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Case Reports

Ruptured Ovarian Cyst or Ovarian Ectopic, Presenting as a Diagnostic Dilemma - A Case Report

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SUMMARY

Implantation of fertilized ovum at a site other than uterine cavity is termed as ectopic pregnancy. Ectopic pregnancy represents 1.6% of all reported pregnancies. One of the rare sites of implantation is ovary. Incidence of primary ovarian ectopic pregnancy is infrequent ranging from 1:7000 to 1:40,000 pregnancies. The risk factors include high parity, intrauterine contraceptive device (IUCD) and pelvic inflammatory disease (PID). Although the classical or typical presentation includes amenorrhoea, vaginal bleeding or spotting, lower abdominal pain, deteriorating vital signs, absence of intrauterine gestation on USG and raised serum beta HCG levels; the presentation may be quite atypical and differential diagnosis from other conditions may be very difficult pre-operatively.

Here we discuss the case of a woman aged 32 years presenting on 19th day of her cycle with lower abdominal pain and gradually worsening hemodynamics, suggesting on USG bilateral ovarian cysts with free fluid around (Ruptured cyst?). The patient underwent emergency laparotomy and cysts were removed. Histopathology later confirmed it to be ovarian ectopic pregnancy fulfilling Spiegelberg criteria.

INTRODUCTION

Incidence of ectopic pregnancy has shown a 4-5 fold increase over the last three decades and is estimated to be 16 per 1000 reported pregnancies. This has been reported from Ireland[1], UK[2] and Sweden[3]. Although ectopic pregnancy constitutes less than 2% of all reported pregnancies, complications are associated with 13% of all pregnancy related deaths[4]. Predisposing factors include PID, previous pelvic surgery, developmental abnormalities like diverticulae, accessory ostia and tubal hypoplasia, adjacent tumours, previous ectopic pregnancy, IUCD. Other factors include premature implantation of fertilized ovum due to premature shedding of zona pellucida, transperitoneal migration of zygote or presence of ectopic endometrium[5].

Out of all ectopic pregnancies 95% occupy fallopian tubes and 5% are in other rare sites including ovaries, rudimentary horn of a bicornuate uterus, broad ligament, peritoneum and cervix[5]. Ovarian ectopic constitutes 1-3% of all ectopic pregnancies, the incidence being 1:7000 to 1:40,000 pregnancies[6]. The risk increases with advancing age. It increases 3-4 times in between 35-44 compared with those between 15-24 years[7].

Furthermore a higher risk of ovarian implantation exists in women who conceive while using IUCD[8]. A woman with an IUCD in place who conceives is more likely to have an extra uterine pregnancy (EUP), than a woman who conceives while using other contraceptive methods. Although an IUCD is more effective in preventing an intrauterine pregnancy (IUP) than EUP, women are not at increased risk of developing an EUP compared with the general population solely because they are wearing an IUCD.

Progesterone IUCDs are less effective than copper IUCDs in preventing ectopic pregnancy, as the copper IUCD prevents fertilization by cytotoxic and phagocytic effects on sperms and oocytes[9].

CASE REPORT

A woman aged 32 years, presented in the middle of night (1:30am) on 16/12/01 in the accident and emergency department of Shaikh

Zayed Hospital with pain lower abdomen for one day, which had progressively increased in intensity over next few hours. She was married for 5 years, and had two children (both SVDs). The last born was 21 months old. Her last menstrual period was 1-12-01, and she was using IUCD for contraception. There was no history of vaginal bleeding, spotting or discharge. There was no history of syncope, fainting, nausea or vomiting. There were no symptoms suggestive of UTI. The passage of stool and flatus was normal. Her vitals were stable. On abdominal examination, tenderness and rebound tenderness were positive in lower abdomen. Gut sounds were audible. Vaginal examination revealed tenderness in adnexae.

Her Hb was 8.7g/dl and TLC $9400x10^9/l$, platelets were normal. Her PT and APTT were in normal range. Complete examination of urine was unremarkable. Her USG revealed a small fibroid in posterior wall of uterus. Cu-T was seen inside uterus. Right adnexa showed a 3.9x3.2 cm cyst. Left adnexa had a mass 5.7x4.0 cm with free fluid, giving suspicion of a ruptured cyst. Minimal amount of free fluid was noted in peritoneal cavity and pelvis. Her serum Beta HCG could not be sent due to some personal problem of the patient.

With a differential diagnoses of ruptured ovarian cyst, ruptured ectopic pregnancy, displaced IUCD, ruptured appendix, she was admitted in Gynae ward at 2:30am. Patient was catheterized, I/V antibiotics started and closely monitored for vital signs and abdominal girth.

She remained stable for only a few hours and gradually her pulse started rising. At 11:00 AM she developed shoulder tip pain while lying down, giving a clue to excessive free fluid in peritoneal cavity. Her pulse started rising, although B.P. and abdominal girth remained unchanged. She underwent exploratory laparotomy at 12:00 MD. About 800-1000 ml of blood was removed from peritoneal cavity. Intraoperatively right ovary was found to have a cyst 3x3 cm with active bleeding from mesosalpinx, which was excised and ovarian reconstruction done. Left ovary had a cyst, which was removed. Both tubes were intact and healthy with no bleeding at fimbrial ends. Myomectomy was done.

A total of four units transfusion had to be given during hospitalization. There was no post-operative complication. She was discharged on 7th postoperative day when her Hb was 12.5g/dl. Her histopathology report revealed ovarian stroma with attached blood clot and chorionic villi of variable sizes lined by cyto- and syncitiotrophoblasts, suggestive of ruptured ectopic primary ovarian pregnancy. This patient had a value of serum beta HCG of 0.02ng/ml on 24th postoperative day, which was absolutely within the normal range.

Although retrospective analysis of this case met all four required Speigelberg criteria of primary ovarian implantation, it highlights the difficulty in diagnosing ectopic gestation in such atypical presentations.

DISCUSSION

Ovarian ectopic pregnancy is one of extremely rare conditions encountered in gynaecological practice. First incidence was reported in 1682.

The condition because of its rarity may sometimes present as a diagnostic challenge and even high index of clinical suspicion, which is required for diagnosis and management, may fail to suspect the diagnosis. This occurs specially when classical presentation of ectopic pregnancy is not there. For example in our case the patient had less than three weeks amenorrhea and USG failed to pick up the exact pathology which was also not picked up per operatively. The only clue towards a definitive diagnosis was the histopathology report on 5th postoperative day and confirmed primary ovarian pregnancy. The criteria defined by Spiegelberg were met retrospectively. These include gestational sac in region of ovary, attachment to uterus by ovarian ligament, histological proof of chorionic villi in ovarian stroma and intact fallopian tubes.

In this particular case pelvic adhesions was not the cause of the ectopic gestation as there was no previous surgery or PID. There is to an interesting relationship between ovarian pregnancy and use of IUCD, which was the case here.

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