Ovarian Ectopic Pregnancy—A Case Report

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Abstract: Ovarian pregnancy is an uncommon presentation of ectopic gestation and usually, it ends with rupture before the end of the first trimester. Its presentation often is difficult to distinguish from that of tubal ectopic pregnancy and hemorrhagic ovarian cyst. We report a rare primary ruptured ovarian pregnancy in a Rh negative 45 years lady.

Key words: Ovarian, ruptured, pregnancy.

1. Introduction

Ectopic pregnancy is a cause of significant maternal mortality [1]. While the exact incidence remains unknown, reported figures range from 0.25 to 1.5 of all pregnancies [2]. The incidence is probably higher as a significant number of such pregnancies remain undetected. While more than 98% of ectopic pregnancies are in the Fallopian tube, a small number are in extra tubal sites; the abdomen, the cervix and the ovary. Ovarian pregnancy is rare representing 0.2% of all ectopic pregnancies [2]. However, ovarian pregnancy could be a life-threatening condition if it ruptures, leading to hemoperitoneum and hypovolemic shock. The diagnosis depends on the physicians' suspicion, experience and is made with high resolution transvaginal ultrasonography and laparoscopic treatment or laparotomy. We report a case of a ruptured ovarian pregnancy, which was managed by laparotomy.

2. Case Report

A 45 year old female, with 98 days' amenorrhoea, complained of severe pain of sudden onset, in the lower abdomen. The pain was present for 2 days. No associated vaginal bleeding was observed. The present

pregnancy was second; the last ones had been full term and normal. The last child had been born twenty years earlier and the child was delivered at home without any medical assistance. No contraceptive agent had been used by her nor had her menstrual cycles been irregular.

On examination, the patient looked pale and restless with the pulse rate of 102/minute and the blood pressure of 116/84 mm Hg. On per vaginal examination, which the patient refused initially due to severe pain, a mass was found in the right adnexa. Uterus could not be felt separately due to the presence of guarding and rigidity. The abdomen had mild distention and was extremely tender in the suprapubic region and had marked rebound tenderness.

Transvaginal ultrasound examination demonstrated a retroverted uterus with an endometrial thickness of 14.9 mm. Transvaginal ultrasound scan also revealed a gestational sac with well defined margins seen in the right ovary with sac diameter of 39.7 mm. There was presence of free fluid in the pouch of Douglas. Patients' investigation report showed a "O" negative blood group having: Hemoglobin level 6.2 g/dl; the white blood cell count of 12400/cumm, while having normal platelets count. Since the patient had reported as an emergency hence beta-hCG level could not be determined. Our provisional diagnosis was an ectopic pregnancy and the patient was taken for an emergency

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laparotomy where 500 ml of altered blood (hemoperitoneum) was found and removed from the peritoneal cavity. Right sided fimbriae was found swollen and adherent to the right ovary (Fig. 1). Also, fetus was found adherent to the surface of the right ovary—a right sided ruptured ovarian pregnancy. Gestational sac was found in the right ovary measuring 5.5 cm (Fig. 2). A right sided oophorectomy and fimbriectomy was done. Further, a left sided tubal ligation was also performed. No urinary malformation was found. Patient was shifted to the high dependency unit and 3 unit blood was transfused. Patient had

uneventful postoperative recovery and was discharged on 8th post operative day.

3. Discussion

Ectopic pregnancy occurs in 2% of all pregnancies, the myriad of locations have a hierarchy of prevalence as well as associated mortality and morbidity. The condition occurs once in every 25,000-40,000 pregnancies [1]. The most common location of the ectopic pregnancy continues to be fallopian tubes (accounting for roughly 95% of all ectopic pregnancies) followed by far less common ovarian ectopic which

Fig. 1 Right ovarian ectopic with swollen fimbriae.

Fig. 2 5.5 cm gestational sac with fetus in right ovary.

comprises 0.3%-3% of extra uterine cavity pregnancies [3]. Ovarian pregnancy is a rare diagnosis of exclusion. Artificial reproduction techniques procedures have resulted in a rise of pregnancy outside the uterine cavity but ovarian pregnancy is still rare [4]. Primary ovarian pregnancy results when an ovum not released from the ovary is fertilized or following a primary implantation of fertilized ovum in the ovary after reverse migration from fallopian tube. In secondary ovarian pregnancy, there is a tubal abortion or rupture with secondary implantation of gestational sac on the surface of ovary. The first case was reported by St Maurice in 1689. Early diagnosis of an ovarian pregnancy is perhaps the most difficult compared to all the other types of extra uterine gestations. It has two subtypes; intra follicular and extra follicular. In present case report, intra follicular ovarian ectopic was recognized. 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 [5]: (1) The gestational sac is located in the region of the ovary; (2) The ectopic pregnancy is attached to the uterus by the ovarian ligament; (3) Ovarian tissue in the wall of the gestational sac is proved histologically; (4) The tube on the involved side is intact. Our case fulfilled almost all the criterias. Ultrasound, especially transvaginal sonography has proved to be an invaluable tool in the diagnosis, as in our case, where a right ovary gestational sac confirmed the diagnosis of an ovarian ectopic gestation. In our case, since the patient has presented late and was not hemodynamically stable (ruptured) hence multiple dose of MTX treatment was not a viable choice [6]. Zaidi et al. [7] had shown that the most surgical treatment of ovarian ectopic pregnancy consists on wedge resection and oophorectomy. Hence, a right sided oophorectomy and fimbriectomy was done. During our laparotomy, an ovarian pregnancy was clearly seen and an ovarian wedge resection was done. For a woman with a previous history of ectopic pregnancy, it is better not to

use a copper or levonorgestrel containing intrauterine device [8]. Hence further a left sided tubal ligation was also performed as patient's family was complete.

4. Conclusion

Ovarian pregnancy is a serious complication of pregnancy accounting for 0.25 to 1.5 of all pregnancies [2]. Early diagnosis though necessary to ensure a successful outcome may be difficult unless this condition kept in mind. Our case suggests that cases which are complicated with hemodynamically unstable patient with ruptured ectopic is best managed by laparotomy [9].

Ovarian pregnancies are rare and can be missed radiologically [10]. The obstetrician should suspect a ruptured ovarian pregnancy when bilateral tubes are normal and the ovarian surface is breeched with haemoperitoneum [11].

Historically the difficulties associated with early diagnosis of ovarian pregnancy are both radiological and intra operative. The gestational sac in the ovary is difficult to differentiate from corpus luteum or hemorrhagic cyst of ovary. There is a role of three dimensional ultrasound to improve the detection rates.

There is a role of frozen section biopsy to differentiate a ruptured corpus luteum from a ruptured ovarian pregnancy intraoperatively [12].

Assisted reproductive procedures are on a rise. Clinicians should be well aware to diagnose the ovarian ectopic at the earliest [4].

In our patient, the ovarian gestation had ruptured and the only option was emergency right sided oophorectomy and fimbriectomy along with a left sided tubal ligation.

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