Ruptured heterotopic pregnancy: a case report

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ABSTRACT

Heterotopic pregnancy is a rare condition when at least two pregnancies are present simultaneously at different implantation sites and only one is located in the uterine cavity. The majority of cases are diagnosed in the first trimester. Heterotopic gestation is very rare in natural conception. A high index of suspicion is required for timely diagnosis and appropriate intervention. We report a case of heterotopic pregnancy in a 26-year-old woman presented with hemoperitoneum from ruptured tubal pregnancy with live intrauterine gestation at 8 weeks of amenorrhea, diagnosed on ultrasound examination. She underwent exploratory laparotomy with right salpingectomy and post-operative period was uneventful.

Keywords: Acute abdomen, ectopic pregnancy, heterotopic pregnancy, laparotomy

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INTRODUCTION

Heterotopic pregnancy refers to the combination of an intrauterine pregnancy and a concurrent pregnancy at an ectopic location. While heterotopic pregnancy used to be rare (estimated to occur in 1 in 30,000 pregnancies[1]), with the emergence of assisted reproductive technology (ART) the overall incidence of heterotopic pregnancy has been increasing.[2,3] We report a case of ruptured heterotopic right tubal pregnancy in a natural cycle. This case report intends to highlight the importance of being aware of ectopic and heterotopic pregnancy in every woman of childbearing age with abdominal pain

Case Report

A 26-year-old woman, gravida 2 Para 1, living 1 presented to the emergency department at 8 weeks of amenorrhea, with acute abdominal pain, per vaginal spotting for 7 days - rendering her to use 1 pad/ day - which was fully soaked. She had no dizziness, fainting spells. Her current pregnancy occurred spontaneously on background of regular menstruation pattern with no previous fertility treatments and she did not use any contraception. Her medical history did not suggest any history of pelvic inflammatory disease, abortions, infertility or abdominal surgery or trauma. Her last menstrual period was 8 weeks and 2 days ago. In her previous pregnancy, she had given birth to one living child. The physical examination revealed a conscious woman, systolic blood pressure of 100 mm Hg, Heart rate of 110 beats/ minute. Abdominal examination revealed tenderness in the right iliac region, without guarding, rigidity or rebound tenderness. On speculum examination, the cervix was stained with blood, cervical os, however, was closed. On vaginal examination, the uterus was tender- on bimanual examination, anteverted with pain during cervical movements. There was no adnexal masses or tenderness. A crystalloid intravenous fluid bolus was started and appropriate laboratory studies were begun. Urinary human chorionic gonadotrophin was positive for pregnancy. Laboratory data on admission showed a white blood cell count of 12,500 elements/mm,^{3} serum hemoglobin concentration of 9.6 g/dl, platelet level 140,000/mm^3. Her Renal and Liver function tests were normal. Her Blood Group was determined to be O positive. After hemodynamic stability, transvaginal ultrasonographic examination was performed at the bedside which revealed a normal intrauterine pregnancy at approximately 6 weeks 5 days of estimated gestational age. Right adnexa contained a heteroechoic area measuring 45.5 mm *42.7 mm with gestational sac like structure with fetal pole; CRL 0.82 cm corresponding to 6 weeks 5 days of gestation without cardiac activity (Fig 1). There was echogenic free fluid in pouch of Douglas, right hepatorenal pouch and left peri splenic region (Fig 2). About 10ml of hemorrhagic fluid was aspirated from right adnexa. Provisional diagnosis of a heterotopic pregnancy with ruptured right ectopic gestation was made. The patient underwent emergency exploratory laparotomy via Pfannenstiel incision under general anesthesia. The blood and the free clots (total about 1 liter) were removed. There was ruptured right-sided tubal pregnancy- right-sided salpingectomy was performed (Fig 3).

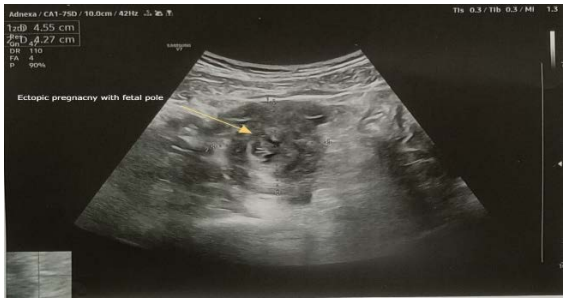

Figure 1. Transvaginal scan through the right adnexa demonstrating gestational sac like structure with fetal pole, without cardiac activity

