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Case Report

Ruptured Primary Ovarian Ectopic Pregnancy: A rare case report

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ABSTRACT

Primary ovarian pregnancy occurs quite rarely and that too usually in young highly fertile multiparous women. Risk factors include previous pelvic inflammatory disease, IUD use, endometriosis, and assisted reproductive technologies. Its presentation often is difficult to distinguish from that of tubal ectopic pregnancy. We report a case where a young Second gravida with previous LSCS presented with two months amenorrhea along with abdominal pain presented to us and was diagnosed as ectopic pregnancy and was confirmed intra-operatively and histopathologically as primary ovarian pregnancy, managed successfully with laparotomy followed by partial ovariectomy.

Keywords: Ovarian ectopic pregnancy, Partial ovariectomy

INTRODUCTION

Primary ovarian pregnancy is a rare entity, the diagnosis of which continues to challenge the practicing clinicians. Primary ovarian pregnancy accounts for 3% of all ectopic pregnancies and is most common type of non-tubal pregnancy.[1] Ovarian pregnancy is an uncommon presentation of ectopic gestation as per the criteria described by Speigelberg.[2] Its presentation often is difficult to distinguish from that of tubal ectopic pregnancy and hemorrhagic ovarian cyst.

CASE REPORT

A 23 year old second gravida with previous LSCS came with the history of 2 months of amenorrhoea and complain of pain abdomen off and on since 1 month. Her previous cycles were irregular with average flow and without any dysmenorrhoea. Her previous medical and surgical history was not relevant. On examination, there was no pallor, pulse 78/min, BP 110/70 mmHg and no tenderness in abdomen was observed. Per vaginal examination showed normal uterine size and no cervical motion tenderness, but a palpable mass of size 4 cm × 4 cm was felt in the right fornix and was tender. On investigation, the urine test for pregnancy was positive, Hb% was 10 gm%, total leucocyte count was 8,800/cu mm, platelet count was 2.81 lakh and the blood group was 'O' positive. Her serum beta hCG value was 11,649 mIU/mL. On ultrasonography, no gestational sac was seen inside the uterus but a right adnexal gestational sac 1.3 cm × 0.7 cm × 0.9 cm was seen with fetal pole corresponding to 5 week 6 days with cardiac activity and small free fluid in the cul de sac. Provisional diagnosis was made as unruptured ectopic pregnancy. Decision for laparotomy was taken. Intra-operatively, the uterus was normal in size and both fallopian tubes were normal. The right ovary was enlarged with a bluish red mass of size 4 cm × 4 cm, with oozing of blood from the ruptured gestational sac. Blood loss was around 250cc. Right-sided partial ovariectomy was performed and the contents were sent for histopathology. On histopathological examination, it was ovarian tissue with hemorrhagic corpus luteum showing large blood clot with trophoblastic tissue and chorionic villi. Thus, the intra-operative findings and the histopathology examination satisfied the criteria for ovarian pregnancy as described by Spigelberg,[3] which are as follows: (a) intact fallopian tube on the affected side, (b) fetal sac must occupy the

position of the ovary on the affected side, (c) ovary connected to the uterus by ovarian ligament, (d) ovarian tissue must be located in the sac wall, which was confirmed by histopathology. The post-operative period was uneventful and patient was discharged successfully on 7th day after skin suture removal.

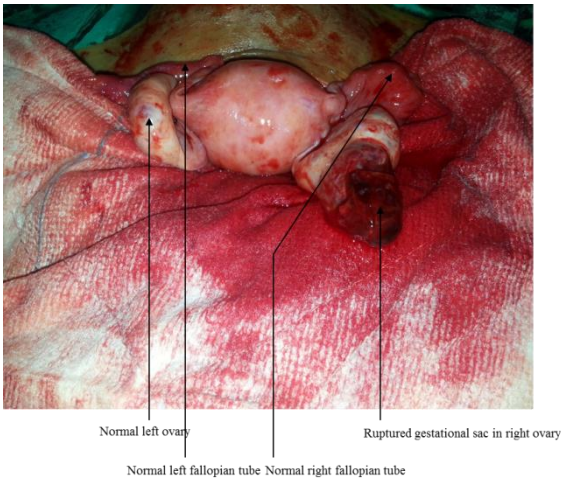

Figure 1: Right sided ruptured ovarian pregnancy.

Figure 2: Ultrasonography of ectopic pregnancy.

