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A case study of Heterotrophic pregnancy: Diagnosis and its surgical Management

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ABSTRACT
Heterotopic pregnancy is defined as the existence of two gestations with separate implantation sites. One of them is a viable intrauterine pregnancy (implanted in the uterus) and the other one which is a non-viable ectopic pregnancy (implanted outside of the uterus, mostly in a fallopian tube).

Rate of heterotrophic pregnancy
Heterotopic pregnancy is most common in couple who conceive by assisted reproductive procedure like In vitro fertilization (IVF). 1 Out of 100 pregnancy assisted pregnancy results in heterotrophic pregnancy.[1]

I. CASE PRESENTATION

A 35-year-old pregnant woman in her 3rd. pregnancy (one caesarean and one abortion) was coming to the Department of Obstetrics & gynaecology of the sane guruji hospital Hadapsar Pune to confirm pregnancy. She had a complaint of intermittent hypogastric pain that partially improved with ordinary analgesics. Nausea, vomiting & amenorrhea of 6week 4 days. USG was performed on ALOKA PROSOUND α 6 LT. from which a single intrauterine pregnancy of 6 week & 2 days. Heterogeneous mass lesion of size 32×20 mm is seen attached to left ovary laterally. It shows peripheral vascularity.it show sac like structure of diameter 11mm? another gestational sac. The woman was known case of secondary infertility and on infertility treatment.

On next day she came with complaint of per vaginal bleeding increased abdominal pain tenderness at left lumbar and iliac region nausea vomiting. Hence hospitalized and conservative treatment given for threatened abortion. Repeat USG done which suggestive of same finding which was mention above but this time the heterogeneous mass lesion size was increased. Routine investigation like hemogram, LFT, RFT, PT-INR, serum ß HCG were done.

serum ß HCG value was 78260.72 correspond to 11- 12 weeks, hemogram shows increased white blood cell count and mildly increased platelet count, all other lab investigation were within normal limits. Conservative treatment (Antibiotics & Analgesic) given for 2 days since hospitalization. But there was no relief.

In view of the unstable clinical features, it was decided to perform diagnostic and therapeutic laparoscopy. This showed the presence of a red blood cell accumulation, obliterating the bottom of the pouch of Douglas. A volume of 200 mL of coagulum came out from the left adnexa (Figure 1). Left side rupture tubal ectopic pregnancy noted. Left salpingectomy was performed, and the sample send for histopathological examination. The pregnant woman evolved with improvement of her clinical condition and undergone prenatal follow-up, using progesterone, without complications till 16 weeks of gestation. Women land up in inevitable abortion.

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Figure 1.left rupture tubal ectopic pregnancy with left ovary

