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Heterotopic pregnancy following spontaneous conception

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Dear Editor,

A heterotopic pregnancy refers to the simultaneous presence of both extrauterine and intrauterine gestations. It is a rare complication of pregnancy, with an estimated incidence of 1 in 30,000 spontaneous pregnancies[1]. The incidence increases in the setting of assisted reproductive technologies which may be related to the techniques employed or prior tubal pathology[2].

In our unit, a thirty-seven-year-old multiparous patient presented at 7^{+2} weeks gestation with hyperemesis gravidarum. Her past medical history was non-significant. As part of routine investigations, a serum β-hCG was taken and a transvaginal ultrasound (TVUS) was performed.

The serum β-hCG was 79,137 mIU/ml and the TVUS demonstrated a live intrauterine gestation (gestational-sac 23mm, crown-rump length 10.4mm) and an area of mixed echogenicity measuring 24mm x 19mm x 17mm adjacent the right ovary. The patient described some moderate pain in the right iliac fossa (RIF) one week previously, but had none since, nor any per-vaginal bleeding.

The possibility that this could be a heterotopic pregnancy was discussed with the patient and she was offered a diagnostic laparoscopy +/- salpingectomy. The patient declined this, preferring a conservative approach with serial scans should she remain asymptomatic. As such, a TVUS was repeated at 8^{+1} weeks with no significant changes.

At 9^{+1} weeks, the patient developed sudden onset RIF pain and represented to the unit. There were no signs of haemodynamic instability, however rebound tenderness and guarding were present on abdominal examination. A TVUS revealed an ongoing intrauterine pregnancy with redemonstration of the adnexal mass and significant free fluid (38mm x 19mm x 26mm).

A three-port laparoscopy was performed and a right sided ruptured ectopic was visualised with approximately 250ml of blood in the pelvis. A salpingectomy was performed, and the patient was discharged on day three.

The rest of the antenatal course proceeded uneventfully and a male infant weighing 3770g was delivered spontaneously at 40^{+2} weeks.

A heterotopic pregnancy presents a diagnostic challenge. Clinically, the typical symptoms that occur tend to be non-specific and can mimic other more common gynaecological causes.

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Given the rarity of the condition, the presence of an intrauterine gestational sac may be falsely reassuring and result in the coexisting ectopic pregnancy being overlooked. Furthermore, the expected serum β-hCG trend in the setting of an ectopic pregnancy is often masked by the β-hCG production of the intrauterine gestation[3].

Due to non-specific symptoms, and challenges with the typical investigations performed, the diagnosis is often delayed and may only be made following rupture of the ectopic pregnancy.

The goal of treatment is to remove the ectopic pregnancy whilst simultaneously preserving the intrauterine pregnancy. Different management strategies have been studied, however surgical management with laparoscopy is often considered the standard treatment. Laparotomy may be indicated in the setting of hemoperitoneum with resultant haemodynamic instability[4].

This case is a pertinent reminder that exceptionally rare conditions do occur and may occur in patients with no obvious risk factors. Regarding heterotopic pregnancies, a high index of clinical suspicion is needed, particularly as the incidence of pregnancies conceived by ART increases.

Declarations of Conflicts of Interest:

None declared.

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