

A Ruptured Ovarian Ectopic Pregnancy in a Tubectomy Patient: A Rare Case Report

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How to cite this article:

Naina Saluja, Jayant S. Makarande/A Ruptured Ovarian Ectopic Pregnancy in a Tubectomy Patient: A Rare Case Report. Indian J Forensic Med Pathol.2023;16(2):149-152.

ABSTRACT

Introduction: Ovarian pregnancy is extremely uncommon, and when it does occur, it typically occurs in young, multiparous women who are extremely fertile.

Case presentation: We present a case of a 33-year-old multiparous female who underwent bilateral tubectomy 4 years back, presented with abdominal pain, and was diagnosed as ruptured ectopic pregnancy and was confirmed intra-operatively and histopathological as ovarian pregnancy.

Diagnosis: Ruptured Ovarian Ectopic Pregnancy.

Therapeutic Intervention: The patient was immediately taken for surgery with blood transfusion (2 unit prc), laparotomy was done and the ruptured ovary was removed and cauterized.

Conclusion: We want to conclude that although ectopic ovarian or tubal gestation following tubectomy is uncommon, one must take this possibility into account if the patient exhibits the classic signs and symptoms of ectopic gestation after a history of amenorrhea. Better investigations and imaging technique knowledge are therefore vitally needed for early diagnosis in order to give time for conservative non-surgical management and lower morbidity related to blood loss and surgery.

Keywords: Ovarian ectopic pregnancy; Bilateral tubectomy; Abdominal pain.

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Received on: 09.03.2023

Accepted on: 09.05.2023

INTRODUCTION

The estimated prevalence of primary ovarian ectopic pregnancy, which accounts for little under 3% of all ectopic cases, ranges from 1:7000 to 1:70,000 (Birge *et al.*, 2015). Ectopic ovarian pregnancy rupture with severe intra-abdominal haemorrhage is an uncommon obstetric complication that usually occurs in the first trimester

of pregnancy and poses a serious risk to the unborn child (*Thanasa et al., 2022*). The complex diagnosis is based on histological and surgical findings (*Hallatt, 1982*). Modern sonographic technology has improved capabilities, but preoperative detection of ovarian pregnancy is still difficult and is frequently made during surgery. Sonographers and other healthcare professionals may be able to offer patients earlier and maybe less invasive treatment alternatives if they are more aware of these uncommon but potentially fatal appearances (*Kadau, 2016*).

We describe a case of a woman who showed up in a condition of shock and with the typical signs of an ectopic pregnancy rupture. Four years prior, she underwent bilateral tubectomy. The diagnosis of ruptured ectopic ovarian pregnancy was made following laparoscopic surgery.

CASE REPORT

A 33-year-old multigravida patient came with the chief complaint of abdominal pain over the right

pelvic region for the last 2 days. The patient had h/o heavy bleeding 2 days back with the passage of clotted blood preceded by severe abdominal pain. On examination, she was afebrile, with a pulse of 150/min, and blood pressure of 70/40 mmHg. On palpation, tenderness was present over the pelvic region on the right side.

The patient had undergone a bilateral tubectomy 4 years back.

Lab investigation: On investigations, haemoglobin was 10.5 gm/dl, total leucocyte count was 9,760 cells /cum, platelet count was 3.69 lakh/cm, blood group was O positive, random blood sugar was 116 mg/dl, serum creatinine was 1.18 mg/dl. Urine routine microscopy was within normal limits and her urine for the pregnancy test was positive.

Radiological investigation: 2D ECHO was done which showed normal cardiac function and collapsed IVC suggestive of hypovolemic shock. USG abdomen showed right ovarian ruptured ectopic pregnancy (Fig. 1)



Fig. 1: Ultrasound image demonstrating a complex mass in the right adnexa and nonintrauterine pregnancy.

Histopathology: Gross feature (Fig. 2)

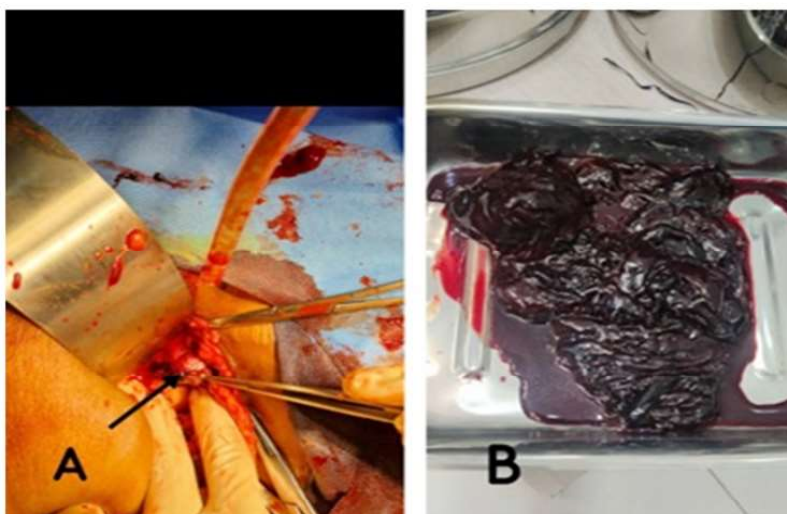


Fig. 2: A: Intraoperative image of the ruptured right ovary. B: Haemorrhagic clots

