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Laparoscopic Management of Heterotopic Interstitial Pregnancy (after Spontaneous Conception) with Hemoperitonium with Preservation of the Intrauterine Pregnancy: A Case

ABSTRACT

Spontaneous heterotopic pregnancy is a rare clinical condition defined as multiple gestations in which one gestational sac is intrauterine, whereas the other is extrauterine. It is rare and fatal haemorrhagic condition and usually missed if not properly investigated. It is a case of 37-year-old woman with a gestational age of 6 weeks heterotopic pregnancy with hypovolumic shock managed laparoscopically with preservation of intrauterine pregnancy.

Keywords: Haemoperitonium, Heterotopic, Interstitial, Laparoscopic

INTRODUCTION

Heterotopic interstitial pregnancy is life-threatening and rare obstetric emergency condition. The incidence is approximately 1 in 3,900 in patients with assisted reproduction techniques (ART). However, the incidence is much lower in patients without ART, approximately 1 in 30,000 pregnancies. Risk factors for heterotopic pregnancy are tubal disease, pelvic inflammatory disease, high levels of estradiol/progesterone, and high numbers of transferred embryos *in vitro* fertilization. The ampullary part of the fallopian tube is the most common site for ectopic pregnancy, constituting 70% of the ectopic pregnancies, fimbrial represent (12%), isthmic (11%), interstitial (2–3%), ovarian (1%), scar ectopic (1%), and cervical and abdominal (1%).[1-3] Among them isthmic ectopic pregnancy is most fatal, hemorrhagic obstetric complication and mortality rate is 6–7 times higher than that of other ectopic pregnancies. We are, therefore, presenting a case of interstitial heterotopic pregnancy conceived spontaneously without ART. She presented with severe abdominal pain with vomiting with hypovolemic shock.

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CASE REPORT

A 37-year-old woman with the gestational age of 6 weeks by LMP, presented to emergency department with severe pain in the abdomen and vomiting with no vaginal bleeding. It was spontaneous conception with no previous fertility treatment. There was no history of pelvic inflammatory disease.

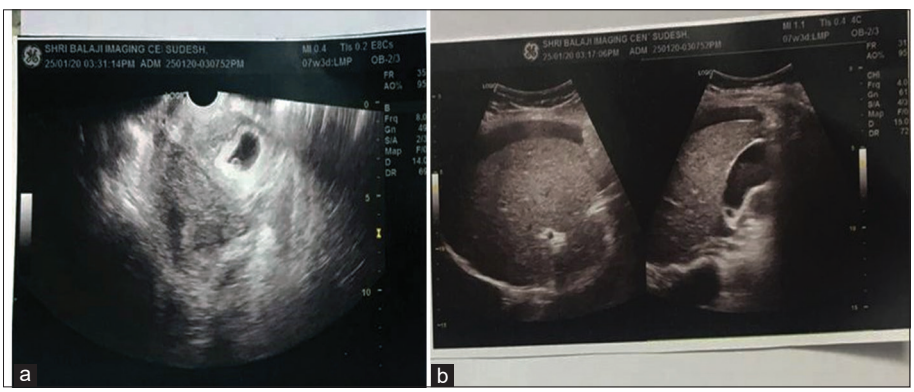

Figure 1: (a) Ultrasound demonstrating an healthy intrauterine pregnancy, (b) Ultrasound demonstrating blood clots and hemoperitonium

Clinical findings

On general examination, she was dehydrated, pale, her pulse was 120/min, blood pressure was 90/60. Per abdomen examination tenderness and distension were present. Immediately IV fluids were started and sample was send for investigation and blood grouping and cross-matching.

Diagnostic assessment

Ultrasound was planned on emergency basis and it demonstrated a single live intrauterine pregnancy of 6 weeks 2 days with large hematoma noted in the pelvis around the uterus and in both adnexa with extension in both iliac fossa with free fluid collection in bilateral subphrenic regions with thick echoes s/o massive hemoperitoneum [Figure 1]. Differential diagnosis at this stage was rupture ectopic pregnancy or rupture ovarian cyst. Hemoglobin was 8 g/dl with otherwise normal coagulation profile, liver function test, and renal function tests.

