

Case Report

Ipsilateral Ovarian Pregnancy after Prior Salpingectomy for Tubal Pregnancy: A Diagnostic Dilemma

Lopamudra Jena^{1*}, Jyoti Narayan Puhan², Sujata Singh³

¹Senior Resident, ²Post Graduate, ³Assistant Professor, Department of Obstetrics and Gynaecology, SCB Medical College, Cuttack, Odisha, India

***Corresponding author**

Lopamudra Jena

Email: id-julijena82@gmail.com

Abstract: Ovarian pregnancy is rare with reported incidence of 1/7000-1/40000 pregnancies. In spite of advances in clinical sciences diagnosis of ovarian ectopic before surgery is rare. We present a case of multiparous lady who had undergone total salpingectomy for tubal pregnancy and had recurrent ectopic on the ipsilateral side which was confirmed to be ovarian pregnancy by histopathology, but did not satisfy the Spiegelbergs criteria thus creating a diagnostic dilemma.

Keywords: Ovarian pregnancy, Tubal pregnancy, Salpingectomy.

INTRODUCTION

Ectopic pregnancy occurs in about 1-2% of all pregnancies [1]. Ectopic pregnancy is an important contributor of maternal mortality, morbidity and early fetal wastages in the first trimester of pregnancy [2]. The incidence is reported to be approximately 15% and it rises to 30% following two ectopic pregnancies [3]. Probably multiple factors are involved such as the increased prevalence of pelvic inflammatory disease (PID), use of assisted reproductive technology [4], increasing maternal age [5], prior abdominopelvic surgery altering the pelvic organ anatomy.

Ipsilateral ectopic pregnancy following salpingectomy (total or partial) is rare [6], with ipsilateral ovarian pregnancy being rarer [7]. Ipsilateral ectopic pregnancy has found to be associated with mortality rates 10–15 times higher than other ectopic pregnancies [8]. In this we report, a case of spontaneous ectopic pregnancy located in the ovary after ipsilateral salpingectomy for tubal pregnancy.

CASE REPORT

A 27 years multiparous lady G4P2A1 with a period of amenorrhoea of 7 weeks was referred to our tertiary care hospital with complains of pain abdomen and reeling of head for one day, with an ultrasonographic diagnosis of ruptured ectopic pregnancy with hemoperitoneum. She had 2 vaginal deliveries with one right tubal ampullary pregnancy for which she had right total salpingectomy 2 years back. On examination she had moderate pallor with pulse rate of 100/min, blood pressure of 90/60 mm of Hg, respiratory rate-20/min.

Diffuse abdominal tenderness was present. On per vaginal examination uterus size could not be elicited, fornices were full and cervical motion tenderness was present. Ultrasonography revealed normal sized uterus with normal endoecho, there was irregular sac surrounded by echogenic mass seen in right adnexal region with fluid present in pelvis & peritoneal cavity. Her pregnancy test was positive. With a provisional diagnosis of ruptured ectopic pregnancy laparotomy was planned. On exploratory laparotomy 1.5L of fresh and clotted blood was present in the peritoneal cavity which was suctioned out. A hemorrhagic mass of 3*4 cm was adherent to the right ovary with hemorrhagic edges and profuse bleeding from the base (Fig.1). Right oophorectomy was done. Left side tube and ovary were healthy (Fig. 2) but keeping in mind the risk of recurrent ectopic left total salpingectomy was done. The postoperative period was uneventful. Histopathological confirmed it to be a case of ovarian pregnancy (Fig. 3).

DISCUSSION

It is reported that ectopic pregnancies of the ampullary region of the fallopian tubes constitutes approximately 92%, interstitial/cornual ectopic pregnancies constitutes 2.5%, while cervical, ovary, and peritoneal are less-common forms [9].

Ectopic pregnancy is an acute medical emergency as it leads to catastrophic intra peritoneal bleeding [10] at an early gestational age due to the poor ability of this portion of the tube to distend as well as the increased vascularity of the area (anastomosis of the uterine and ovarian vessels) [9]. The mechanism by

which ectopic pregnancy in the ipsilateral ovary after salpingectomy occurs is not clear but the literature is replete with a lot of theories on the mechanism on recurrent ipsilateral ectopic pregnancy [11, 12]. According to one theory the spermatozoa pass through the patent tube into the Pouch of Douglas, and travel to fertilise the ovum on the side of the diseased tube. The fertilised ovum implants on the stump of previous ectopic site. While according to another theory of transperitoneal migration, the fertilised ovum on the side of the normal tube migrates and gets implanted on the tubal stump. The third theory states that despite ligation, lumina remain intact in the interstitial portion and distal remnant of the fallopian tube allowing communication between the endometrial and peritoneal cavities. Thus, migration of the fertilised ovum or spermatozoa occurs from the endometrial cavity to the distal remnant of fallopian tube [13].

Due to uncertain mechanism, selection of a preventive method is difficult. However, few options may be suggested in order to decrease the probability of recurrence. During salpingectomy, care should be taken not to leave a long tubal stump [4] to minimise the risk of bleeding associated with the isthmic portion of the fallopian tube [9]. Remnant portion should be minimised to minimize the risk of future ectopic pregnancies [6]. Adequate diathermy of the proximal portion or ligation with clips may be necessary to decrease the future risk [6]. Hysterosalpingography can be performed to evaluate the patency of the fallopian tubes after salpingectomy and ligation [14].

In 1878, Von Spiegelberg suggested 4 criteria for diagnosis of ovarian pregnancy (a) The tube on the affected side must be intact, (b) The fetal sac must occupy the position of the ovary, (c) The ovary must be connected to the uterus by ovarian ligament, (d) Definite ovarian tissue must be present in the sac walls [15].

