ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

HETEROTROPIC PREGNANCY IN A SPONTANEOUS CYCLE

KEY WORDS: Heterotpoic Pregnancy, Laparotomy , Ectopic

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ABSTRACT

Spontaneous heterotopic pregnancy is a rare clinical and potentially dangerous condition in which intrauterine and extrauterine pregnancies occur at the same time. The incidence is 1 in 30,000 in spontaneous pregnancies.However, with assisted reproduction techniques, this incidence increases to 1 in 100 pregnancies. Heterotopic pregnancies can be asymptomatic in about half of the cases; otherwise, it can present with variable clinical presentations: mainly abdominal pain, adnexal swelling that may be associated with vaginal bleeding, or even shock due to hypovolemia. Unfortunately, the clinical findings are more frequently presented with tubal rupture. High resolution transvaginal ultrasound with color doppler is helpful as the trophoblastic tissue in the adnexa in a case of heterotopic pregnancy shows increased flow with significantly reduced resistance index. Accurate and early diagnosis of heterotopic pregnancy is challenging and still remains a diagnostic and therapeutic challenge to practitioners despite the increased medical knowledge and use of improved reproductive technologies.

INTRODUCTION

Spontaneous heterotopic pregnancy is a rare clinical and potentially dangerous condition in which intrauterine and extrauterine pregnancies occur at the same time.

The incidence is 1 in 30,000 in spontaneous pregnancies. [1,2] However, with assisted reproduction techniques, this incidence increases to 1 in 100 pregnancies.

Predisposing risk factors include previous history of ectopic pregnancy, tubal surgery, pelvic inflammatory disease, use of an intrauterine device, in vitro fertilisation in the current pregnancy, in utero diethylstilbestrol exposure and smoking.[3,4]

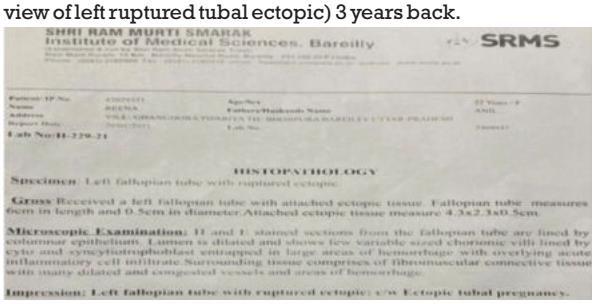
Heterotopic pregnancies have been diagnosed from 5-34 weeks of gestation with up to 70% diagnosed between 5-8 weeks of gestation, 20% between 9-10 weeks, and only 10% after the 11th week.[5]

Case Report

A 25 year-old Gravida 2 ectopic 1 at 7+4 weeks presented with lower abdominal pain for 5 days with brownish vaginal discharge, nausea, and vomiting.

It was a spontaneous conception.No previous fertility treatment and she did not use any contraception.

History of an exploratory laparotomy(left salpingectomy in view of left ruptured tubal ectopic) 3 years back.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HISTOPATHOLOGY

Specimen: Left fallopian tube with ruptured ectopic

Gross: Received a left fallopian tube with attached ectopic tissue. Fallopian tube measures 6cm in length and 0.5cm in diameter.Attached ectopic tissue measure 4.3x2.3x0.5cm.

Microscopic Examination: H and E stained sections from the fallopian tube are lined by columnar epithelium. Lumen is dilated and shows few variable sized chorionic villi lined by cyto and syncytiotrophoblast entrapped in large areas of hemorrhage with overlying acute inflammatory cell infiltrate.Surrounding tissue comprises of fibromuscular connective tissue with many dilated and congested vessels and areas of hemorrhage.

Impression: Left fallopian tube with ruptured ectopic; c/w Ectopic tubal pregnancy.

Figure 1 HPE report suggestive of of ruptured left tubal ectopic

On clinical examination, she was haemodynamically stable, tenderness in right iliac fossa but had no rigidity or guarding. On per speculum examination there was minimal altered brownish discharge present.

Transabdominal and transvaginal ultrasounds were performed .Grayscale ultrasound confirmed by color doppler revealed a viable intrauterine pregnancy of 7 weeks and 6 days along with another well formed G sac in right adnexa with a viable fetus of CRL corresponding to 7 weeks 5 days .Minimal to mild free fluid with dense homogenous echoes were seen in close vicinity to the ectopic gsac ; otherwise, the ovaries displayed unremarkable ultra- sound features.

The ectopic pregnancy was diagnosed at 7+5 weeks, 1 week after diagnosis of the intrauterine pregnancy. An emergency exploratory laparotomy was performed in view of clinical and ultrasound findings , per op -hemoperitoneum of 100-150 cc with right tubal pregnancy. Both the ovaries appeared normal. right salpingectomy was performed .The uterus was not manipulated, to preserve the intrauterine pregnancy. Postoperatively patient was started on progesterone.