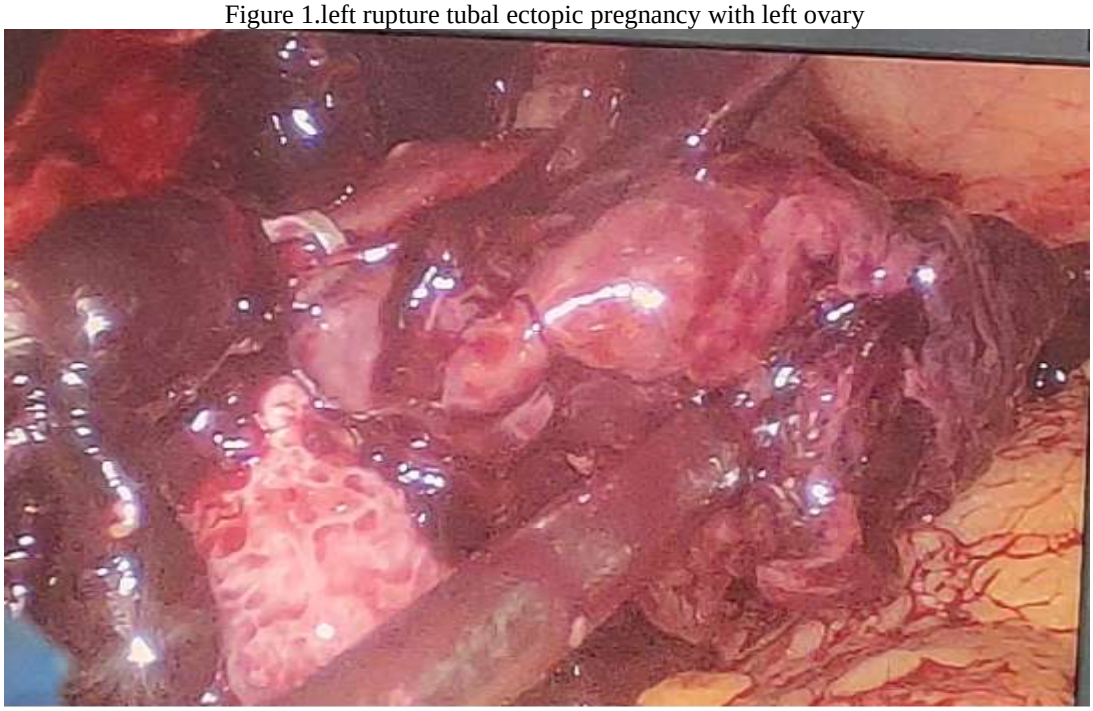
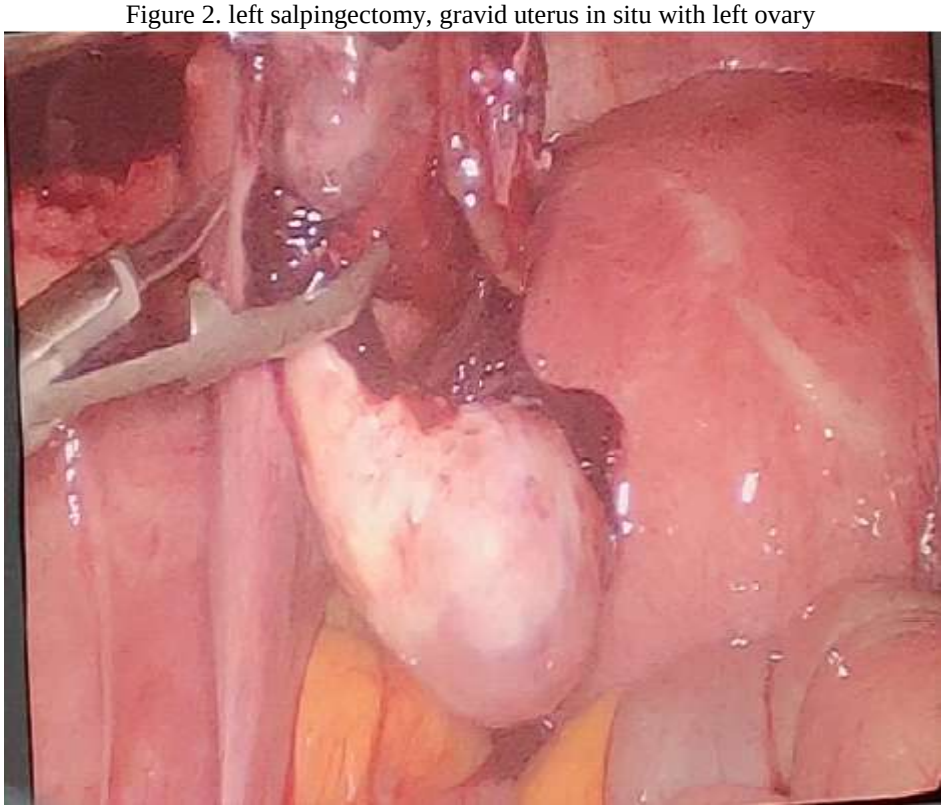


Figure 2. left salpingectomy, gravid uterus in situ with left ovary



II. DISCUSSION

The Heterotrophic Pregnancy incidence is 1 per 30 000 pregnancies, but assisted reproductive techniques (ART) such as IVF and induction of ovulation contributed to higher rates. In the recent National ART Surveillance System bet ween 2001

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and 2011, which reported 553,577 pregnancies, only 485 heterotopic pregnancies were identified – that is 1 per 1111.[2] In this case the woman was known case of secondary infertility had under gone ovulation monitoring & induction.

In the review of the published literature from January 1994 to December 2004, performed by Barrenetxea, 13 HP cases were spontaneous, and nearly 74% were diagnosed early, between 5 and 8 weeks of gestation. However, there was one case recognized at 20 weeks.[3] In this case the gestational age was 6-week 2days.

In normal pregnancies with β-hCG levels above 1,500–2,000 mIU/mL, the intrauterine pregnancy should already be detectable. However, we can't exclude the possibility of heterotopic pregnancy, which is more frequent with fertility treatments [4,5]. Thus, adequate viewing of the adnexa becomes necessary in all assessments on the start of pregnancy.

The most commonly present extrauterine images in transvaginal ultrasound in heterotopic pregnancies consist of complex cysts or adnexal masses, which may confuse with corpus luteus cyst, tubal ring, or even a live embryo[6]. However, in such cases, MRI of the pelvis may be used to assist in the diagnosis[7].

In present case study the drawback was our department does not have magnetic resonance imaging or computed tomography facility. It is clinical as well as ultrasound diagnosis. The data available for literature review was also scattered and incomplete.

Diagnostic and therapeutic laparoscopy was performed as ultrasound was unable to diagnose heterotrophic pregnancy.

Thus, if there is any adnexal mass, lesion or cyst in pregnancy, especially in pregnancy which was conceived assisted reproductive treatment, MRI should be done to rule out heterotrophic pregnancy.

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