

Heterotopic Pregnancy: A Diagnostic Dilemma to Suspect More Often

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Abstract: A heterotopic pregnancy is a phenomenon of co-existing intrauterine and ectopic pregnancies. Heterotopic pregnancies are diagnostic and therapeutic challenges for obstetricians. Incidence is more with Assisted Reproductive Techniques and ovulation induction. Within 3 months we received 2 cases of heterotopic pregnancies, conceiving after ovulation induction, presented with shock due to delay in diagnosis. First case was bicornuate uterus with live pregnancy in one horn and ruptured tubal pregnancy with haemoperitoneum. Salpingectomy was done and uterine pregnancy continued till term. In Second case, triplet intrauterine and ruptured tubal pregnancy, for which salpingectomy was done. One intrauterine pregnancy continued and other two gestational sacs vanished. Heterotopic pregnancy should be suspected in any patient who presents with lower abdominal pain in early pregnancy, especially following fertility treatment. Interesting thing in our cases is continuation of intrauterine pregnancies even after life-threatening rupture of ectopic pregnancies.

Keywords: Heterotopic pregnancy; ectopic pregnancies; Assisted Reproductive Techniques

INTRODUCTION

With increasing use of Assisted Reproductive Techniques (ART) and rising incidence of ectopic gestation, heterotopic pregnancies are becoming much less rare, incidence being 1 in 7000 to 1 in 30,000 pregnancies [1]. With ART, it is as high as 1 in 100², ovulation induction 1 in 900³. Signs and symptoms are those of ectopic pregnancy, along with enlarged uterus and absence of vaginal bleeding because of an intact intra-uterine pregnancy. A persistent sign of pregnancy after laparotomy or abortion is also suggestive.

Confirmation can be done by TVS, but it is not foolproof, as diagnosis can be missed in 50% of cases resulting in ruptured ectopic [2]. Following are 2 such case reports of heterotopic gestations conceived after induction of ovulation, presenting as obstetric emergencies.

CASE REPORT

Case 1: Bicornuate Uterus with Live Pregnancy in Right Horn and Left Ruptured Tubal Pregnancy

28 years old G2P1D1 with 10weeks of gestation presented with severe abdominal pain, giddiness and shock. She had secondary infertility for 7yrs. She conceived with clomiphene citrate and HCG. On examination she was pale, PR:110/min,BP:90/60mmhg, abdomen was tense, tender. On Pelvic examination uterine size could not

made out. Cervical movements were tender. USG showed: ruptured ectopic with intrauterine pregnancy. Emergency laparotomy was done and findings were bicornuate uterus with pregnancy in right horn with ruptured left tubal pregnancy (Fig. 1 & 2). Left salpingectomy was done. Post operatively USG showed bicornuate uterus with viable intrauterine pregnancy in right horn (Fig. 3). Pregnancy continued till term followed by normal vaginal delivery of a healthy baby.

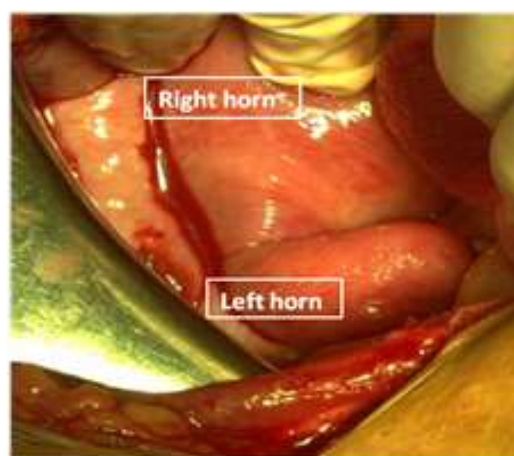


Fig. 1: Intraoperative findings



Fig. 2: Intraoperative findings



Figure 4: Pre-operative TVS



Fig. 3: Post-operative TVS- viable pregnancy



Fig. 5: Intraoperative - ruptured left tubal pregnancy

CASE 2: Intra Uterine Triplet Pregnancy and Left Ruptured Tubal Pregnancy

25 year old, primigravida with 8 weeks of gestation presented with giddiness, abdominal pain and hypovolemic shock. She was investigated for primary infertility of 6 years and diagnosed as PCOD. Laparoscopic ovarian drilling was done. Semen analysis showed oligospermia. She conceived with clomiphene citrate, HCG and IUI. USG showed triplet intrauterine pregnancy with ectopic gestation in left fallopian tube (Fig. 4). USG guided ectopic ablation was done with KCL but no follow up. Intraoperative findings were uterus 8 weeks size, cystic mass of 3×3.5cm in ampulla of left tube with hemoperitoneum (Fig. 5). Left salpingectomy was done. Post operative USG showed one live fetus in uterine cavity of 8 weeks, second sac empty and third sac with fetal pole, without cardiac activity (Fig. 6). Pregnancy continued. At 16 weeks, USG showed single live intrauterine pregnancy with disappearance of other two sacs. At 24 weeks severe oligohydramnios was detected (AFI=2cm). Patient refused admission. Later she came with IUD at 26 weeks.



Fig. 6: Post-operative TVS - uterine cavity with live fetus in sac-1; non-viable sacs-2 & 3

DISCUSSION

Above cases illustrate challenges inherent in diagnosis of heterotopic pregnancy resulting in late diagnosis, as clinical features are nonspecific. It should be suspected in any patient who presents with lower abdominal pain in the early intra-uterine pregnancy following fertility treatment [3]. Tal *et al.* [4] reported that 70% of the heterotopic pregnancies were diagnosed between 5 and 8 weeks of gestation, 20% between 9 and 10 weeks and only 10% after the 11th week. Our cases were diagnosed at 10 and 8 weeks respectively. It is more common today than it was when first described

by Duverney, 300 years ago because of ART and ovulation induction [5], which increase number of eggs available for conception.

The majority was diagnosed late and serum B-HCG AND TVS are not foolproof resulting in significant morbidity and occasional mortality [6], as illustrated by above cases, which presented in shock. In heterotopic pregnancy\HCG levels are comparable to that of normal intra-uterine pregnancy. On USG, as focus is mainly on intra-uterine gestation, adnexal pregnancy is easily missed. Intra-uterine gestational sac may be confused with pseudogestational sac of ectopic gestation [7]. Lateral location of gestational sac in-utero and presence of two corpora lutea should raise suspicion [7]. Heterotopic pregnancies can also pose a diagnostic dilemma because of the presence of a haemorrhagic corpus luteum [8].

As a result only 10% of them are diagnosed pre-operatively [9]. In such cases KCl may be tried instead of laparotomy or laparoscopy. In our second case KCl treatment failed. Most heterotopic pregnancies present with rupture of ectopic gestation as noticed in above cases. Abbas bakhsh *et al.* [9] presented a report of heterotopic pregnancy with healthy live birth. Similarly our first case ended in live birth, while 2nd case, though pregnancy continued after laparotomy, ended in intra-uterine death at 26 weeks.

CONCLUSION

Timely detection of heterotopic pregnancy necessitates high index of suspicion and vigilance. It should always be considered in women with documented intra-uterine pregnancy, especially after ART and ovulation induction, presenting with abdominopelvic pain. A comprehensive pelvic ultrasound is a must to exclude heterotopic pregnancy.

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