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CASE REPORT

The Forgotten Child: Think Heterotopic

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ABSTRACT

Heterotopic pregnancy is defined as the rare presence of simultaneous pregnancies at two different sites of implantation, one intrauterine and the other extrauterine (ectopic). It is a life-threatening condition that can be easily missed if not noticed carefully.

Here, we present a case report of heterotopic pregnancy diagnosed by ultrasonography in a patient. Once an intrauterine gestational sac is visualized, the radiologists are relieved and do not inspect the adnexa carefully even if ectopic pregnancy is clinically suspected. One should remember "Think ectopic. If intrauterine gestation is seen, think heterotopic."

Keywords: Ectopic pregnancy, Heterotopic pregnancy, Ultrasonography.

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INTRODUCTION

Firstly reported in 1761 after an autopsy,[1] heterotopic pregnancy is the concomitant localization of intrauterine and extrauterine pregnancies resulting from fecundation of two oocytes expulsed at a short time interval and implantation of resulting blastocysts. The incidence in spontaneous conception is 1 in 30,000 pregnancies. However, the rate is higher due to assisted reproductive techniques and it is approximately 1 in 7,000 overall and is as high as 33/10,000 with ovulation induction.[2]

Heterotopic pregnancy is found rarer in pregnancies which are spontaneous. The patient often reports to the casualty with hemorrhagic shock and acute pain in abdomen. However, in unruptured ectopic pregnancy, the symptoms are like any normal gestation. Thus, to avoid catastrophic outcomes, it should be suspected even after an intrauterine gestation is confirmed and managed accordingly.

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When a gravida presents with acute pain abdomen, the sonologists keep in mind "Think Ectopic" as advised by the famous French surgeon Henri Mondor (1885–1962). However, now, when an intrauterine gestation is visualized, think heterotopic pregnancy.

So, here we are reporting a rare case of heterotopic pregnancy with a natural conception and stress on the need of a careful imaging in diagnosis and for the management of these patients.

CASE REPORT

A 25-year-old G2P0A1 female presented to our gynecological outpatient department with a history of amenorrhea of 7 weeks, 5 days, and a 2-day history of severe lower abdominal period-like pain and several episodes of vomiting per day. It was a spontaneous conception. She had no episode of vaginal bleeding, bowel, or bladder symptoms. She had no history of any intrauterine contraceptive device use or previous sexually transmitted infections or undergone assisted reproductive technology (ART). She denied any history of previous ectopic pregnancies and any pelvic or tubal pathology. Her periods were regular. She had one spontaneous abortion 5 months back which was not followed by surgical evacuation. Her past medical and surgical histories were uneventful.

On examination, she was of average built with moderate pallor. She was tachycardic at 115 beats per minute with a blood pressure of 102/62 mm Hg. Her abdomen was soft with tenderness present in the lower abdomen. On bimanual examination, she had an 8-week size uterus with tenderness and fullness in left adnexa and positive cervical motion tenderness. Right adnexa was clear and nontender. Her cervical os was closed. Culdocentesis done was positive with 4 mL of nonclotting blood.

Her urine pregnancy test was positive. Urine dipstick showed no signs of urinary tract infection. Her investigations were normal with hemoglobin of 8.5 gm/dL.

She underwent a transabdominal ultrasound scan which revealed a single live intrauterine fetus of 8 weeks 2 days with minimal free fluid in pouch of Douglas, guided aspiration through which showed hemoperitoneum.

There was simultaneous presence of a 3.2 × 3.2 mm complex left adnexal cyst with marginal vascularity, suggestive of likelihood of a heterotopic pregnancy (Fig. 1).

Initial resuscitation was done with intravenous colloids and emergency exploratory laparotomy was planned in view of acute abdomen and unstable hemodynamic.

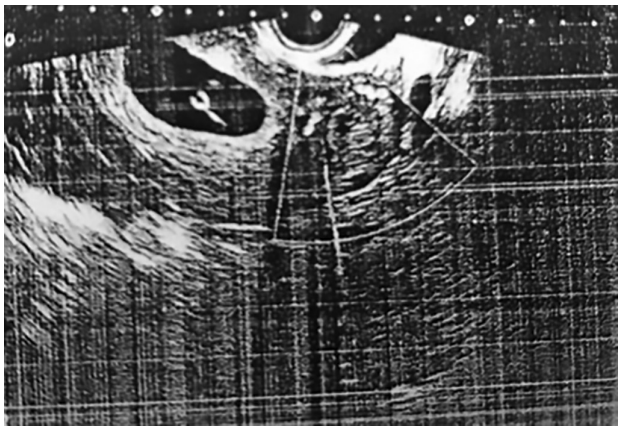
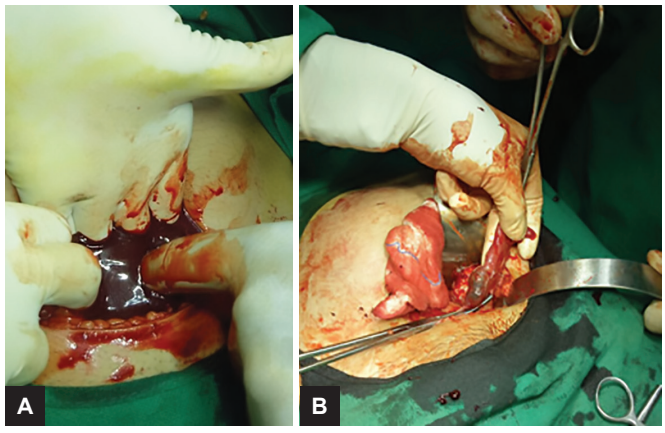


