

Ovarian Pregnancy - A Rare Non-Tubal Ectopic

Dr. Harshitha B N¹, Dr. Archana Chatterjee², Dr. Arya Bodhe³

¹Resident, Mahatma Gandhi Mission Hospital, Kalamboli

²Associate Professor, Mahatma Gandhi Mission Hospital, Kalamboli

³Assistant Professor, Mahatma Gandhi Mission Hospital, Kalamboli

Abstract: Ovarian pregnancy is a rare form of non-tubal ectopic. Incidence ranging from 0.5% to 3%. In this case early diagnosis of ovarian ectopic and immediate surgical treatment improved morbidity and mortality of the patient. We report a case of 23 year old primigravida with 6 weeks delay in menstruation with complains of lower abdominal pain and vaginal bleeding since 2 days. Urine pregnancy test positive. Ultrasonography showed gestational sac with cardiac activity in her right ovary. Patient was taken up for emergency laprotomy. Intraoperatively, ovarian ectopic was confirmed and wedge resection of affected ovary was performed. Patient was discharged on postoperative day four, with instruction for weekly follow up of β -human chorionic gonadotropin levels until it returns to normal values.

Keywords: Ovarian pregnancy, Wedge resection

1. Introduction

Ectopic pregnancy is one of the most common causes of maternal mortality in the first trimester^[1]. It is defined as implantation of the trophoblast outside the endometrium of the uterine cavity with an estimated incidence of 1.5% to 2% in all pregnancies^[2].

Incidence of ovarian pregnancy is only 1/7000-1/40,000 live births and 0.5-3% of all ectopic gestations^[3]. Due to increased vascularization of the ovarian tissue, approximately 75% of ovarian pregnancies are terminated in the first trimester by rupture leading to internal hemorrhage and hypovolemic shock. The diagnosis is usually made by emergency laparotomies and histopathologic assessment^[3].

Findings ovarian pregnancy is likely to mimic those of a tubal pregnancy or a bleeding corpus luteum. Approximately one third of ovarian pregnancy lead to severe bleeding. At surgery, early ovarian pregnancies are likely to be considered corpus luteum cyst or a bleeding corpus luteum. Use of transvaginal sonography has resulted in a more frequent diagnosis of unruptured ovarian pregnancies^[4].

Unlike tubal pregnancies which hold a 15% chance of recurrence, there have been no case reports of a repeat

ovarian pregnancy which indicates that a previous ovarian pregnancy may not be a risk factor for its recurrence^[2].

2. Case Report

A 23-year-old primigravida came to MGM hospital, Kalamboli with complains of lower abdominal pain and vaginal bleeding for 2 days with a history of 6 weeks amenorrhea. Her previous menstrual cycle was regular: average flow and no dysmenorrhea. On examination, no pallor, pulse 104/min, BP 100/70 mmHg and tenderness in the right iliac fossa was present. Per vaginal examination showed uterus 6 weeks size with tenderness in the right fornix. On investigation, the urine pregnancy test was positive, Hb% was 10 gm%, total leucocyte count was 5,450/cu mm, platelet count was 2.4 lakh and the blood group was O positive. On ultrasonography, no intrauterine gestational sac seen. There was a gestational sac seen in right adnexa with fetal pole and yolk sac seen. CRL - 4.1mm=6 weeks 1 day. Cardiac activity was present (figure 1). There was mild free fluid seen in pelvis with thick moving echoes within it suggestive of hemoperitoneum (figure 2). Provisional diagnosis was right ovarian ectopic pregnancy. On admission β - human chorionic gonadotropin was 17,330 mIU/ml.



Figure 1: Ultrasonography showing right ovarian pregnancy

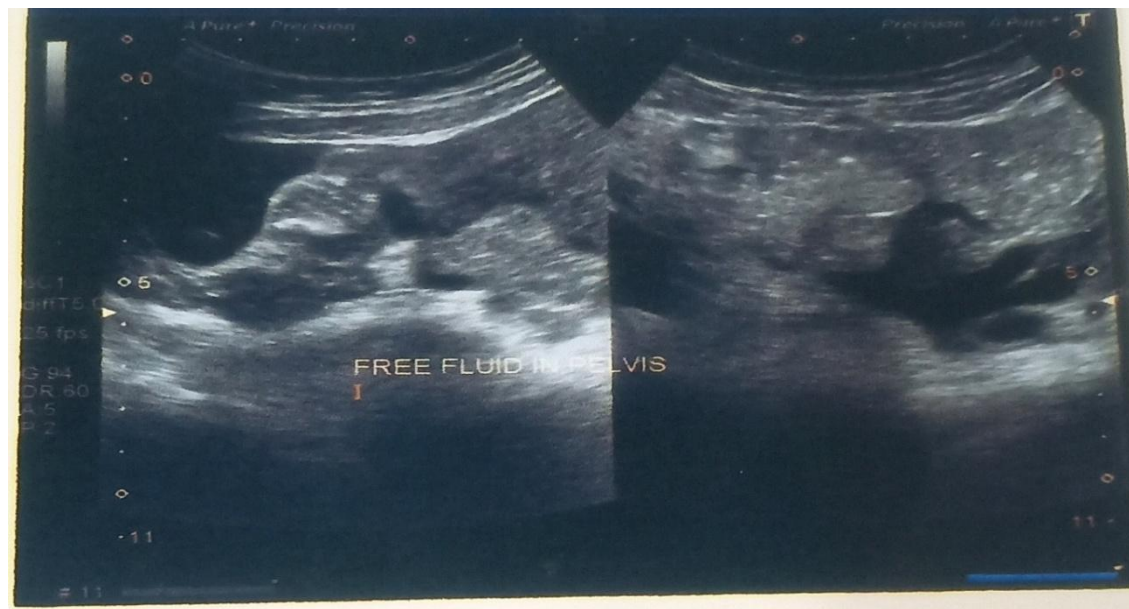


Figure 2: Showing free fluid in pelvis

After counselling and taking informed consent from patient and relatives, patient was taken up for emergency laparotomy. On exploration of abdomen, 500cc of haemoperitoneum and enlarged right ovary with oozing of blood from surface noted (figure 3). Uterus, both fallopian tubes and left ovary were normal. Wedge resection of the right ovary was performed (figure 4). Specimen sent for histopathology. Post-operative period was uneventful.

