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# Case report: Spontaneous heterotopic pregnancy presenting with abdominal pain

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A 43-year-old woman presented with severe pain and tenderness in the lower abdomen for four days, along with a history of a bloody mucoid vaginal discharge. There was no history of vomiting. The patient had regular menstrual cycles, with a history of spotting 20 days earlier. There was no history of use of contraceptive pills or of ovulation-inducing drugs. The patient had five children and the last delivery was six years ago. There was no history of surgical interventions or abortions.

On general examination, the patient had tachycardia, low blood pressure, with severe tenderness in the lower abdomen and right adnexa. Per speculum examination revealed a congested cervix with a thick mucoid discharge. The urine pregnancy test was positive. A clinical diagnosis of ectopic pregnancy was made. USG of abdomen and pelvis showed an intrauterine gestational sac containing a live embryo with a crown–rump length (CRL), corresponding to a gestational age of seven weeks and four days [Figures. 1, 2]. Another gestational sac with a live embryo of approximately seven weeks gestational age was seen in the right adnexa. There was fluid, with low-level echoes in the hepatorenal pouch and the pelvis, suggestive of a hemoperitoneum. Thus, a diagnosis of heterotopic pregnancy, with ruptured ectopic pregnancy and hemoperitoneum was made.

The patient was immediately taken up for exploratory laparotomy, which revealed an enlarged uterus, corresponding to eight weeks size, with hematosalpinx and an ectopic gestational sac in the right fallopian tube. The left fallopian tube appeared normal. Approximately 500 ml of hemorrhagic fluid was removed. As the patient was not willing to continue pregnancy, the products of conception

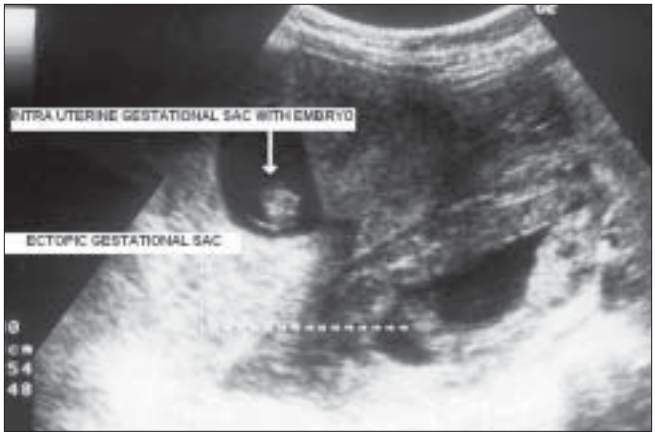


**Figure 1:** USG of the pelvis showing intrauterine and ectopic gestational sacs with embryos

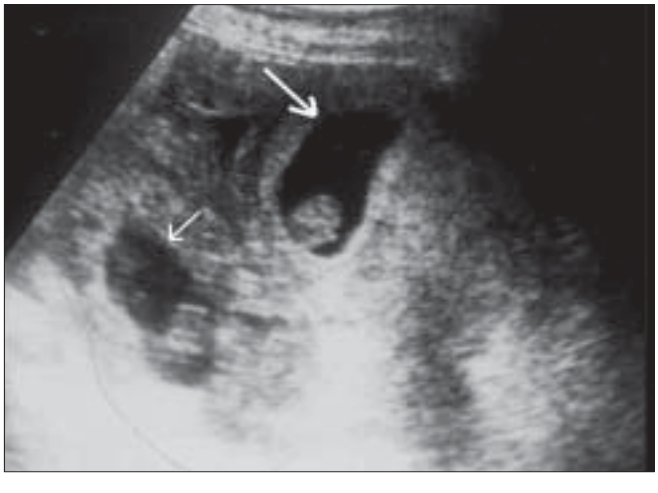

**Figure 2:** USG of the pelvis showing intrauterine (large arrow) and ectopic (small arrow) gestational sacs with embryos

were removed by suction evacuation and curettage and a right-sided salpingo-oophorectomy with left tubectomy was performed.

Histopathology confirmed the above findings. The patient had an uneventful recovery.

## Discussion

Heterotopic pregnancy, which is defined as the coexistence of an intrauterine pregnancy and an ectopic pregnancy, was originally estimated on a theoretical basis to occur in 1 in 30,000 pregnancies. The frequency has increased considerably with the expanding use of assisted fertility techniques.[1] Molloy and co-workers found a frequency of 1% amongst assisted reproduction pregnancies. There is a strong association between infertility and ectopic pregnancy. Risk factors for ectopic pregnancy are present in patients who undergo ovulation induction or in vitro fertilization (IVF) and embryo transfer. The increased incidence of multiple pregnancies with ovulation induction and IVF further increases the risk for both ectopic and heterotopic gestation.

Heterotopic pregnancy is also known to occur in patients who have been treated earlier for an ectopic pregnancy. It is necessary to make an early diagnosis so as to be able to treat it appropriately and successfully.[2] There has been an emphasis on the need to maintain a high index of suspicion and to intervene early to reduce maternal morbidity and mortality.[3] In patients who present with an acute abdomen after IVF, both appendicitis and heterotopic pregnancy should be considered in the differential diagnosis, as both may coexist.[4] Cornual heterotopic pregnancy has also been described after bilateral salpingectomy in an IVF patient.[5] One should include heterotopic pregnancy as a differential diagnosis in women in the reproductive age group presenting with pelvic pain, even when there are no known risk factors.[6] Transabdominal ultrasound is reported to be more useful than endovaginal ultrasound as it can visualize those areas which cannot be accessed by the latter. In effect, both methods are complementary.[7]

In this era of assisted reproduction, the sonologist must remain highly vigilant. Visualization of intrauterine pregnancy cannot be considered a reliable sign that excludes ectopic pregnancy, as was believed earlier. Coexisting adnexal abnormalities should be scrutinized for evidence of an extrauterine gestational sac.

To conclude, one may say that though heterotopic pregnancy is rare, when it does occur, it is potentially dangerous to the mother and the intrauterine conceptus. The diagnosis of a heterotopic pregnancy should always be kept in mind in pregnant women presenting with pain in the abdomen.[8]

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