



HETEROTOPIC PREGNANCY: THREE CASE REPORTS

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(ABSTRACT) **BACKGROUND:** Heterotopic pregnancy is defined as simultaneous presence of intrauterine and extra uterine pregnancy. It is a rare condition with a prevalence of 0.65 to 2.5 per 10000 pregnancies but the incidence is increasing due to more use of assisted reproductive techniques and tubal surgeries. Most patients have a history of infertility or tubal surgery. In this case series, we are presenting three cases of heterotopic pregnancy. **CASE REPORTS:** Out of the three cases, first case had undergone treatment with ovulation inducing drugs, and the second case conceived spontaneously with no history of infertility or tubal surgery which is very rare, third case had history of ectopic pregnancy. All the three cases presented as a case of ruptured ectopic. In first case, the intrauterine pregnancy was diagnosed post operatively on ultrasonography as the intraoperative finding revealed large size uterus. Pregnancy went uneventful with delivery of a healthy baby. The second case was diagnosed on ultrasonography showing hemoperitoneum and intrauterine pregnancy. In this case, spontaneous abortion occurred. The third case had non viable intrauterine pregnancy along with an ectopic. **CONCLUSION:** Since there is rising trend of heterotopic pregnancies, it must be treated as a differential diagnosis and there is a need to develop diagnostic criteria to rule out heterotopic pregnancy at an early stage specially in cases of patients undergoing infertility treatment.

KEYWORDS : Ectopic, Heterotopic.

INTRODUCTION

Heterotopic pregnancy is the presence of simultaneous intrauterine and extra uterine pregnancy. It can occur spontaneously in a natural conception cycle or following assisted reproductive techniques. It is also known as combined ectopic pregnancy or coincident pregnancy. It is a very rare occurrence.

The prevalence is 0.6-2.5 per 10,000 pregnancies.¹ There is significant increase in the incidence of heterotopic pregnancy in women undergoing infertility treatment like ovulation induction, In vitro fertilisation (IVF) and Gamete Intrafallopian Transfer (GIFT). The incidence is 1-3 per 100 pregnancies in women undergoing infertility treatment while the incidence in natural conceptions is 1 in 30,000 pregnancies.²

The causes of high incidence in infertility treated women are higher incidence of multiple ovulation, higher incidence of tubal malformation/damage and technical factors involved in embryo transfer. The most common ectopic site is the fallopian tube, both in spontaneous and ART heterotopic pregnancies. The cornual site is the second most common site, while heterotopic pregnancy in the cervix, ovary, and abdomen is extremely rare.

Here we present 3 case reports of heterotopic pregnancy managed in our department two of them following ovulation induction and one following natural conception.

CASE 1

A 20 year old primigravida at 9 weeks 4 days gestational age presented with chief complain of vaginal spotting and lower abdominal pain for 36 hours. She was married for 2 years and with known case of PCOS. She had undergone treatment with ovulation inductions following which she conceived. She denied any history of urinary symptoms, fever, chills or leakage of fluid per vaginum. On examination she was dehydrated, pale with unstable hemodynamic. Abdomen was distended with guarding and rigidity and tenderness more on left side than right side.

On vaginal examination, there was mild bleeding, Uterus size couldn't be delineated, cervix was long, closed and posterior and cervical motion tenderness was present along with bilateral adnexal tenderness. No adnexal mass appreciated. Culdocentesis was positive. There were

no other significant physical findings. Routine investigations along with blood grouping and Rh typing was sent. Patient was resuscitated and an emergency laparotomy was performed under general anaesthesia, approximately 1500 ml of hemoperitoneum was evacuated. Uterus was enlarged in size around 10-12 weeks. There was approximately 4x3 cm size ruptured ectopic pregnancy at the ampulla of left fallopian tube. Left salpingectomy was performed. She was transfused with three units of blood and her post-operative period was uneventful. Post operatively she underwent ultrasonography and it showed single intrauterine pregnancy of 10 weeks gestation age. She was given progesterone and discharged. On follow up she further had normal course of intrauterine pregnancy and delivered at term, the baby was delivered via spontaneous vaginal delivery with no significant complications.

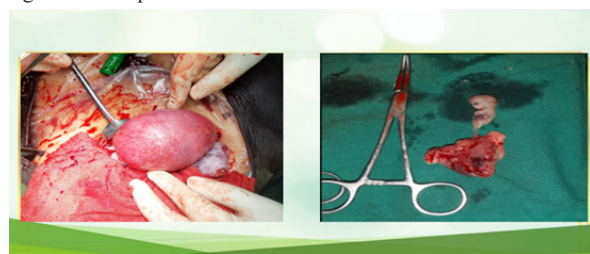


Figure 1: Intraoperative finding of ectopic pregnancy (left) and gross specimen (right).

