinning that may precede uterine rupture and hemorrhage, are also reviewed. The series further addresses treatment options, including indications for surgical intervention and methotrexate therapy, along with their contraindications.

Conclusion:

Early and accurate recognition of ectopic pregnancy is essential to reduce morbidity and mortality. Radiologists should be well-versed in the imaging features and locations of various ectopic pregnancies and be able to differentiate them from benign mimics by integrating clinical history, imaging findings, and laboratory data. Awareness of potential complications can prompt additional imaging and guide further management. Understanding treatment options enables radiologists to provide critical information in their reports, aiding clinical decision-making and improving patient outcomes.