



Case report

PRIMARY OVARIAN PREGNANCY IN A PRIMIGRAVIDA - A CASE REPORT

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ABSTRACT

Primary ovarian pregnancy is a rare form of ectopic pregnancy due to the implantation of the gestational sac in the ovary. It is reported to occur in 1 in 25000-40000 pregnancies following natural conceptions and accounts for 0.3- 3% of all ectopic pregnancies. The preoperative diagnosis is difficult and is mostly diagnosed following surgery or histo pathological examination. Here we present a case of ovarian pregnancy which was managed surgically and its review of the literature is discussed.

KEYWORDS: Ectopic pregnancy, Extrauterine pregnancy, Primary ovarian pregnancy, Diagnosis, Management

INTRODUCTION

Primary ovarian pregnancy is a rare form of ectopic pregnancy, the diagnosis of which continues to challenge the practicing clinicians. Ovarian pregnancy is reported to occur in 1 in 25000-40000 pregnancies and it accounts for 0.3-3% of all ectopic gestations.^[1] In a 10 year population based study, the incidence of ovarian pregnancy was found to be 3.2% of all ectopic gestations.^[2] The preoperative diagnosis of ovarian pregnancy is not easy and the clinical symptoms and ultrasound findings are not typical. This case is being reported because of its rarity, especially for its occurrence in a nulliparous woman. In our case the diagnosis of ovarian pregnancy was made at the time of laparotomy and was preceded to right salpingo-oophorectomy.

CASE REPORT

26 year old Mrs. P was referred by a private practitioner with a history of 60 days amenorrhoea, lower abdominal pain and bleeding per vaginum of two days duration. She was married for 3months and her previous menstrual cycles were regular occurring once in 30days lasting for 2-3 days. Her LMP was on 15 / 2 / 15. In her past history there was no history suggestive of pelvic inflammatory disease, tuberculosis, abdominal surgeries, and there was no history of contraceptive use. On examination the patient had no pallor, her pulse rate was 100 beats per minute and the blood pressure was 110/70mmHg. On abdominal examination, there was no distension and no free fluid was made out. The speculum examination revealed bleeding

through the cervical os. On per vaginal examination, the uterus was found to be normal and the right fornix was full. There was no cervical motion tenderness. In view of her history and the right fornix being full, clinically ectopic pregnancy was suspected. Her immediate laboratory investigations were as follows: Hb-11.6%, BT/CT was within normal limits, blood group was O positive and HIV & HBsAG were negative and the urine pregnancy test was positive. On ultrasound examination, the uterus measured 6.6 x 3.3cm and there was no gestational sac within the uterine cavity. The endometrial thickness was 8mm. There was a complex right adnexal mass measuring 5.4x4.9 cm and the right ovary could not be visualised separately and there was no free fluid in the abdomen. (Fig.1) The left adnexa was normal.



Figure1: USG Image showing right adnexal mass

As the pregnancy test was positive and the ultrasound was showing an empty uterine cavity with right complex adnexal mass, a provisional diagnosis of ectopic pregnancy was made.

The patient was taken up for emergency laparotomy with necessary preparations. At laparotomy there was 100 ml of blood in the pouch of Douglas. Both the fallopian tubes were normal. The right ovary was enlarged with the hemorrhagic mass measuring 5x5cm which was oozing blood from the surface. There was a translucent membrane seen adjacent to the hemorrhagic mass. (Figure 2) The left fallopian tube and ovary were normal. The right fallopian tube was traced and palpated to its entire length and was found to be normal. Based on the above findings a diagnosis of ovarian pregnancy was made and right salpingo-oophorectomy was proceeded with. Her postoperative period is uneventful. Cut section of the ovary showed a haemorrhagic mass with a translucent tissue in the centre surrounded by ovarian tissue. (Figure 3)

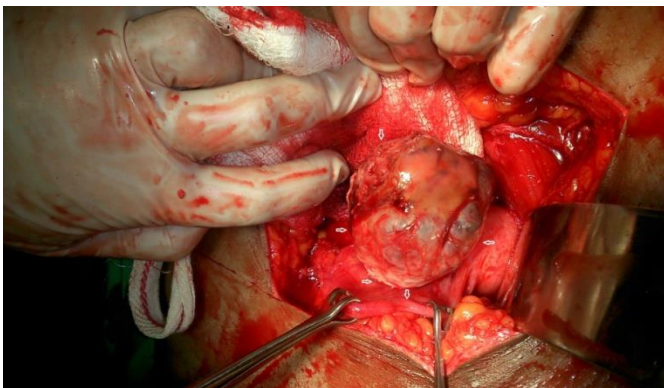


Figure 2. PICTURE SHOWING MACROSCOPIC APPEARANCE OF RIGHT OVARIAN PREGNANCY



Figure 3. PICTURE SHOWING CUT SECTION OF THE MASS WITH OVARIAN TISSUE AT THE PERIPHERY.