But in this case all the four criteria's could not be full filled creating a diagnostic dilemma of ovarian pregnancy versus ectopic in tubal remnant involving the ovary. To prevent recurrent ectopics, if the woman has completed her family and has a history of ectopic pregnancy, effective contraception counselling may be given, or permanent contraceptive measures implemented.



Fig. 1: Right ovary with hemorrhagic mass



Fig. 2: Left side healthy ovary and tube, right tube absent

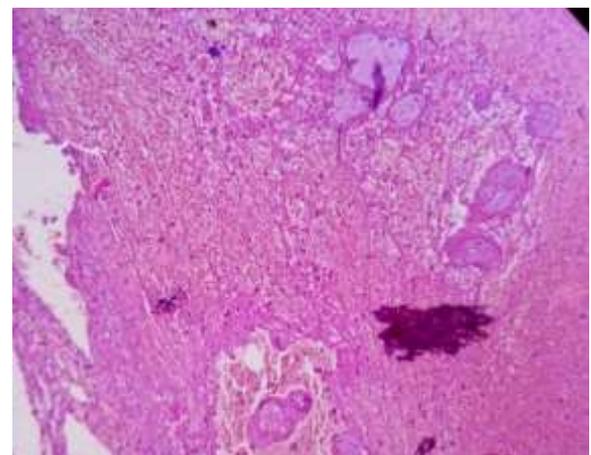


Fig. 3: Histopathology showing ovarian stroma and trophoblastic villi

CONCLUSION

Recurrent ovarian pregnancy after ipsilateral salpingectomy for tubal pregnancy is a very rare occurrence. Its clinical presentation is same as a disturbed ectopic pregnancy and diagnosis is usually made on operating with healthy tube and ovary of opposite side. Clinicians should be aware that one ectopic is a risk factor for future ectopics and that

salpingectomy does not exclude ipsilateral ectopic pregnancy. When performing a salpingectomy, we suggest that the length of the remnant should be minimised and adequate diathermy applied. It is a diagnostic dilemma and should be excluded from ectopic in remnant tube by histopathological study. Timely diagnosis and surgery can save the patient's life.

REFERENCES

1. Boufous S, Quartararo M, Mohsin M, Parker J; Trends in the incidence of ectopic pregnancy in New South Wales between 1990–1998. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 2001; 41(4): 436–438.
2. Igberase GO, Ebeigbe PN, Igbekoyi OF, Ajufor BI; Ectopic pregnancy: an 11-year review in a tertiary centre in the Niger Delta. *Trop doct.*, 2005; 35:175-177
3. Tulandi T; Reproductive performances of women after two tubal ectopic pregnancies. *Fertil Steril.*, 1988; 50:164.
4. Yano T, Ishida H, Kinoshita T; Spontaneous ectopic pregnancy occurring in the remnant tube after ipsilateral salpingectomy: a report of 2 cases. *Reproductive Medicine and Biology*. 2009; 8(4): 177–179.
5. Storeide O, Veholmen M, Eide M, Bergsjø P, Sandvei R; The incidence of ectopic pregnancy in Hordaland county, Norway 1976–1993. *Acta Obstetrica et Gynecologica Scandinavica*, 1997; 76(4): 345–349.
6. Samiei-Sarir B, Diehm C; Recurrent ectopic pregnancy in the tubal remnant after salpingectomy. *Case Rep Obstet Gynecol.*, 2013; 2013: 753269.
7. Hong S-Y, Kim D-W, Shin J-W, Park W-I, Seo Y-S; Ipsilateral ovarian pregnancy after vaginal salpingectomy: A case report. *JMIG*, 2009; 16(6): S122.
8. Lau S, Tulandi T' Conservative medical and surgical management of interstitial ectopic pregnancy. *Fertility and Sterility*, 1999;72(2): 207–215.
9. Takeda A, Manabe S, Mitsui T, Nakamura H; Spontaneous ectopic pregnancy occurring in the isthmic portion of the remnant tube after ipsilateral adnexectomy: report of two cases. *The Journal of Obstetrics and Gynaecology Research*, 2006; 32(2): 190–194.
10. Soufi M, Mimouni A, Soufi G, Ismaili Z, Tijani H; Abdominal Ectopic Pregnancy: An Important Cause of Haemoperitoneum and Shock. *Enliven: Gynecol Obstet.*, 2014; 1(1): 002.
11. Zuzarte R, Khong CC; Recurrent ectopic pregnancy following ipsilateral partial salpingectomy. *Singapore Med J.*, 2005; 46(9): 476.
12. Fruscella L, Danti M, Toti R; Extrauterine pregnancy in residual tube stump in a patient already treated with partial salpingectomy for right ampullary pregnancy. Report of a clinical case. *Minerva Ginecol.*, 1994; 46: 695-697.
13. Faleyimu BL, Igberase GO, Momoh MO; Ipsilateral ectopic pregnancy occurring in the stump of a previous ectopic site: a case report. *Cases Journal*, 2008, 1: 343.
14. Shah V, Panay N, Williamson R, Hemingway A; Hysterosalpingogram: an essential examination following assured hysteroscopic sterilisation. *British Journal of Radiology*, 2011; 84(1005): 805–812.
15. Kakade AS, Kulkarni YS, Mehendale SS; Ovarian ectopic pregnancy: varied clinical presentations- 3 case reports and review of literature. *Indian Journal of Basic & Applied Medical Research*, 2012; 1(3): 242-244.