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Case Report

Ruptured Ovarian Pregnancy –A Rare Case Report

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Abstract

Primary ovarian pregnancy is one of the rarest varieties of ectopic pregnancies accounting for 1 to 3%. Patients frequently present with abdominal pain and menstrual irregularities. Preoperative diagnosis is challenging but transvaginal sonography has often been helpful. A diagnostic delay may lead to rupture, secondary implantation or operative difficulties. Although ovarian pregnancy is rare, in any case of a ruptured ectopic pregnancy where the tubes are found to be normal on laparotomy, an ovarian pregnancy must be ruled out. Early detection and prompt diagnosis can preserve the future fertility of the woman. We report a rare case of a ruptured ovarian pregnancy.

Keywords: laparotomy; ovarian pregnancy; rupture; ultrasound

1. Introduction

Ovarian pregnancy is a rare type of extra uterine pregnancy. Primary ovarian pregnancy is a rare entity, the diagnosis of which continues to challenge the practicing clinicians. In contrast to tubal pregnancy, ovarian pregnancy occurs as a single event in an otherwise healthy woman. There is no specific clinical, laboratory test or ultrasonography signs for differentiating ovarian from tubal pregnancy. At laparoscopy, it frequently suggests hemorrhage from the corpus luteum or a rupture of ovarian cyst. Histology is the only means of establishing the diagnosis. Ovarian pregnancy rupture is often more dangerous than tubal pregnancy, but conservative treatment is often possible.[1]Here, we report a rare case of a ruptured ovarian pregnancy.

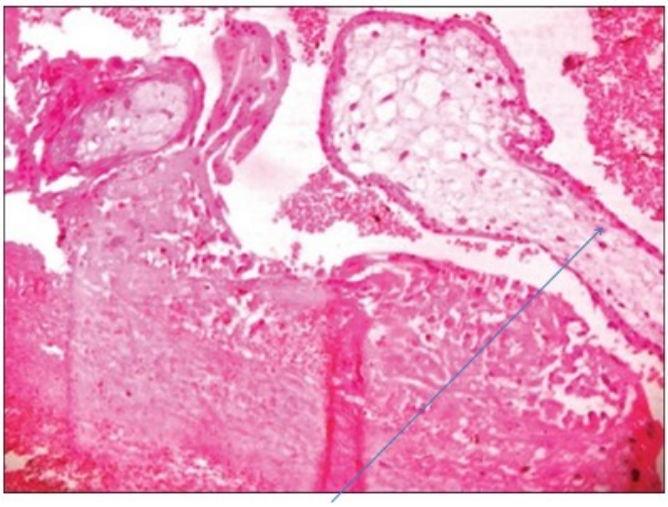
2. Case Report

A 28 year old Primigravida came to our hospital with amenorrhea of 5 weeks and 3 days with complaints of sudden onset pain in the lower abdomen, associated with bleeding per vagina for one day. Her previous cycles were regular with 3-4 days of bleeding every 28-30 days, average flow and no dysmenorrhea. She was married for 6 years. There was no history of ovulation induction. No history of any contraceptive use.

Her general examination was normal except for mild pallor. On abdominal examination, there was mild tenderness in the left iliac fossa. Per speculum examination, the vagina and cervix were normal. Per vaginal examination revealed normal uterine size and cervical motion tenderness and palpable tender mass was felt in the left fornix. Urine beta hCG pregnancy test was positive. On ultrasonography, no gestational sac was seen in utero but a left sided ruptured adnexal mass was seen with moderate hemoperitoneum with fluid in the pouch of Douglas. Emergency laparotomy was performed with a preoperative provisional diagnosis of left ruptured tubal pregnancy. Intraoperative, the uterus was normal in size with

hemoperitoneum and both the tubes were found to be normal. The right ovary was normal. The left ovary was enlarged with a bluish red mass of size 2 cm × 2 cm, with oozing of blood from the surface of the mass. The left fallopian tube was found completely normal and separate from the ovary. The hemorrhagic ovarian mass could not be separated from the ovary hence left sided oophorectomy was performed and was sent for histopathological examination. Her postoperative recovery was uneventful. On histopathology, the left ovarian tissue showed ovarian stroma, multiple chorionic villi which were covered by trophoblastic cells and decidua with fibrin and polymorphs – which were suggestive of an ovarian pregnancy.

Figure 1: Histopathology slide showing trophoblastic villi and corpus luteum embedded in ovarian tissue



3. Discussion

Ovarian pregnancies comprise 0.15% of all pregnancies and 0.15-3% of ectopic gestations, with an incidence of up to 1/7,000 deliveries. Primary ovarian pregnancy may occur without any classical antecedent risk factors. Ultrasonography can be a useful adjunct to clinical presentation and physical examination in allowing the preoperative diagnosis of ovarian gestation.[2] With a few exceptions, the initial diagnosis is made on the operating table and the final diagnosis only on histopathology on the basis of the four Spiegelberg criteria.[3]

1. The fallopian tube on the affected side must be intact.

2. The fetal sac must occupy the position of ovary.

3. The ovary must be connected to the uterus by the ovarian ligament.

4. Ovarian tissue must be located in the sac wall.

The cause of primary ovarian pregnancy remains obscure. Boronow and colleagues concluded that chance is a reasonable explanation of ovarian pregnancies.[4]

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.[5]

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.[6]

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.[5]

Rupture in the first trimester is the usual rule in an ovarian ectopic, but the pregnancy may advance to full term.[7] Conservative treatment, as in tubal pregnancy, is of the utmost importance if the patient is young and desires to bear

children in ovarian pregnancy. Methotrexate is an effective therapeutic option in the management of unruptured ovarian ectopic pregnancy. It permits to avoid more invasive interventional surgery, with possible complications such as hemorrhage or later pelvic adhesions.[8]

In the past oophorectomy has been advocated as treatment of ovarian gestations, but ovarian cystectomy, mostly by laparoscopic techniques, is now the preferred procedure.[9]

The classic management of ruptured ovarian pregnancy is surgical, like any other ruptured ectopic pregnancy. The extent of surgery varies according to the amount of tissue destruction that has occurred. Patients with an ovarian pregnancy have a good prognosis. For future fertility, conservative surgical management is advocated unless in our case where oophorectomy was done as most of the ovarian tissue was destroyed and ovary could not be preserved.[9]

No case of repeat ovarian pregnancy has been reported in contrast to approximately 15% recurrent tubal pregnancy.[10] Fertility after ovarian pregnancy remained unmodified.[11]

4.Conclusion

Primary ovarian pregnancy may occur without the presence of any of the classical symptoms of ectopic pregnancy. Diagnosis of ovarian pregnancy should be suspected from elevated beta human chorionic gonadotropin (hCG), absence of intrauterine gestational sac, a complex ovarian mass on ultrasound and patient's risk factors. Early diagnosis and treatment can help in conservative management and retain the future fertility of the patient.

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