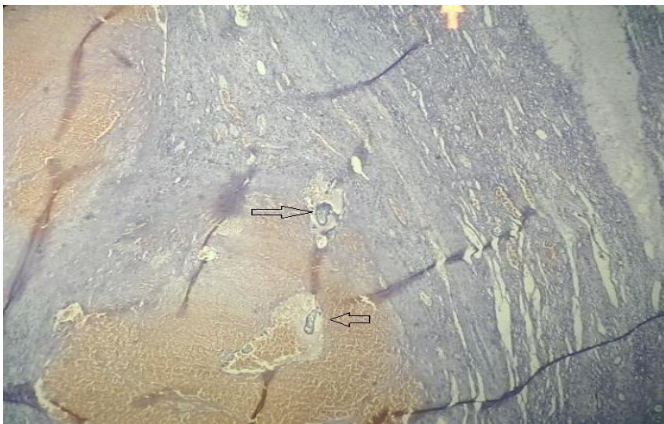


Figure 4. PICTURE SHOWING OVARIAN TISSUE WITH CORPUS LUTEUM AND CHORIONIC VILLI x 40

Histopathology was reported as ovary containing corpus luteum and ovarian tissue surrounding areas of chorionic villi. (Figure 4)

DISCUSSION

Primary ovarian pregnancy is a rare form of extra-uterine pregnancy. It accounts for nearly 3% of all ectopic gestations, with an incidence of one in 25000-40000 of all pregnancies.^[1,2] Except in few incidences, the final diagnosis is most often made at the time of laparotomy and final confirmation is by histopathology based on spiegelberg criteria^[3].

The spiegelberg criteria are as follows:

- Intact fallopian tube on the affected side,
- Foetal sac must occupy the position of the ovary on the affected side,
- Ovary connected to the uterus by ovarian ligament,
- Ovarian tissue must be located in the sac wall.

In our case both the fallopian tubes were normal. The right ovary showed a hemorrhagic mass with a translucent membrane in the centre surrounded by normal ovarian tissue at the periphery. The histopathological report of chorionic tissue seen within the ovarian tissue confirmed the diagnosis of primary ovarian pregnancy.

The cause of primary ovarian pregnancy remains obscure and many hypotheses have been postulated. Literature review shows that interference in the release of ovum from the ruptured follicle, malfunction of the tubes and inflammatory thickening of the tunica albugenia, and current intrauterine contraceptive device use may all be possible risk factors for the occurrence of primary ovarian pregnancy^[4] There have been recent reports of primary ovarian pregnancy following IVF techniques.^[5] As the clinical picture is similar to that of ruptured hemorrhagic corpus luteum, chocolate cyst and tubal ectopic pregnancy, primary ovarian pregnancy is often not suspected. However awareness of this rare condition is important in order to reduce the associated risk such as heavy intra peritoneal bleeding.^[4] In our case though the USG showed a well formed right adnexal mass without haemoperitoneum, ovarian pregnancy was not suspected and the diagnosis was made only at the time of laparotomy. The signs and symptoms of ovarian pregnancy are similar to that of tubal ectopic pregnancy. Usually ovarian pregnancy ruptures in the first trimester and rarely progresses to advanced pregnancy^[6] Our patient fortunately was operated upon before the full blown rupture of the ovarian pregnancy. With recent advances in USG instrumentation, use of vaginal probes and operator's skill, it is possible to diagnose ovarian pregnancy pre-operatively. Early diagnosis will allow conservative laparoscopic treatment of ectopic pregnancies.^[7] By USG, presence of a wide echogenic ring with an internal echolucent area on the ovarian surface has been shown to be suggestive of ovarian pregnancy.^[8]

Our case is unusual in that she was married only for 3 months at the time of presentation and she did not have any risk factors for any type of ectopic pregnancy. Similar to our case, there has been a report of primary ovarian pregnancy in a primigravida by Panda et al. [9]

Portunda et al have reported that fertility after ovarian pregnancy remains unmodified [10] Number of conservative approaches such as ovarian wedge resection of the ovary and use of methotrexate have been described in the management of primary ovarian pregnancy [11]

CONCLUSION

The diagnosis of ovarian pregnancy is difficult. However with the availability of advanced ultrasonographic techniques and operator skill it may be possible to diagnose ovarian pregnancy pre operatively which will allow conservative treatment, thereby preserving the ovary.

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