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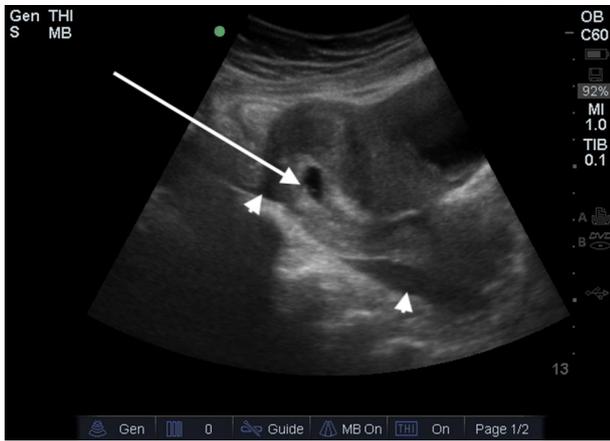
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Figure 1. Transabdominal pelvic ultrasonography in the sagittal plane, demonstrating a fetal pole in a gestational sac (arrow) with surrounding decidual reaction, as well as free fluid in the pelvis (arrowheads).



Figure 3. Point-of-care ultrasonography of the right upper quadrant, identifying free fluid at the tip of the liver (arrowheads).

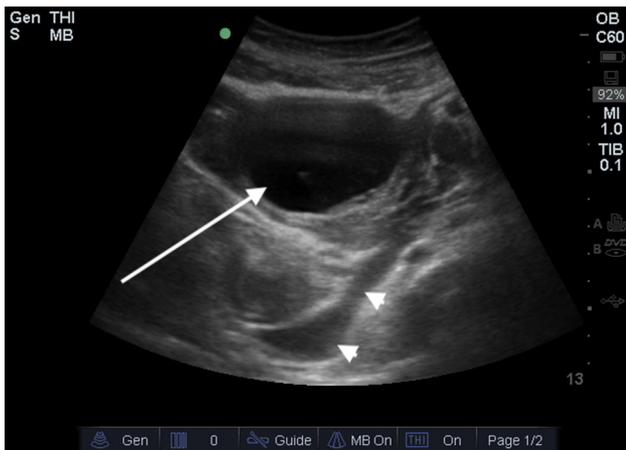


Figure 2. Transabdominal pelvic ultrasonography in the parasagittal plane, demonstrating a large adnexal cyst (arrow) and pelvic free fluid (arrowheads).



Figure 4. Transvaginal pelvic ultrasonography in the transverse plane, depicting both an intrauterine pregnancy (arrow) and an ectopic gestational sac (arrowhead) in the right adnexa.

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A 35-year-old primigravid woman at 5 weeks plus 3 days gestational age presented with a 3-day history of lower abdominal pain, with no other symptoms. On examination, vital signs were within normal limits. The abdomen was soft and tender in the right lower quadrant, without peritonitis. Serum level of β subunit of human chorionic gonadotropin was 16,049 mIU/mL. Point-of-care ultrasonography demonstrated a live intrauterine pregnancy (Figure 1, Video 1), adnexal cyst (Figure 2, Video 2), and moderate free fluid in the pelvis and Morison's pouch (Figure 3, Video 3). She had no risk factors for ectopic pregnancy. Because of the moderate volume of free fluid, radiology department pelvic ultrasonography was performed (Figure 4).

For the diagnosis and teaching points, see page e68.

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*(continued from p. e67)***DIAGNOSIS:**

Heterotopic pregnancy. Radiology ultrasonography identified both an intrauterine pregnancy with cardiac activity and a right-sided adnexal ectopic pregnancy with a fetal pole and cardiac activity (Figure 4). There was also a 6-cm hemorrhagic ovarian cyst. The patient underwent laparoscopic right-sided salpingectomy and cystectomy, and the intrauterine pregnancy progressed as expected on follow-up.

Heterotopic pregnancy is the presence of both intrauterine and extrauterine pregnancy. It is exceedingly rare in a natural conception with no risk factors, at a rate of 1 in 30,000.¹ With any assisted reproduction, rates increase to a range of 1 in 100 to 1 in 500.² Early diagnosis is often challenging because of the absence of clinical symptoms. Common misdiagnoses include corpus luteum cyst or hemorrhagic ovarian cyst.³ An intrauterine pregnancy on point-of-care ultrasonography does not exclude a heterotopic pregnancy in high-risk populations who have used assisted reproductive techniques. These patients require radiology department pelvic ultrasonography and reliable follow-up to definitively exclude heterotopic pregnancy.

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