Patient was discharged on day 4 of operation. Patient was followed up with β - human chorionic gonadotropin weekly for 6 weeks until it reduced to normal level. Histopathology report confirmed diagnosis of primary ovarian ectopic pregnancy, showed multiple chorionic villi lined by cytotrophoblasts and syncytiotrophoblasts embedded in ovarian tissue.



Figure 3: Ruptured right ovarian ectopic



Figure 4: Right ovary after wedge resection

3. Discussion

Primary ovarian pregnancy is a rare type of ectopic pregnancy with an estimated incidence of 0.5-3% of all ectopic gestations [2]. With few exceptions, the initial diagnosis is made on operation table & final diagnosis only on the histopathology. Ovarian pregnancy can occur without any classical antecedent factors. However, there seems to be strong association with intra uterine contraceptive device. Other risk factors are ART, endometriosis & PID. Ovarian ectopic gestations are mostly associated with high parity, young age and ART [5]. Common clinical features are abdominal pain, amenorrhoea, with or without PV bleeding. Although early use of quantitative beta HCG assay & pelvic ultrasonography has increased our diagnostic capability for ectopic gestation, ovarian pregnancy still represents diagnostic problem. Ovarian pregnancy must be differentiated from tubal pregnancy, hemorrhagic ovary & ruptured corpus luteal cyst [5].

St. Maurice in 1689 reported the first case of ovarian pregnancy [8]. Spiegelberg criteria is used for diagnosis of ovarian ectopic pregnancy, which differentiates ovarian ectopic from other ectopic gestations and include-

- Intact ipsilateral tube, clearly separate from the ovary.
- Gestational sac within or replacing the ovary.
- Gestational sac connected to uterus by ovarian ligament.
- Histologically proven ovarian tissue located in the sac wall. [6]

In our case these criterias were fulfilled and histopathology further confirmed the diagnosis of ovarian ectopic pregnancy.

The treatment of the ovarian ectopic pregnancy is divided into surgical and conservative. Conservative management can be done for haemodynamically stable patient. The classic surgical approach of the disease with open or laparoscopic access is the wedge resection of the ovary and the suturing of the remaining ovarian tissue (our case). For the case where the diagnosis is made late and is accompanied by severe bleeding, an oophorectomy may be required [7]

The prognosis depends mainly on the gestational age and the erosive activity of the ectopic trophoblast. Spontaneous bleeding caused after ovarian rupture is the main complication of the disease, with significantly increased rates of maternal morbidity and mortality. In cases of ovarian pregnancy after the early surgical treatment of the disease, the success rates for future pregnancies are considered to be very satisfactory [8].

4. Conclusion

A good prognosis of primary ovarian ectopic pregnancy necessitates early diagnosis and immediate intervention. This helps to decrease the incidence of maternal mortality and morbidity and preserve future fertility, as what was done in our case. The modern diagnostic approach of the ectopic

ovarian pregnancy is a very important step towards the successful treatment of this rare but at the same time life-threatening obstetric complication.

References

- [1] J. V. V. Kadau, "Sonographic detection of ovarian ectopic pregnancy," *Journal of Diagnostic Medical Sonography*, vol. 32, no. 5, pp. 299–303, 2016.
- [2] Case Report of Spontaneous Bilateral Ovarian Pregnancy in a Nulliparous Lady Abdulrahman D. Mahroofi,¹ Jawaher K. Alsaqer,¹ Nawal Saad Alabdulla,² Rihab Ismael,² Stephanie Hsu,³ and M.Samy Ismail
- [3] .Medical management of an ovarian ectopic pregnancy: a case report Ozer Birge Mustafa Melih Erkan Ertugrul Gazi Ozbey Deniz Arslan *Journal of Medical Case Reports*
- [4] Cunningham FG, Leveno KJ, Bloom SL, Hauth JC, Rouse DJ, Spong CY. *Williams Obstetrics*. 23rd Ed. Mc Graw Hill; 2010. Ectopic pregnancy; p. 251.
- [5] *International J. of Healthcare and Biomedical Research*, Volume: 03, Issue: 04, July 2015, Pages 68-70 68 ,Case report: Case report of primary ovarian ectopic pregnancy Suhas Shinde*, Gautam Aher**, Urmila Gavali*
- [6] *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* Ghuman NK et al. *Int J Reprod Contracept Obstet Gynecol.* 2020 Jun;9(6):2632-2634, pISSN 2320-1770 | eISSN 2320-1789 ;Case Report :Unruptured ovarian ectopic gestation: a rare clinical scenario , Navdeep K. Ghuman¹*, Priya S. Mathew¹, Aasma Nalwa²
- [7] *Hindawi Case Reports in Obstetrics and Gynecology* Volume 2021, Article ID 6618751, 5 pages;Case Report Surgical Treatment of Ovarian Pregnancy-Efthymia Thanasa,¹ Ioannis Thanasas ,² Nikoleta Koutalia,² and Maria Mousia³
- [8] Lurie S. The history of the diagnosis and treatment of ectopic pregnancy: a medical adventure. *Eur J Obstet Gynecol Reprod Biol.* 1992; 43: 1–7