Therapeutic intervention

Plan was to do emergency operative laparoscopy. She was counseled and consented for that. Two unit blood was arranged. Operative finding revealed a rupture ectopic in the interstitial part of the left fallopian tube with hemoperitoneum of 2 l with large clots reaching the perihepatic region [Figure 2]. Both ovaries appear normal. The right fallopian tube was also normal. Electrocauteristion of the left tube was done at the site of rupture and salpingectomy was performed followed by removal of the hemoperitoneum and free clots. The patient had a good recovery period and received a total of 3 units of whole blood cells.

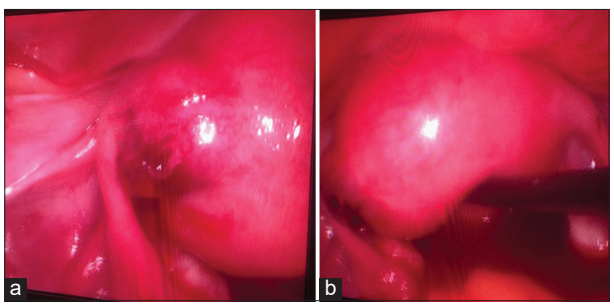

Figure 2: (a) At laparoscopy ,we saw a cornual pregnancy at right side partially ruptured. (b) approximately 2litres of blood was there in abdomen.

Follow-up and outcome

Patient was kept in high dependency Unit for 24 h and then shifted to normal care unit. A transvaginal ultrasound scan done postoperative day 2 revealed a viable intrauterine pregnancy going with date [Figure 3]. She had a good recovery. She was advised to come for regular follow-up for antenatal care. After 1 ½ month after surgery, she again came with 12 weeks of intrauterine pregnancy.

DISCUSSION

Heterotopic interstitial pregnancy is a rare and life-threatening obstetric complication dangerous for both mother and intrauterine fetus. As the incidence of heterotopic pregnancy is very low, the literature lacks evidence-based recommendations, so our current practice is based on case reports and experts opinion. As it is very difficult to diagnose it in early stages, it can lead to high morbidity and occasional mortality also.[4] Hence, it should be ruled out in any pregnant woman with abdominal pain in the first trimesters not only in ART-associated pregnancies but also in spontaneous pregnancies also. There are no particular investigations which are specific for heterotopic pregnancy, it should be suspected in any pregnant women with hypotension and abdominal pain with ultrasound suggestive of intrauterine pregnancy and free fluid.[5] Talbot carried a systematic review from 2005 to 2010 which shows that diagnosis was delayed in 33% of heterotopic pregnancies because previous ultrasound findings gave false reassurance by suggesting normal intrauterine pregnancy.[6]

Both laparoscopy and laparotomy are safe modalities and gave equal results regarding intrauterine pregnancy.[7] We prefer laparoscopy in our case because of skilled staff availability.

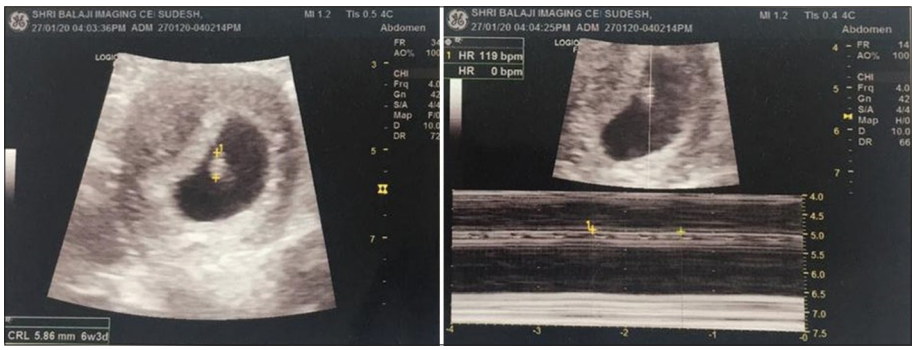

Figure 3: Ultrasound after surgery demonstrating a healthy intrauterine pregnancy

CONCLUSION

Our case is interesting because interstitial heterotopic pregnancy is rare following spontaneous conception in the absence of any other risk factors, and we managed it successfully by minimal invasive technique despite a major blood loss.

ETHICAL APPROVAL

It does not require Ethical approval.

CONFLICT OF INTERESTS AND FUNDING SOURCES STATEMENT

None.

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