Case Report

Heterotopic pregnancy (cervical & tubal pregnancy)

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Abstract

Heterotopic pregnancy is the presence of intrauterine pregnancy (living or deadsingle or multiple) and extra-uterine pregnancy which located in the fallopian tubes, ovary, uterine corner, cervix or peritoneal cavity. This condition is very rare (1:30 000 pregnancies). With the development and accessibility of assisted reproductive techniques, the incidence of heterotopic pregnancies increased to 1:100 of pregnancies. The aim of this report is to present a case of early recognized double ectopic pregnancy tubal and cervical pregnancy. The case is a 30 years old Saudi lady 6 weeks gestation in her 3rd pregnancy the first was twin pregnancy delivered by spontaneous vaginal delivery and the 2nd is term singleton pregnancy delivered also by spontaneous vaginal delivery. The patient admitted because of vaginal bleeding and abdominal pain lasting for 48 hours diagnosed as ruptured left tubal pregnancy and underwent emergency laparotomy in which left salpingectomy was done and the other tube and both ovaries were normal. Patient discharge in a good condition 3 days after the surgery. Patient seen in her follow up visit 4 days after discharge serum βhCG was still high ultrasound reviled a viable pregnancy in the posterior lower part of the uterus at the junction with cervix. Laparoscopic successfully guided feticide is donefollowed by IM injection of Methotrexate. Patient had a spontaneous pregnancy which was uncomplicated till she had a spontaneous delivery without complications 1 year later.

Keywords. Heterotopic pregnancy, tubal pregnancy, cervical pregnancy, feticide.

Introduction

Heterotopic pregnancy is the presence of intrauterine pregnancy (living or dead single or multiple) and extra-uterine pregnancy which located in the fallopian tubes, ovary, uterine corner, cervix or peritoneal cavity. The first case was described in 1708 – at that time the diagnosis was established during autopsy. [(1)]With the development of the assisted reproductive techniques and the ultrasound techniques improvement, the incidence of heterotopic pregnancies increased from 1:500 to 1:100 of pregnancies. Cervical pregnancy is an ectopic pregnancy in which the gestational sac implants in the cervical canal. The incidence of cervical pregnancy is rare at <1% of ectopic pregnancies [(2)]. Although it is rare cervical pregnancy is serious due to the high risk of severe life-threatening bleeding if it is not treated appropriately. Risk factors include previous dilatation and curettage, prior cesarean section, use of intrauterine contraceptive devices, and assisted reproductive technologies. The diagnosis is made depending onclinical presenting symptoms, signs on the physical examination, estimation of serum β-hCG levels andtransvaginalultrasound scan.The most common presenting symptom for cervical pregnancy is painless vaginal bleeding.[(3)]. Delay of the diagnosis may lead to massive bleeding or even hypovolemic shock. In this study the case of the coexistence of cervical and tubal pregnancies has been presented in a patient, who had been stated no increased risk of heterotopic pregnancy and who conceived in the course of natural menstrual cycle.Searching in the literature couldn't recognize a report of combined cervical and tubal pregnancy.

Case report:

A 30 years old Saudi patient G3 P3 +0, has one set of twin and one singleton pregnancy delivered by normal delivery presented at 6 weeks GA admitted to our hospital (7th of March) through ER complaining of severe left lower abdominal pain and minimal vaginal bleeding for 2days.Abdominal Examinationrevealedsevere abdominal tenderness all over mainly inthe left iliac fossa no palpable mass. Serum was βhCG: 8998 UIU/ml.

Transvaginal Ultrasound: showed intrauterine gestational sac and fetalecho was

seen.Left adnexal mass 6 X 4 cm and collection of fluid in the abdomen and pouch of doglus diagnosed as ruptured left ectopic pregnancyand patient shifted for emergency laparotomy.

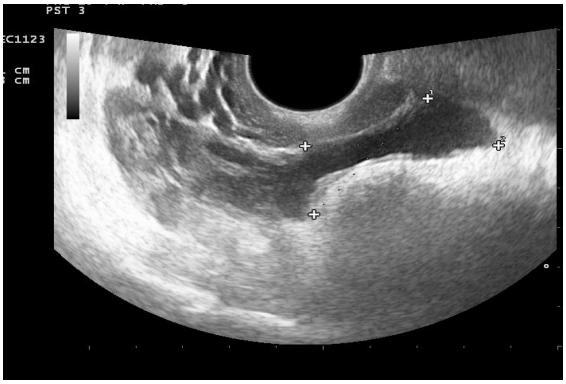


Figure (1) show ultrasound scan showed Left Disturbed Tubal Pregnancy Blood collection + Blood Clots

Operative details and findings:

- 1500 cc blood in the peritoneal cavity, clots were present with left ruptured tubal ectopic. Left salpingectomy was done and sent for histopathology. Right tube and ovary were normal. Patient post-operative is stable
- The patient was given appointment after 4 days with **βhCG** level for follow up.
- 4 days later the patient came for her appointment: Ultrasound done by a consultant of feto-maternal medicine showedgestational sac withviable embryo 7 weeks gestational age at the rightposterior wall just above the cervix.
- At that time her **βhCG** was **13312 UIU/ml**

