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Case Report

Primary ovarian pregnancy with intrauterine contraceptive device

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ABSTRACT

Primary ovarian pregnancy is a rare variant of extra-uterine pregnancies. However the cause for primary ovarian pregnancy is still obscure. Some studies have reported a strong correlation of this condition with intrauterine contraceptive device (IUCD). The diagnosis of ovarian ectopic pregnancy is seldom made before surgery though ultrasound proves to be an invaluable tool for its diagnosis. We describe here about a case of primary ovarian pregnancy which was diagnosed only at the time of operation and was managed with wedge resection of the ovary.

Keywords: Ovarian pregnancy, IUCD, Wedge resection

INTRODUCTION

Primary ovarian pregnancy is one of the rare forms of non-tubal ectopic pregnancies. Its incidence has been variably reported as 1 in 7000 to 1 in 60,000 deliveries and accounts for 1-3% of all ectopic gestations.¹ The first case was reported by St Maurice in 1682. Unlike in the case of tubal pregnancy, usual risk factors such as pelvic inflammatory disease and prior pelvic surgical procedures may not play a role in the etiology of ovarian pregnancy. Some authors found that IUCD users appear to have higher incidence of ovarian pregnancies.^{2,3} In the case series of Raziel et al.⁴ with 20 such cases, 18 had IUCD in situ. Transvaginal ultrasonogram (TVUSG) is found to be useful in diagnosing the ovarian pregnancies. Surgical management remains the main modality in managing these cases and the diagnosis will be confirmed by histopathology.

CASE REPORT

A twenty-three year old lady, second gravida with one live child was admitted with the history of bleeding per vagina for one month and abdominal pain for one day. She underwent removal of intrauterine contraceptive device (IUCD) following positive pregnancy test on the day prior to admission. Her previous menstrual cycles

were regular. Initially IUCD was removed twice due to pain, each after a period of two years after insertion. The recent IUCD was placed one month prior to the admission. She has been married for 5 years. She had her first pregnancy 4 years ago and delivered a term female baby, by lower segment Caesarean section (LSCS), weighing 2.5 Kg, alive and well. There is no event in the past. Her general clinical condition was normal except for tachycardia. Per abdominal examination revealed right paramedian scar of previous LSCS and tenderness in the lower abdomen without any signs of free fluid. Per vaginal examination revealed soft bulky uterus with evidence of bleeding; fornices were free and non-tender. There was no cervical excitation tenderness. Pelvic ultrasound revealed gestational sac with foetal pole corresponding to 6 weeks and 4 days seen in the right adnexa; cardiac activity was not visualized (Figure 1); endometrial thickness was 3 mm (Figure 2); minimal free fluid adjacent to the sac was suggestive of right tubal ectopic pregnancy.

We performed emergency laparotomy under regional anaesthesia. Intra-operatively about 50 ml of fresh blood in the peritoneal cavity was seen and the uterus was of normal size with both Fallopian tubes appearing normal with no signs of ectopic pregnancy; the left ovary was also normal in size and appearance. The right ovary was

found slightly enlarged with ruptured gestational sac and corpus luteum (Figure 3). As these morphological features suggested ectopic right ovarian pregnancy, wedge resection of the ovary at the site of abnormality was done. The hisopathological examination confirmed the primary ovarian pregnancy. The postoperative period was uneventful.



Figure 1: Scan showing GS with foetal pole in adnexal area and free fluid in POD.



Figure 2: Uterus with thin endometrium.

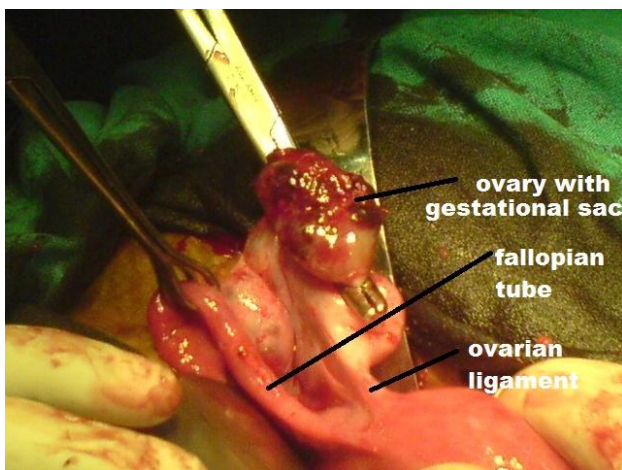


Figure 3: Intra-op picture showing sac in the ovary.

DISCUSSION

Primary ovarian pregnancy presents with signs and symptoms of tubal ectopic, ruptured corpus luteal cyst or haemorrhagic cyst. Usually the initial diagnosis will be made intra-operatively on the basis of the four Spiegelberg criteria and the final diagnosis by histopathology except in few occasions where the diagnosis can be made preoperatively by TVUSG. In our case preoperatively we diagnosed it as tubal pregnancy but intra-operatively ovarian pregnancy was diagnosed based on the criteria of Spiegelberg (1878). All four criteria were satisfied in this patient and were later confirmed by histopathology.

The criteria are:

1. The tube on the affected side must be intact.
2. The fetal sac must occupy the position of the ovary.
3. The ovary must be connected to the uterus by ovarian ligament.
4. Definite ovarian tissue must be found in the sac.

Association between ovarian pregnancy and IUCD has been described in the literature.⁵⁻⁸ In our case; IUCD was removed three days prior to the laparotomy. Even though IUCD has been shown to reduce the incidence of uterine implantation by 99.5% and tubal implantation by 95% it does not reduce the incidence of ovarian pregnancy.⁹ The incidence reported for primary ovarian pregnancy among ectopic pregnancies is 1 in 7-9 among the IUCD users and 1 in 150-200 in the general population.¹⁰ In case of IUCD with positive pregnancy test, an ectopic ovarian pregnancy should be suspected.

Hallet (1982), in his study of 25 cases of ovarian pregnancy, reported that only in 28% of the cases the correct surgical diagnosis was made, whereas the rest of the cases were diagnosed by the pathologist.¹¹

In uncomplicated cases, prior to the rupture of gestational sac, laparoscopic removal of the ectopic pregnancy without excessive removal of healthy ovarian tissue followed by wedge resection, partial removal of the ovary or oophorectomy is the main method of treatment in primary ovarian pregnancies. Medical treatment such as systemic methotrexate also has a role in selective group of patients. As our patient is a young female desiring to retain the reproductive capability we have initially suggested for medical treatment. But she deferred medical management due to logistic reasons and opted for laparotomy. So we performed wedge resection to avoid excessive removal of healthy ovarian tissue.

Unlike tubal ectopic pregnancy, which has a significant risk of recurrence, so far there has been no report of recurrence of ovarian pregnancy. We also counselled her regarding the risk of recurrence.

CONCLUSION

In conclusion, if the patients conceive with IUCD in situ an ectopic ovarian pregnancy may be suspected and conservative surgical procedures can be opted to retain the functional ovary.

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