

Ovarian Ectopic Pregnancy: A Case Report

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Abstract:

Background: Primary ovarian pregnancy is a rare entity, constituting about 0.5% to 1% of all ectopic pregnancies.

Methods and results: We present a case of right ovarian ectopic pregnancy in a 23 year old female, who was admitted with the complaint of amenorrhoea for one month, pain abdomen, bleeding per vaginum in Gynaecology ward, RIMS, Imphal, Manipur. The laparoscopic suspicion of right ovarian ectopic pregnancy was finally confirmed by histopathologic evidence of the presence of degenerated chorionic villi in a background of ovarian tissue.

Conclusion: Pre-operative diagnosis of ovarian ectopic pregnancy still remains a challenge inspite of current medical advances. However, histopathological examination is always mandatory and confirmatory.

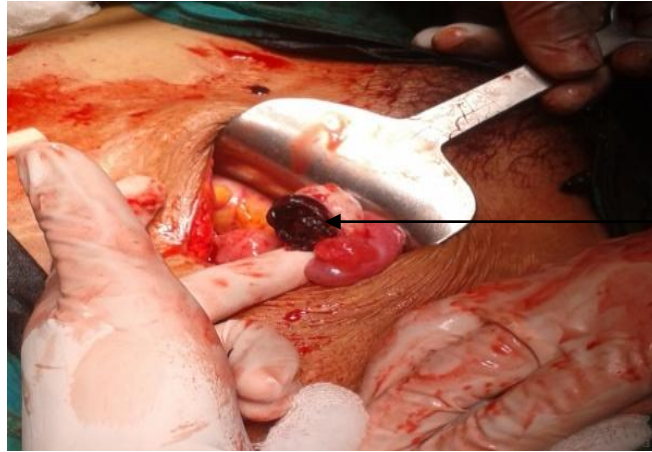
Key words: Amenorrhoea, Ovarian ectopic pregnancy, Chorionic villi.

I. Introduction

An ectopic pregnancy is the implantation and development of an embryo outside the uterine cavity. They can occur in fallopian tube, cervix, ovary, abdomen or previous caesarean scar.¹ Ovarian ectopic pregnancy is one of the rarest forms of ectopic pregnancies which accounts for 0.5% to 1% of all ectopic pregnancies.² Amenorrhoea, abdominal pain, vaginal bleeding are the classical symptoms found in ectopic pregnancies. Pain is the most common symptom which varies with severity and nature of the cases.³ Traditional risk factors for ovarian ectopic pregnancy are intrauterine device, pelvic inflammatory diseases, ovulatory drugs and assisted reproductive techniques.⁴ Diagnosis is based on surgical and histopathological observations and it continues to challenge the practising clinicians.⁵

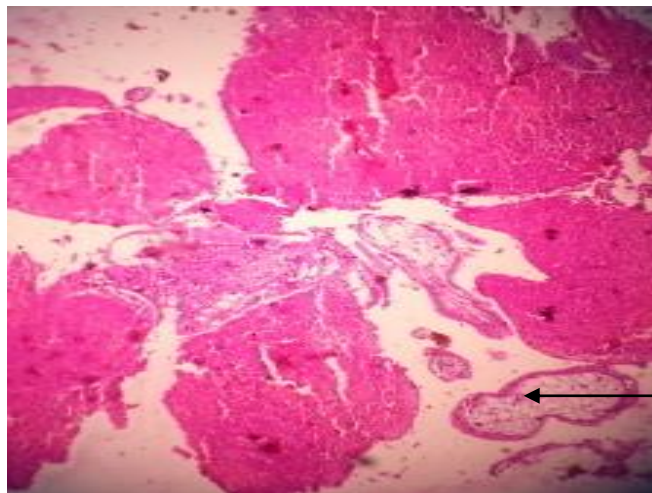
II. Case Report

A 23 year old, gravida 2, para 1 woman was admitted in RIMS Gynaecology clinic with the complaint of amenorrhoea for one month, pain abdomen and bleeding per vaginum. Her previous menstruation cycle was regular with average flow and no dysmenorrhoea. Past obstetrical history was uneventful with a full term live birth baby by caesarean section. There was no past history of ectopic pregnancies, intrauterine device insertion or assisted reproductive techniques. On examination, patient had severe pallor, pulse 133/min, blood pressure 100/60 mmHg. Per abdomen examination revealed tenderness and guarding in lower abdomen. Per vaginum examination revealed normal anteverted soft uterus, bilateral cervical movement tenderness with right fornix fullness. Paracentesis revealed bloody tap. On investigation, the urine pregnancy test was positive; Hb 4gm%, TLC 9,800/cumm and platelet count 2.1 lakhs/cumm. Ultrasonography and serum beta-hCG estimation could not be done as the patient was hemodynamically unstable. Emergency laparotomy was suggested. During laparotomy, there was hemoperitoneum and about 1.2litres of blood was sucked out from abdominal cavity. A ruptured hemorrhagic cyst of (1x1) cm noted on anterior surface of right ovary (Figure 1). Both fallopian tubes and left ovary were normal. A provisional diagnosis of ruptured ovarian ectopic pregnancy was made. Partial ovariectomy was done and specimen was sent for histopathology. Histopathological examination revealed degenerated chorionic villi in a background of ovarian tissue (Figure 2,3). As per Spiegelberg's criteria for ovarian pregnancy this case was finally diagnosed as right ovarian ectopic pregnancy.