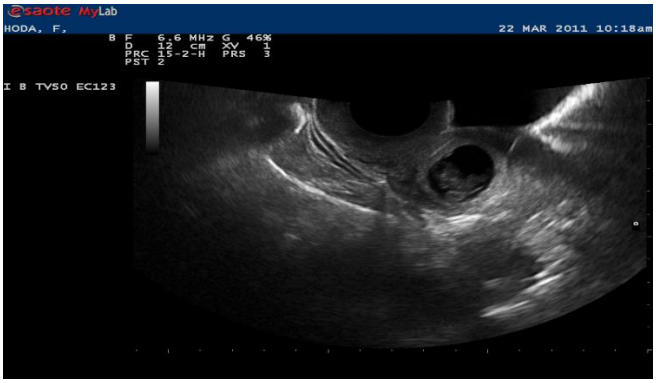


Figure (3) show ultrasound scan with intrauterine viable pregnancy (posterior lower uterine pregnancy at the junction of the cervix)

Patient admitted again in 18th of March for termination of pregnancy.
βhCG in the day of operation was **40189 UIU/ml**

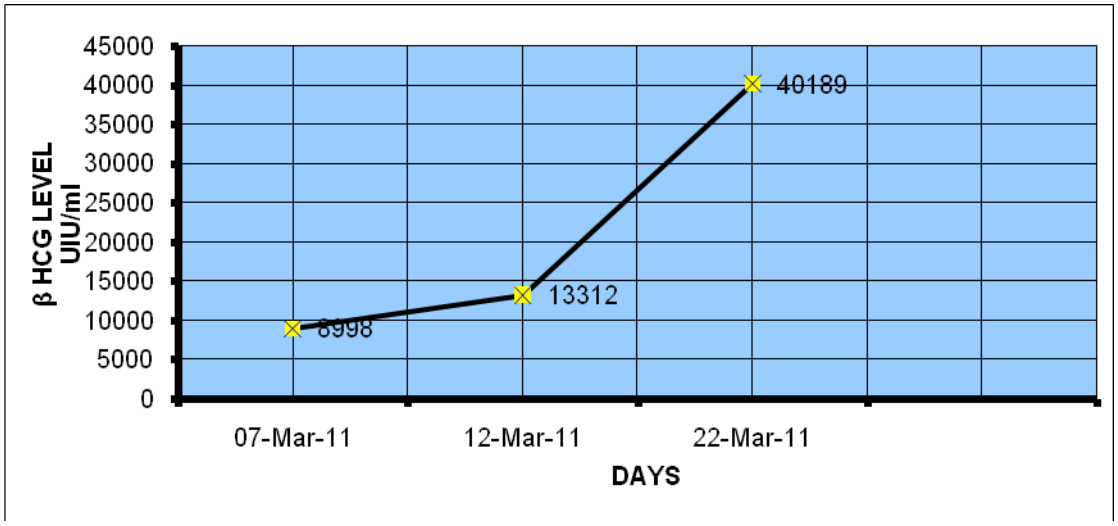
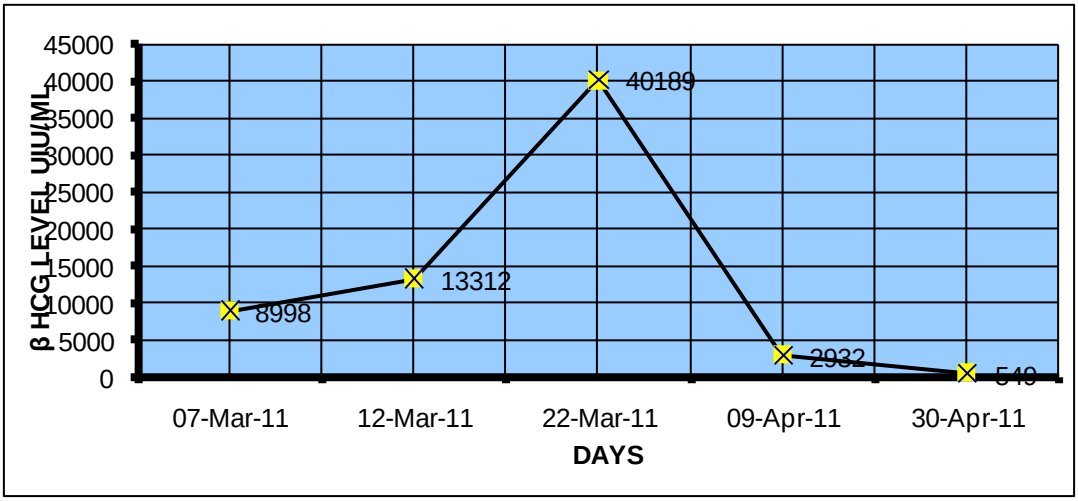


Figure (4) shows the level of βhCG from presentation to time of feticide.

