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Case Report

A rare case of spontaneous heterotopic pregnancy presented as ruptured ectopic pregnancy

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ABSTRACT

Heterotopic gestation, although common with assisted reproductive techniques, is very rare in natural conception. A high index of suspicion can help in timely diagnosis and appropriate intervention. We report a case of 30 year old patient who was treated for a heterotopic pregnancy. She had taken treatment for genital tuberculosis in the past. The patient presented acutely with a ruptured tubal pregnancy in shock and this was managed by emergency laparotomy. A high index of suspicion is needed in women with risk factors for an ectopic pregnancy and in low risk women who have free fluid with or without an adnexal mass with an intrauterine gestation.

Keywords: Heterotopic pregnancy, Ectopic pregnancy

INTRODUCTION

Heterotopic pregnancy defined as the coexistence of intrauterine (IU) and extrauterine gestation, was reported for the first time in 1708 by Duverney during an autopsy.[1] Spontaneous heterotopic pregnancy has traditionally been regarded as a rare and potentially dangerous clinical condition, with a very low incidence. In a spontaneous conception cycle, its incidence is about 1:25,000-1:30,000 pregnancies.[2,3] Recently, the incidence has been rising in step with increasing risk factors for ectopic pregnancy such as PID , previous tubal surgeries etc. and the increasing use of ovulation induction and new assisted reproductive techniques in infertile couples and is approximately 1 in 7,000 overall and as high as 1 in 900 with ovulation induction.[4,5] Heterotopic pregnancy can have various presentations. It should be considered more likely in the following cases: (a) after assisted reproduction techniques, (b) with persistent or rising chorionic gonadotropin levels after dilatation and curettage for an induced/spontaneous abortion, (c) when more than one corpus luteum is present in a natural conception, and (d) when vaginal bleeding is absent in the presence of signs and symptoms of ectopic gestation. A high index of suspicion is needed in women with risk factors for an ectopic pregnancy and in low-risk women with an IU gestation with free fluid in pouch of douglas with or without an adnexal mass or in those presenting with acute abdominal pain and shock , due to the risk of ruptured ectopic pregnancy.[6] Hence, early diagnosis and management of heterotopic pregnancy is crucial.

CASE REPORT

A 30 year old lady G_2P_{1+0} with previous cesarean section, presented in our gynaecology emergency unit with acute abdominopelvic pain and bleeding per vaginum in shock with overdue of menses by 15 days. On examination, she was cold, clammy, dyspnoeic and hypotensive. Abdominal examination was suggestive of an acute abdomen with severe tenderness, guarding and rigidity. Her urine pregnancy test was positive. Clinical diagnosis at this stage was an ectopic pregnancy. This was a spontaneous conception. She was successfully treated for genital tuberculosis, 4 years ago. A transvaginal ultrasound was done immediately in emergency unit which showed a solitary IU gestational sac of approximately 5^{+2} weeks with yolk sac without cardiac

activity suggestive of IU early embryonic demise .In addition, another ruptured ectopic gestational sac of 5^{+6} weeks was seen in left adnexal region with yolk sac and absent cardiac activity associated with large perisac hematoma extending into pouch of douglas and right adnexa encasing the right ovary. Both the ovaries were normal.

She was counselled and written consent was taken for exploratory laparotomy and ERPC (evacuation of retained products of conception). At laparotomy, there was approximately one litre of hemoperitoneum. Right adnexa were normal. There was rupture at ampullary end of left fallopian tube. Left ovary was normal. A total left salpingectomy with removal of the hemoperitoneum and peritoneal lavage was done followed by ERPC. Both the tissue specimens were sent separately for histopathological examination. The histology from each of the specimens confirmed chorionic villi suggestive of a heterotopic pregnancy. Her postoperative period was uneventful.

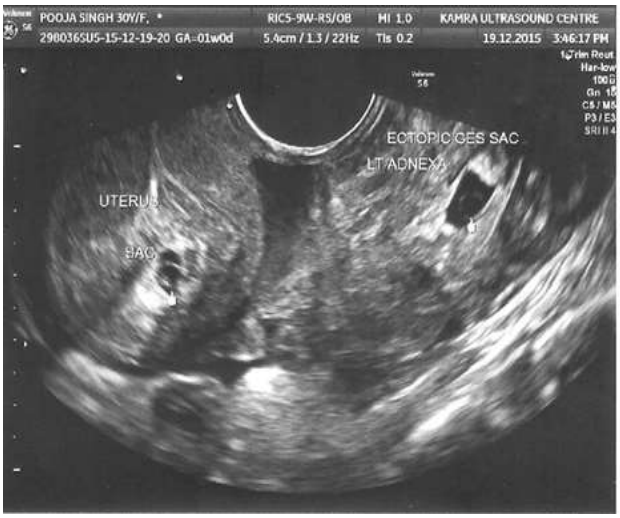

Figure 1: Transvaginal ultrasound showing both intrauterine gestational sac and ectopic gestational sac in left adnexa.