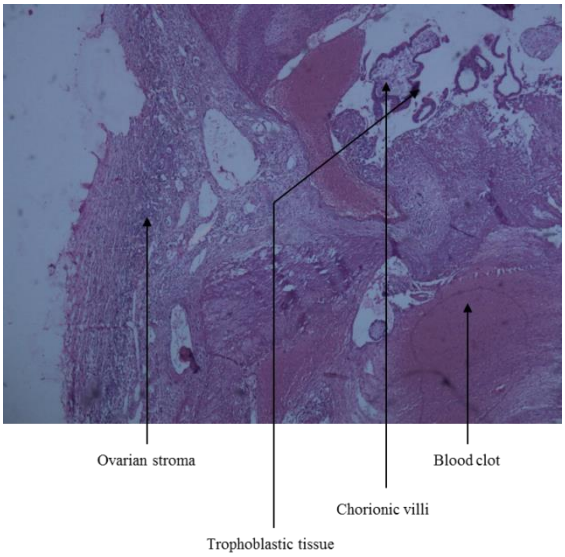

Figure 3: Histopathology of ovarian ectopic pregnancy.

DISCUSSION

Primary ovarian pregnancy is one of the rarest types of extra-uterine pregnancy. Ectopic pregnancy is the most important cause of maternal death in the first trimester accounting for approximately 10% of deaths related to pregnancy. The incidence of such pregnancies, as stated in Indian literature, varies from 0.001% [4] to 0.013% [5] of normal pregnancies and from 0.17% [4] to 1% [6] of ectopic pregnancies. The signs and symptoms of ovarian pregnancy are similar to disturbed tubal pregnancy, conditions most commonly confused with ruptured hemorrhagic corpus luteum and chocolate cyst or tubal ectopic pregnancy. Rupture in the first trimester is the usual rule in an ovarian ectopic. With few exceptions, the initial diagnosis is made on the operating table and the final diagnosis only on histopathology on the basis of the four Spigelberg criteria, establishing that the pregnancy is limited to the ovary and does not involve the tube.[3] The etiology of ovarian pregnancy remains unclear, it occurs as a result of a fertilized ovum getting implanted on the ovarian tissue. Although several factors, such as pelvic inflammatory disease and previous gynecological surgery, are closely linked to tubal pregnancies but do not seem to be related to ovarian pregnancies.[7,8] The cause of primary ovarian pregnancy remains obscure. Borrow concluded that chance is a reasonable explanation of ovarian pregnancies.[9] Other hypotheses have suggested interference in the release of the ovum from the ruptured follicle, malfunction of the tubes and inflammatory thickening of the tunica albugenia. Current intra uterine contraceptive device used may also be a cause .The entity, empty follicle syndrome, where no oocytes are retrieved from the mature ovarian follicles with apparently normal follicular development and estradiol levels, after controlled ovarian hyper stimulation for an assisted reproductive technology cycle, despite repeated aspiration and flushing, can also be a cause for primary ovarian pregnancy.[10] Out of the modern methods, ultrasonography, laparoscopy and estimation of human chorionic gonadotrophic (hCG) levels have been used in conjunction with repeated clinical evaluation in the diagnosis and management of extra uterine pregnancies.[11,12,13,14] In our patient, a presumptive diagnosis of ectopic pregnancy can be made based on the positive hCG, without an intrauterine gestation. However, given patient's lack of symptomatology, features of rupture, lack of palpable abdominal and given the rarity of this condition, a preoperative diagnosis of ovarian pregnancy would be very difficult. In the absence of a very suggestive transvaginal scan, this patient may not have been taken for a surgery, thus leading to a potential surgical emergency like rupture. Patient was managed with laparotomy because of non-availability of laparoscopy which is the gold standard .Fertility after ovarian pregnancy remained unmodified.[15]

CONCLUSIONS

Ovarian ectopic have a varied surgical presentation and in spite of advances in clinical sciences correct pre surgical diagnosis of ovarian ectopic still remains uncertain and challenging. It commonly mimics tubal ectopic, ruptured haemorrhagic corpus luteum and torsion of the ovary. The diagnosis suspected during surgery when a haemorrhagic mass is seen near the ovary with normal fallopian tubes and confirmation is made by histopathology. The chief goal of treatment remains lifesaving intervention by early diagnosis to reduce maternal mortality and morbidity.

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