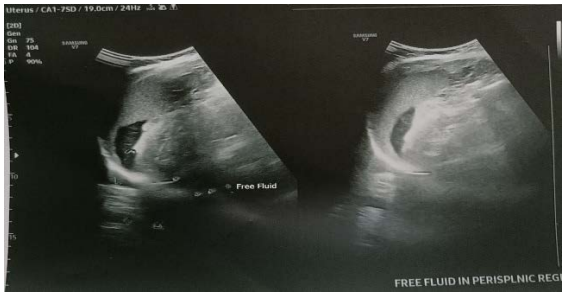

Figure 2. Sagittal transvaginal scan demonstrating clot and free fluid present in the pouch of Douglas, peri splenic region

Figure 3. Resected fallopian tube with ectopic pregnancy and clots.

The patient was transfused with 2 units of RBCs postoperatively and had an uncomplicated hospital course. Three days after surgery, she was discharged with a viable intrauterine pregnancy which proceeded without complications. This

pregnancy is currently estimated at 7 months, with satisfactory ultrasonographic evaluation and the patient is free of any symptoms.

DISCUSSION

Heterotopic pregnancy refers to the combination of an intrauterine pregnancy and a concurrent pregnancy at an ectopic location, commonly in the fallopian tube.[1] Previously rare, with the emergence of assisted reproductive technology (ART) the overall incidence of heterotopic pregnancy has been increasing.[2,3] Heterotopic pregnancies have been diagnosed at any stage of pregnancy, between 5 and 34 weeks of gestation[4], although 70% are diagnosed between 5 and 8 weeks of gestation.[2] Risk factors for ectopic pregnancy are also applicable to heterotopic pregnancy—these include previous ectopic pregnancy, tubal surgery or pelvic inflammatory disease.[6] Our patient had no risk factors which undermined the diagnosis of heterotopic pregnancy. This highlights that every woman of childbearing age with abdominal pain should be considered to have an ectopic pregnancy, regardless of risk factors, until proven otherwise. Transvaginal sonography (TVS), although an invaluable tool in aiding the diagnosis of such conditions, the sensitivity is only 56% at 5–6 weeks.[7] Owing to the rarity of the condition, unusual presentation and low sensitivity of imaging, the diagnosis of heterotopic pregnancy can be really challenging. Delay in diagnosis can lead to increase chances of more invasive clinical management and significantly increased risk of morbidity and mortality to both the intrauterine fetus and the mother. Often, the only clinical symptom is lower abdominal pain with mild cramping. Abdominal pain is present in majority of heterotopic pregnancies and hypovolemic shock with abdominal tenderness in 13%. In the case of an intra uterine pregnancy with acute lower abdominal pain, the possibility of a heterotopic pregnancy should be considered. This condition is very rare in a natural cycle. The search of fluid in the pouch of Douglas is presumed clinically important. Puncture of the cul-de-sac is still used to diagnose internal bleeding, as done in our case. Evaluation of the amount of fluid in the abdomen with the characteristic echogenicity is evident of hemoperitoneum.[4] In our case, the clinical suspicion of heterotopic pregnancy was clinched after transvaginal ultrasonography.

The management options depend on the clinical status of the patient, timing of presentation and patient preference. The ectopic component in case of rupture is always treated surgically and the intra uterine pregnancy is expected to continue normally. Laparoscopy with minimal handling of the uterus is considered to be the safest option as opposed to Laparotomy. For unruptured ectopic gestation, treatment options include expectant management with aspiration and installation of potassium chloride or prostaglandin into the gestational sac.[7] Systemic methotrexate (MTX) or local injection of MTX cannot be used in a heterotopic pregnancy owing to its toxicity, although some authors have used instillation of a small dose.[8] In our case she was treated with immediate Exploratory Laparotomy due to the presence of internal bleeding. The operating time was approximately 35 minutes and the patient tolerated well

CONCLUSION

The diagnosis is possible only in cases when there is a high index of suspicion by the treating clinician. The clinical presentation is like that of an ectopic pregnancy where the patient presents with abdominal pain and bleeding per vaginum. The diagnosis of heterotopic pregnancy is easily hampered by a false sense of security after visualization of an intrauterine gestation which highlights the importance of inspection of adnexa during ultrasonography otherwise the operating room will have the final verdict. This case report serves to highlight the importance of being aware of ectopic and heterotopic pregnancy in any women of childbearing age who presents with any abdominal pain because early diagnosis and management will result in improved maternal and fetal outcomes.

Consent

A signed consent was taken from the patient regarding the publication of the case report.

Conflict of Interests

None

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