MRI was done(20-03) Showed:
Myometrial pregnancy in the right lower uterine segment at the junction with the cervix.
Figure (6) shows the level of βhCG from presentation till post-feticide



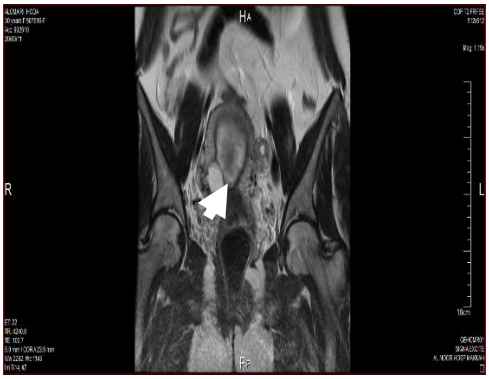


Figure (5) shows MRI with cervical pregnancy

Plan was for Ultrasound guided feticide

In the OR:

- First Feticidal attempt with KCL intra-cardiac injection was attempted under Trans Vaginal Ultrasound (TVU) which was failed.Second attempt was successful via laparoscopy under TVU.Patient post-operative in good condition.
- After that baseline hematological profile, liver and renal function tests were evaluated Methotrexate(50mg/m²) for 3 doses alternating with folinic acid were administered intramuscularly
- After that serum βHCG showed dramatic decrease:
  - ✓ 9th of April the result of β**hCG** is 2932 UIU/ ml.
  - ✓ 30 of April the result of **βhCG** is 549 UIU/ml.

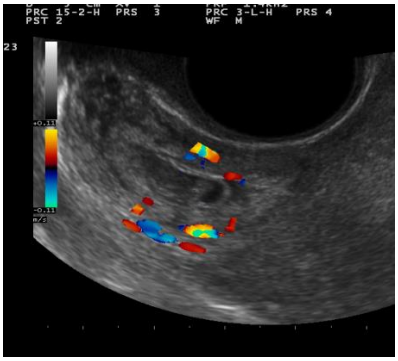


Figure (8) shows post-feticideDoppler ultrasound scan with no fetal cardiac activity

To complete the story the patient had a spontaneous pregnancy which was uncomplicated till she had a spontaneous delivery without complications 1 year later.

Discussion:

Cervical pregnancy accompanying tubal pregnancy is very rare form of ectopic pregnancy.Cervical pregnancy occurs when the pregnancy attaches or implanted in the endocervical canal. It accounts for less than 1 percent of ectopic pregnancies.[4] The incidence is approximately 1 in 9000 pregnancies. In a 10-year, population-based study of 1800 cases, no cervical pregnancies were encountered.[5,6]. Incidence of cervical pregnancy increases in pregnancies achieved through assisted reproductive technologies; it accounts of 0.1 percent of in vitro fertilization pregnancies and 3.7 percent of in verto fertilization ectopic gestations.[7]Because there is high risk of severe hemorrhage and hysterectomy diagnosis and treatment early in pregnancy are important to avoid and minimize those risks.

The aetiolgy of cervical pregnancy is not known but might be associated with local pathology in cervix related to a history of surgery in the cervix or the uterus such as history of curettage or cesarean delivery [5, 6].

Symptoms of cervical pregnancy include: vaginal bleeding (most common), which is usually profuse[8]. Less than 30% of the cases presents with Lower abdominal pain or cramps. Studies on cervical pregnancies, with an average

gestational age of 9 weeks, shows that cervix was enlarged, globular, or distended in 86% of cases, while the uterus was enlarged in 54%[8]. Performing speculum examination is found to be more informative and with less risk of bleeding than bimanual examination. Clinical finding revealed that the external os is often open, with membranes or tissue of conception is visible. There is a significant risk of hemorrhage with the possible need for urgent hysterectomy to stop the bleeding in cases of cervical pregnancy. The availability and advances in transvaginal ultrasound scanning facilities and the wide use of rapid assay of β-hCG facilitate the early diagnosis of most ectopic pregnancies, including cervical pregnancies where most of the patient will be more clinically stable and can therefore be offered conservative management rather than emergency surgical intervention.[9]

Options for the treatment of cervical pregnancy includes: [10]

- Use of folly catheter as cervical tampon.
- Interruption of the blood supply to the cervix by cervical cerclage, cervical arteries ligation, ligation of internal or uterine arteries, embolization of the cervical, uterine or internal iliac arteries.
- Dilatation and Curettage or hysterectomy
- Ultrasound-guided feticidethrough injection of potassium chloride and/or methotrexate directly in the fetus
- Use of systemic cytotoxic chemotherapy (methotrexate) either a single or multiple doses, and adding folinic acid.[11]

Here we report a case of spontaneous cervico-isthmic and tubal twin ectopic pregnancy who was diagnosed early in the first trimester with transvaginal ultrasonography.

The pregnancy was terminated successfully with laparotomy and excision of the ruptured tube and later Intracardiac Potassium Chloride Injection followed by methotrexate (MTX) 50 mg/m² for 3 doses alternating with folinic acid for the cervico-isthmus pregnancy.

Tubal Ectopic Pregnancy accounts about 95% of ectopic pregnancy, incidence of Cervical Ectopic Pregnancy 1:1000 – 1:18000 and to have

both together (Twin Hetro Ectopic)is extremely extremely rare.

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