Fig. 1: Ultrasound showing heterotopic pregnancy



Figs 2A and B: (A) Hemoperitoneum on laparotomy. (B) Left tubal ectopic pregnancy

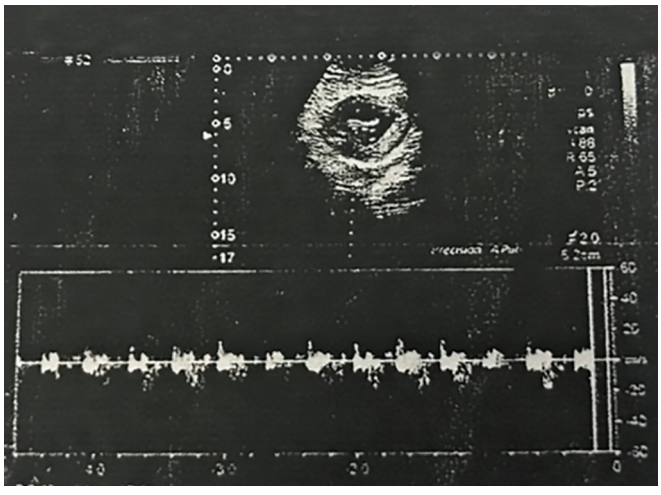


Fig. 3: Follow-up ultrasound showing single live intrauterine fetus

Laparotomy confirmed the rupture of left tubal ectopic on isthmus with presence of 500 cc blood and 250 cc of blood clots in the peritoneal cavity (Fig. 2).

Left-sided salpingectomy was done followed by peritoneal lavage and intrauterine pregnancy was preserved. The patient was transfused one unit of packed red blood cell during surgery and another unit postoperatively. After a good postoperative period, she was discharged under satisfactory condition on postoperative day 6. On discharge, she was prescribed folic acid and progesterone support.

Histopathology of the tissue confirmed tubal ectopic pregnancy. Follow-up ultrasonography was done after 2 weeks to confirm the viability of the fetus and was suggestive of single life intrauterine fetus of 10 weeks 2 days (Fig. 3).

DISCUSSION

Diagnosing heterotopic pregnancy in early unruptured stage is very challenging because of the lack of clinical symptoms and signs and confusion in diagnosis with other early pregnancy cases like bicornuate uterus with gestational sac in both the cornua and complex corpus luteal cyst with hemorrhage.

The predisposing factors for heterotopic pregnancy are the conditions that increase the risk of ectopic pregnancy (sexually transmitted infection, pelvic inflammatory disease, smoking, hormonal contraception, intrauterine device, pelvic surgery, and history of infertility) and ovulation induction and ARTs. Our patient did not have any risk factor of ectopic pregnancy. The prevalence of heterotopic pregnancies among those obtained after ART varies from 1 to 2.9%.[3] In cases where heterotopic pregnancy cannot be ruled out preoperatively, the uterus may be handled inappropriately during the surgery done for ruptured ectopic pregnancy, leading to adverse effects on the intrauterine fetus. The diagnosis of heterotopic pregnancy is made by the presence of amenorrhea, pregnancy-related symptoms, pelvic pain (present in 82.7 to 90% of cases), elevated level of β-human chorionic gonadotropin, signs of irritated peritoneum (present in 12.9 to 45% of cases) and metrorrhagia (present in 50% of cases).[4] In up to 50% of cases, heterotopic pregnancy can remain totally asymptomatic till it is discovered fortuitously by a routine first trimester ultrasound.[5] The treatment of heterotopic pregnancy can be expectant, medical, or surgical. Out of 217 cases of heterotopic pregnancies reported in literature, 90.78% were managed surgically.[1] Depending on the patient's hemodynamic state at the time of diagnosis, salpingectomy can be done by a laparotomy or laparoscopic approach. The tube hosting the pregnancy can be conserved if future pregnancy is desired depending on the condition of the contralateral fallopian tube and on the state of the ectopic pregnancy. Heterotopic pregnancy can be managed expectantly if it is not growing. Medical management may be considered if the extrauterine gestational sac is diagnosed early and the patient is asymptomatic. Other treatment modalities available include ultrasound-guided transvaginal

aspiration of the sac or local injection of methotrexate, potassium chloride, or hyperosmolar glucose.

In the present case, the conception was spontaneous and diagnosed ultrasonologically by the simultaneous presence of an intrauterine and extrauterine pregnancy. Surgical management was done to remove the extrauterine nonviable pregnancy with salpingectomy, thus allowing the intrauterine viable gestation to continue to term and thereby culminating in a full-term normal vaginal delivery. Our management was aimed at preserving the mother's health and the intrauterine fetus for which the procedure was completed swiftly to allow the least exposure to spinal anesthesia, the uterus was properly handed during surgery, and the intrauterine pregnancy was supplemented with progesterone.

Thus, all surgeons who are operating for ruptured ectopic must keep in mind the possibility of heterotopic pregnancy and handle the uterus with care to preserve the developing intrauterine pregnancy. Treatment should be as minimally invasive as possible to avoid hurting the intrauterine pregnancy. With early diagnosis and treatment, 70% of the intrauterine pregnancies will reach viability.[6]

CONCLUSION

Heterotopic pregnancy is a very rare phenomenon in spontaneous conception and should be suspected in patients with intrauterine gestation and complaining of pain abdomen or with sonographic evidence of free fluid in the pouch of Douglas or peritoneal cavity. Early judicious diagnosis and prompt intervention are essential to avoid life-threatening condition with tubal rupture and hemorrhagic shock. Intraoperatively, the uterus should be handled with care to allow the intrauterine pregnancy to continue and undergo normal delivery at term.

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