Microscopic features (Fig. 3)

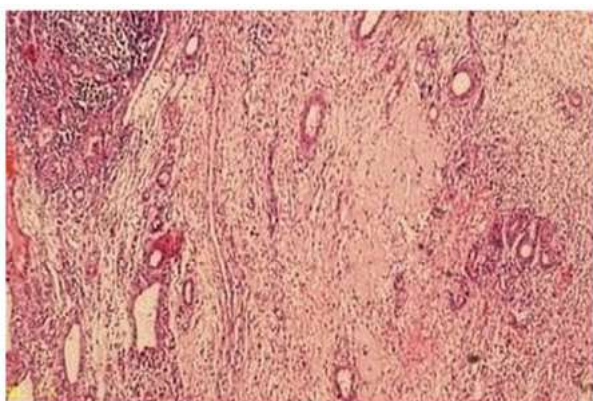


Fig. 3: Section of right ovary showing chorionic villi (H & E stain).

TREATMENT

As the patient was in hypovolemic shock, she was immediately shifted to ICU. Started with IV antibiotics, IV fluid, inotropic support, and other supportive measures. The patient was immediately taken for surgery with blood transfusion (2 unit prc), laparotomy was done and the ruptured ovary was removed and cauterized. One unit of PRC was given on a post-operative day.

All the vitals were normal by postoperative day 2 and the patient was discharged on day 3 post-surgery in stable condition.

DISCUSSION

When the corpus luteum or follicle ruptures, an

imprisoned ovum inside of it fertilizes, resulting in an ovarian pregnancy (*Hallatt, 1982; Kadau, 2016*). Corpus luteum secretions aid in implantation within the ovarian stroma. The fertilized ovum proceeds through development as the placental tissue, amniotic sac, and fetus are formed (*Kadau, 2016*). However, normal implantation takes place inside the uterus (*Novak and Woodruff, 1967*).

While our patient was 33 years old, the average age of patients with primary ovarian pregnancy has been found to be 29 years (*Philippe et al., 1987*). There was no h/o infertility, PID, IUCD insertion, or OCP intake, and the patient had a regular menstrual cycle of three to four days every 28 days. Contrary to tubal ectopic pregnancy, which is frequently observed in patients with h/o infertility, ovarian pregnancy occurs in patients who are fertile (*Seinera et al., 1997*).

In the literature, the average gestational age is 45 days, however, our patients' amenorrhea lasted 40 days. The patient typically has hypovolemic shock (8%), vaginal hemorrhage (33%), and abdominal pain (100%) (*Raziel et al., 2004*). Our patient presented with a history of abdominal pain and was in hypovolemic shock. The causes of ovarian pregnancy remain obscure.

Some hypotheses include ovum implantation after fertilization or ovum implantation inside the ovary, PID, reverse embryo migration, tubal disorders, thicker tunica albuginea dysfunction, (*Philippe et al., 1987; Raziel et al., 2004*) and interference with ovum release from ruptured

follicles (*Ramachandran et al., 2012; Scutiero et al., 2012*).

Also mentioned are cases involving IVF and IUCDs (*Raziel et al., 2004*). However, no such association was seen in our case.

Ectopic pregnancy in post-sterilized women requires a high level of suspicion to be diagnosed. Clinical symptoms and signs should be thoroughly examined. The diagnosis is aided by a urine pregnancy test and ultrasound. The patient in this case study underwent bilateral tubectomy 4 years prior. It shows that failure can happen long after sterilization and is not only restricted to the first several years. A ruptured ovary with blood clots was discovered in the peritoneal cavity during laparotomy.

CONCLUSION

Ectopic pregnancy with a ruptured ovary is a rare presentation. Ovarian pregnancy following tubectomy has been infrequently documented. We want to conclude that although ectopic ovarian or tubal gestation following tubectomy is uncommon, one must take this possibility into account if the patient exhibits the classic signs and symptoms

of ectopic gestation after a history of amenorrhea. Women should be educated about the possibility of pregnancy post-sterilization as well and about the complications so that early interventions could be taken. In the present case, due to ruptured ovary the surgical approach was prioritized and laparotomy was done to manage the condition. Hence surgical approach found effective and the prognosis of the patient post-surgery was good.

Contribution of the Authors: Uniform contributions have been put into the study by each Author.

Conflict of Interest: There is no conflict of interest among the authors of the manuscript.

Source of Funding: Any kind of funding was not received for the study.

Acknowledgment: We deeply appreciate the subject for co-operation during the study, we would also like to extend our thanks to the professors and head of the Department of Pediatrics for their contribution.

Informed Consent: The procedure along with the risk involved was thoroughly explained to the patient before the onset of the procedure. Written; Oral informed consent was obtained from the participant.

Data and Materials availability: All data associated with this study are present in the paper.

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