CASE 2

A 27 year old primigravida at 8 weeks 5 days gestational age by her LMP presented to labour room with chief complain of pain abdomen and vomiting for six hours with ultrasonography report revealing single intrauterine pregnancy of 8 weeks along with severe degree of hemoperitoneum. She was married for 6 months and conceived spontaneously. She denied any history of fever, urinary symptoms, loose motion or any other chronic diseases. On examination she was extremely pale, hemodynamically unstable. Abdominal examination revealed distension and tenderness. On vaginal examination cervix was long, closed with cervical motion tenderness present along with posterior fornix fullness and no adnexal mass appreciated. An emergency laparotomy was performed which revealed 2000ml of hemoperitoneum which was evacuated and rupture ectopic of 5x3cm

in ampullary region of left fallopian tube. A left salpingectomy was performed. Uterus was enlarged around 8-10 weeks size. Following surgery during vaginal examination, products of conceptus was seen inside vagina. The patients attendant was informed and counselled, suction and evacuation was performed both specimen was sent for histopathological study which revealed decidua and chronic villi.

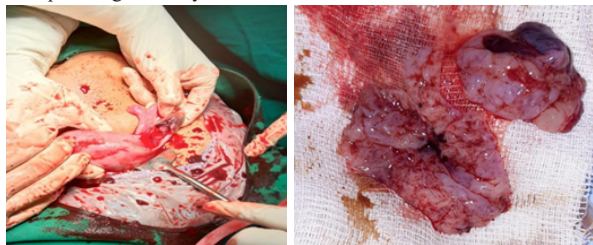


Figure 2: Intraoperative findings of ruptured ectopic (left) and Expelled intrauterine products of conceptus. (right)

CASE 3

A 28 years old multigravida (G3P1L1A1) at 7 week 4 day gestation age by her LMP presented to the emergency department with chief complaint of abdominal pain and mild bleeding per vaginum for 1 day. She was married for 4 years who conceived in the course of natural menstrual cycle. She had a previous history of ectopic pregnancy 2 years back and undergone left salpingectomy. On examination patient was mildly pale, hemodynamically stable. On abdominal examination, mild distension was present with tenderness. Vaginal examination revealed cervical motion tenderness with right fornix fullness. Paracentesis was positive. Ultrasonography was done which showed a non-viable intrauterine pregnancy along with hemoperitoneum and adnexal mass on right side. Emergency laparotomy was performed which revealed 1000ml of hemoperitoneum and right side rupture ectopic in ampulla region. Hemoperitoneum was evacuated and right salpingectomy was performed. Following the surgery suction and evacuation was performed. Both specimen was sent for histopathological examination and revealed decidua and chronic villi.

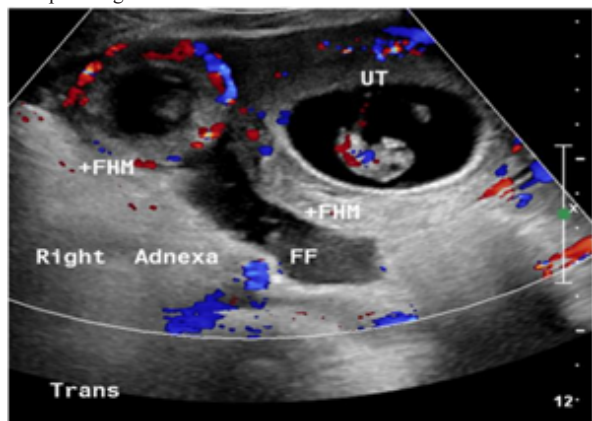


Figure 3: USG showing rupture ectopic with intrauterine pregnancy.

DISCUSSION

The first description of heterotopic pregnancy was done during an autopsy by Duverney in 1708.

Early diagnosis of heterotopic pregnancy is challenging because of the detection of an intrauterine pregnancy and raised beta HCG level can make the radiologist to ignore the adnexal examination. Almost half of the heterotopic pregnancies are detected during emergency laparotomies due to ruptured ectopic.

High resolution transvaginal ultrasonography four to six weeks following embryo transfer is necessary to detect early heterotopic pregnancy.³

Treatment depends upon the severity of presentation/detection, site of ectopic pregnancy, number of previous pregnancies, the viability of intrauterine pregnancy, the expertise of the physicians in centres, and the socioeconomic status of the patients.⁴

Success rates for delivering a live new born is less and usually results in

early or late miscarriages.⁵

Expectant management can be practiced in patients with unruptured gestation and a decreasing trend of beta-Hcg.⁶

Systemic methotrexate is avoided in the case of a viable intrauterine fetus.^{3,7}

Laparoscopy (salpingostomy, salpingectomy) is the treatment of choice because of a better outcome for IU pregnancy and the least harmful effects to the intrauterine gestation.⁴

Selective embryo aspiration under ultrasound guidance is also one of the options. However, it demands expertise to do the procedure, and there is a high incidence of treatment failure, tubal rupture, delayed bleeding, and hematoma formation.³

CONCLUSION

This case reports and literature review emphasize on focused scanning of the adnexa in patients with ART and embryo transfer, even so in natural conception.

Clinicians must be alert to the fact that confirming an intrauterine pregnancy clinically or by ultrasound does not exclude the coexistence of an ectopic pregnancy.

A high index of suspicion in pregnant women is needed for early and timely diagnosis, and management with laparotomy or laparoscopy can result in a favorable and successful obstetrical outcome

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