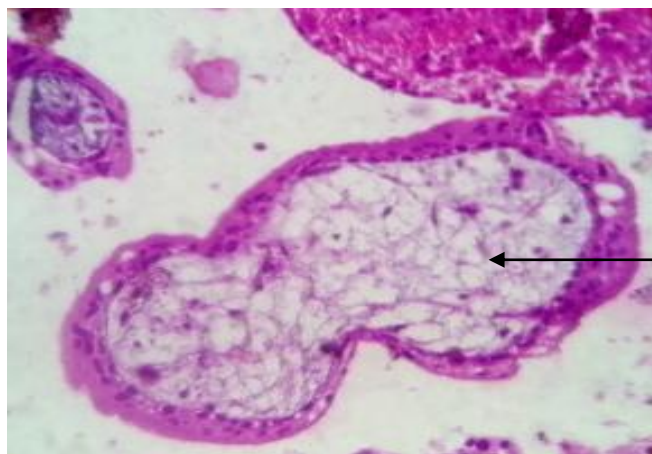
Hemorrhagic cyst

Figure 1: Right ovarian hemorrhagic cyst (laparotomy finding)



Chorionic villi

Figure 2: Degenerated villi with ovarian tissue (H&E, x10)



Degenerated chorionic villi

Figure 3: Chorionic villi (H&E, x40)

III. Discussion

Ovarian pregnancy is an uncommon form of all ectopic pregnancies. Incidence is one in 7000-40,000 pregnancies.⁹ It can be primary ovarian pregnancy or secondary to ruptured tubal pregnancy. Cause of ovarian pregnancy remains unknown. According to some hypotheses, reflux of the conceptus following a normal fertilization from the uterus, unable to release ovum from ruptured follicle, altered tubal motility and inflammatory thickening of tunica albugenia may be the reasons of ovarian implantation.^{3,5} Ovulatory medication, assisted reproductive techniques, pelvic inflammatory disease, intrauterine device, endometriosis are few risk factors that are strongly associated with ovarian ectopic pregnancy. But it may also occur without

any antecedent risk factors.^{4,5} In our case, we could not find out any associated risk factors from the history provided.

Our case presented with the classical symptoms of amenorrhoea, pain abdomen, bleeding per vaginum. Other conditions like tubal pregnancy, ruptured hemorrhagic corpus luteum, torsion of ovary or chocolate cyst can also present similarly.⁷ Diagnosis of ovarian pregnancy can often be made on the basis of history, clinical features, serum beta-hCG level and pelvic ultrasonography. But Resta et al⁸ reported that quantitative beta-hCG level may be unreliable predictor and ultrasound examination may be misleading. Our case presented with profuse bleeding and hemodynamically unstable condition, therefore, she underwent surgery without serum beta-hCG level or ultrasonography.

Ovarian pregnancies can be diagnosed intraoperatively and histopathologically by the following criteria of Spiegelberg³

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.

Management of ovarian pregnancy is usually surgical, as maximum patients present late with profuse bleeding, shock and diagnosis is made intraoperatively. Most preferred surgery is partial ovariectomy or cystectomy by either laparotomy or laparoscopy. Sometimes, oophorectomy may be suggested. The alternative treatment especially for unruptured ovarian pregnancy is methotrexate or prostaglandin therapy under strict supervision.^{3,5,9,10} In our case, no medical treatment was possible as she presented with profuse bleeding and hemoperitoneum. Therefore, she was managed surgically. Unlike the tubal pregnancy, no recurrences has been documented till date in ovarian ectopic pregnancy.⁹ Fertility after ovarian ectopic pregnancy remains unaltered.⁵

IV. Conclusion

Though ovarian pregnancy is a rare event, but is expected to rise as many patients seek for fertility therapy. In spite of current medical advances, preoperative diagnosis of ovarian ectopic pregnancy still remains a challenge. However, histopathological examination is always mandatory and confirmatory.

Conflict of Interest: There is no conflict of interest or financial relationship to disclose.

References

- [1]. Kraemer B, Kraemer E, Guengoer E, Juhasz-Boess I, Solomayer EF, Wallwiener D et al. Ovarian ectopic pregnancy: diagnosis, treatment, correlation to Carnegie stage 16 and review based on a clinical case. *Fertil Steril* 2009;92(1):13-5.
- [2]. Sharma B, Preston J, Olibo N. Ovarian pregnancy: an unusual presentation of an uncommon condition. *J Obstet Gynecol* 2002;22(5):565-6.
- [3]. Itil IM, Ozcan O, Terek MC, Aygul S. Primary ovarian pregnancy: a case report and review of literature. *Ege Tip Dergisi* 2004;43(2):113-5.
- [4]. Roy J, Sinha Babu A. Ovarian pregnancy: Two case reports. *Australas Med J* 2013;6(8):406-14.
- [5]. Panda S, Darlong LM, Singh S, Borah T. Case report of a primary ovarian pregnancy in a primigravida. *J Hum Reprod Sci* 2009;2(2):90-2.
- [6]. Kaur H, Shashikala T, Bharath M, Shetty N, Rao KA. Ovarian ectopic pregnancy following assisted reproductive techniques: a rare entity. *IJIFM* 2011;2(1):37-9.
- [7]. Scutiero G, Di Gioia P, Spada A, Greco P. Primary ovarian pregnancy and its management. *JLSLS* 2012;16(3):492-4.
- [8]. Resta S, Fuggetta E, D'Itri F, Evangelista S, Ticino A, Porpora MG. Rupture of ovarian pregnancy in a woman with low beta-hCG levels. *Case Rep Obstet Gynecol* 2012;2012:1-3. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3502786>. Accessed November 15, 2015.
- [9]. Kakade AS, Kulkarni YS, Mehendale SS. Ovarian ectopic pregnancy: varied clinical presentation- 3 case reports and review of literature. *Indian J Basic Appl Med Res* 2012;1(3):242-4.
- [10]. Tehrani HG, Hamoush Z, Ghasemi M, Hashemi L. Ovarian ectopic pregnancy: a rare case. *Iran J Reprod Med* 2014;12(4):281-4.