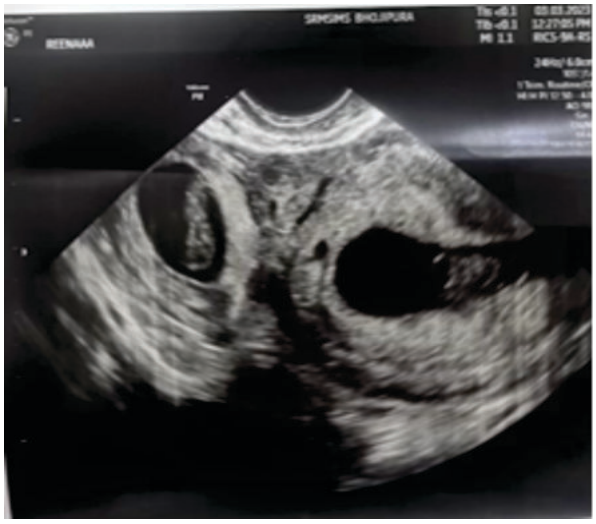


Figure 2 TVS showing simulatenous intrauetrine and extrauterine pregnancy

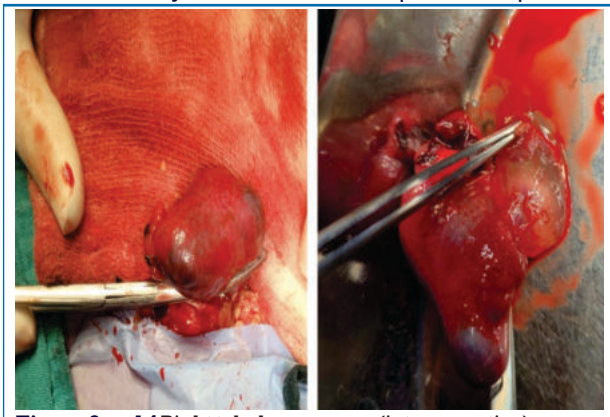
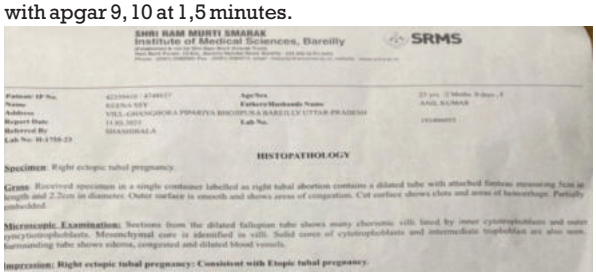


Figure 3 and 4 Right tubal pregnancy (intraoperative)

The antenatal period was uneventful otherwise. The patient was steroid covered at 34 weeks and progesterone support was withdrawn. The patient went into spontaneous labour at 38^{+5} weeks. The patient was taken for emergency caesarean section in view of non progress of labour and delivered a female baby of 2700gm. Baby cried immediately after birth with apgar 9, 10 at 1,5 minutes.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HISTOPATHOLOGY

Specimen: Right ectopic tubal pregnancy.

Gross: Received specimen in a single container labelled as right tubal abortion contains a dilated tube with attached fimbria measuring 5cm in length and 2.2cm in diameter. Outer surface is smooth and shows areas of congestion. Cut surface shows clots and areas of hemorrhage. Partially embedded.

Microscopic Examination: Sections from the dilated fallopian tube shows many chorionic villi lined by inner cytotrophoblasts and outer syncytiotrophoblasts. Mesenchymal core is identified in villi. Solid cores of cytotrophoblasts and intermediate trophoblast are also seen. Surrounding tube shows edema, congested and dilated blood vessels.

Impression: Right ectopic tubal pregnancy: Consistent with Etopic tubal pregnancy.

Figure 5 HPE suggestive of right tubal ectopic

DISCUSSION

Most commonly, the location of ectopic gestation in a heterotopic pregnancy is the fallopian tube. However, cervical and ovarian heterotopic pregnancies have also been reported.[6,7]

Heterotopic pregnancies can be asymptomatic in about half of the cases; otherwise, it can present with variable clinical presentations: mainly abdominal pain, adnexal swelling that may be associated with vaginal bleeding, or even shock due to hypovolemia. Unfortunately, the clinical findings are more frequently presented with tubal rupture.

The main symptoms of heterotopic pregnancy are abdominal pain, adnexal mass, peritoneal irritation and an enlarged uterus,which can mimic other gynaecological causes (miscarriage, Ectopic pregnancy, intrauterine pregnancy with haemorrhagic corpus luteum and adnexal torsion) and non-gynaecological ones (appendicitis, cholecystitis, bowel obstruction or pancreatitis).

High resolution transvaginal ultrasound with color Doppler is helpful as the trophoblastic tissue in the adnexa in a case of heterotopic pregnancy shows increased flow with significantly reduced resistance index.[2]

Most often heterotopic pregnancy is managed by salpingectomy or salpingostomy. Similar case study has been reported by Jeon HS et al in 2012 in which the Heterotopic pregnancy was managed by laparotomy with conservation of intrauterine pregnancy.[8]

Systemic methotrexate has no role in the management of heterotopic pregnancy due to the presence of a viable intrauterine pregnancy. Some literature described the use of local injection of potassium chloride and methotrexate, but the success rate is controversial.

CONCLUSION

A heterotopic pregnancy, though extremely rare, should be kept in mind even if an intrauterine pregnancy is diagnosed and can still result from natural conception, and one needs extra efforts to look for heterogenous pregnancy.

There are several cases reported of Heterotopic pregnancy where ectopic pregnancy was not detected initially.

The high index of suspicion is to ensure for early and timely diagnosis and management, a timely intervention can result in a successful outcome of intrauterine pregnancy and prevent tubal rupture and hemorragic shock which can be fatal.

Although ultrasound evaluation of an early gestation should include the adnexa, the diagnosis of an IUP often leads to the mistaken exclusion of the hypothesis of a concomitant EP.

Accurate and early diagnosis of heterotopic pregnancy is challenging and still remains a diagnostic and therapeutic challenge to practitioners despite the increased medical knowledge and use of improved reproductive technologies.

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