DISCUSSION

Heterotopic pregnancy is defined as the presence of multiple gestations, with one being in the uterine cavity and the other outside the uterus commonly in the fallopian tube and uncommonly in the cervix or ovary.[7-9] Majority of the reported heterotopic pregnancies are of singleton IU pregnancies. Triplet and quadruplet heterotopic pregnancies have also been reported, though extremely rare .Spontaneous triplet heterotopic pregnancy has been reported with two yolk sacs seen in one tube and in another case an ectopic pregnancy in each tube with a single IU gestation has been reported.[10,11] Ultrasound examination, especially transvaginal sonography, has proven to be an invaluable tool in the diagnosis of this condition. The extrauterine pregnancy in cases of heterotopic pregnancy has a similar sonographic appearance as that of an isolated ectopic pregnancy. The detection rate of heterotopic pregnancy can vary from 41 to 84% with transvaginal ultrasound scan.[12,13] But, heterotopic pregnancies can pose a diagnostic dilemma because an early transvaginal ultrasound may not diagnose an ex-utero gestation in all cases. Sometimes the presence of a haemorrhagic corpus luteum can confuse and delay the diagnosis of a heterotopic pregnancy.[14] With an increase in assisted reproduction techniques the likelihood of detecting heterotopic pregnancy will increase but missed or delayed diagnosis of spontaneous heterotopic pregnancy remains a diagnostic dilemma and a challenge for gynaecologists. In a case series Louis-Sylvestre et al mentioned 13 cases of heterotopic pregnancy out of which only one case was a spontaneous heterotopic pregnancy, 6 with ovulation induction and 6 with IVF.[15] The mean gestational age at the time of the diagnosis was 8 weeks and 54% heterotopic pregnancies were detected by transvaginal ultrasound. All the patients underwent surgical treatment out of which 10 had a laparoscopy and 3 had a laparotomy mainly for significant hemoperitoneum. They found laparoscopy to be useful for the early diagnosis of heterotopic pregnancy and resulted in good surgical outcomes. After diagnosis, the ectopic component in case of rupture is always treated surgically and the IU pregnancy is expected to continue normally. In case the ectopic pregnancy was detected early and was unruptured, treatment options include expectant management with aspiration and instillation of potassium chloride or prostaglandin into the gestational sac.[16] Systemic methotrexate (MTX) or local injection of MTX cannot be used in a heterotopic pregnancy owing to its toxicity, although some authors have used instillation of a small dose.[17] The laparoscopic approach is technically feasible for both cases without disrupting the course of an IU pregnancy. The decision to allow the IU pregnancy remains controversial. The IU gestation may undergo spontaneous abortion after surgery for ectopic gestation. However, there have been reported cases of heterotopic pregnancy in which post laparotomy/salpingectomy, the IU pregnancy continued to full term delivering a healthy neonate.[18] Women with previous ectopic pregnancy, tubal surgery, genital tuberculosis or pelvic inflammatory disease may be at a higher risk and should be scanned at an early gestation to confirm the location of the pregnancy. The probability of ectopic pregnancy in a female without risk factors presented with abdominal pain, positive urine pregnancy test and vaginal hemorrhage is 39%.[19] This probability increase at 54% in the presence of risk factors for ectopic pregnancy.[20] Also a high index of suspicion is necessary in the low risk symptomatic patient with abdominal or pelvic pain in which ultrasound findings are consistent with IU gestational sac while free fluid is noted in the pelvis with or without an adnexal mass.

CONCLUSION

The important learning point from our case was that the diagnosis should be suspected more frequently in women with known risk factors like genital tuberculosis, increased vigilance is required in such cases even if they are asymptomatic and an intrauterine gestation is confirmed. As in our case, on transvaginal scan even after finding an intrauterine early embryonic demise, meticulous scan of adnexae was done which leads to diagnosis of ruptured left ectopic pregnancy with hemoperitoneum. Immediately after diagnosing the condition, prompt decision was taken for exploratory laparotomy and her life was saved. This case highlights that doctors must be alert to the fact that confirming an IU pregnancy clinically or by ultrasound does not exclude the coexistence of an ectopic pregnancy that should systematically be suspected in any woman presenting with abdominal pain, bleeding per vaginum and hypovolemic shock during pregnancy.

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