



CASE REPORT OBSTETRICS

An isthmic ectopic pregnancy - Atypical presentation

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ABSTRACT

The most dreadful gynecological crisis, ectopic pregnancy (EP), affects 2% of pregnancies. Almost 85% to 95% of ectopic pregnancy implants in the ampulla of the fallopian tube, the next most common area of implantation is in the isthmus (12%). In the isthmic pregnancy, the tubal wall is damaged beyond repair. There are multiple factors responsible for tubal ectopic pregnancy; a combination of structural tubal anomalies and tubal dysfunction has been mainly postulated. Isthmic ectopic pregnancy commonly ruptures into the broad ligament due to the position of the tube near the fundus, and an ampullary pregnancy ruptures in the abdominal cavity. Nowadays, systemic methotrexate can be used as a conservative medical method to treat many ectopic pregnancies. Here, we present a case of a multigravida with 5 weeks amenorrhea with an atypical presentation of isthmic tubal unruptured ectopic pregnancy, which was initially diagnosed as being an ovarian ectopic pregnancy, but the timely intervention helped save the life of a patient with minimum morbidity.

Keywords: Beta human chorionic gonadotrophin, Gestational sac, Isthmic ectopic pregnancy, Laparoscopy, Methotrexate

INTRODUCTION

When the implantation of a fertilized ovum occurs outside the uterus, the pregnancy is referred to as ectopic pregnancy (EP). One of the most frequent gynecological crises, ectopic pregnancy affects 2% of pregnancies.¹ In 85% to 95% of ectopic pregnancies, implantation occurs in the ampulla of the fallopian tubes, whereas 12% occurs in the isthmic area.² In the isthmic pregnancy, the tubal wall is damaged beyond repair. There are multiple factors responsible for tubal ectopic pregnancy; a combination of structural tubal anomalies and tubal dysfunction has been mainly postulated.³⁻⁵

The ampulla is the most frequent location for EP, and only around 12% of EP occurs in the isthmic region. Ectopic pregnancy patients generally present with a history of amenorrhea, slight vaginal bleeding, and lower abdominal pain. The most common presentation of an isthmic pregnancy is rupture. Due to its proximity to the fundus with a narrow lumen and lesser distensibility, the tube ruptures in the first few weeks.¹ Serial levels of human chorionic gonadotropin (Beta hCG), ultrasonography, and occasionally dilatation and curettage may be required for the diagnosis.⁶ The patient's clinical condition will determine the treatment plan. Expectant management and medical and surgical therapy are all included in the treatment plan.⁷⁻⁹ Unruptured isthmic pregnancy requires salpingectomy, segmental resection, and anastomosis through laparotomy or laparoscopic technique.⁶



Figure 1: Normal sized uterus with empty cavity and thin endometrium in ultrasonography. Blue circles indicates adenomyotic changes in uterus.

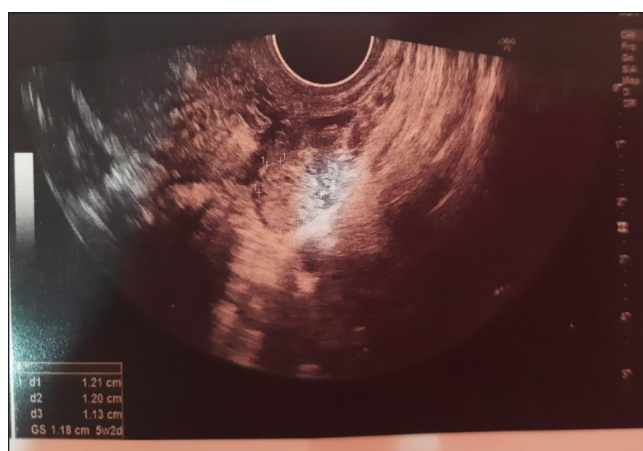


Figure 2: Left adnexal mass in ultrasonography.

CASE REPORT

A 35-year-old, para 2, living 2, having 2 abortion, with previous both caesarean deliveries, last childbirth 4 years ago, with a regular menstrual cycle of duration 24–26 days, came to outpatient department on 15/11/2022 with a history of last menstrual period on 18/10/2022 followed by one day of bleeding on 5/11/2022 and no other complaints. Her incidental urine pregnancy test came out to be positive when done on 15/11/2022, even before missing her periods. Her transvaginal ultrasonography was done on 15/11/2022, which was suggestive of a retroverted uterus, with a thin endometrial thickness of 5 mm; bilateral adnexa were clear, and bilateral ovaries were normal, as shown in Figure 1.



Figure 3: Left adnexal mass with ring of fire appearance on doppler.

The patient was advised to follow up in 4 days. Her beta hCG was done on 19/11/2022, which was 3,986, and on 21/11/2022, it was 4,560, which was suggestive of atypical rise. A repeat scan done on 24/11/2022 was suggestive of a thin endometrial thickness of 6 mm, with right adnexa being normal and left adnexa suggestive of a heterogenous mass of 9 by 8 mm adjacent to the left ovary, which corresponded to 5 weeks 2 days, with no free fluid in the pouch of Douglas, which was suggestive of ovarian adnexal ectopic pregnancy. Doppler done was suggestive of a ring of fire appearance around the mass, which was more likely to be an ovarian ectopic feature as shown in Figures 2 and 3.

The patient was initially planned for conservative management and was given the first dose of injection (inj.) methotrexate 50 mg on 24/11/2022 and inj. Folic acid 10 mg on 25/11/2022. Review Beta hCG done on 26/11/2022 was 4,843, and a review scan on the same day was suggestive of an adnexal mass 1.2 by 1 cm with a small gestational sac inside the mass with no free fluid in the pouch of Douglas. The patient was posted for laparoscopy as per her wish, as she did not want further conservative management. Operative laparoscopy was done on the next day after fitness for surgery and prior consent for intraoperative tubectomy and oophorectomy. The intraoperative findings were as follows: evidence of endometriosis in bilateral ovaries with a left ovarian hemorrhagic cyst and evidence of left isthmic unruptured ectopic pregnancy as shown in Figure 4. The right tube was normal. The decision of left salpingectomy was taken, and her right tubectomy was done as the patient had completed with her family. The patient recovered uneventfully postoperative and was discharged on the second day. Further follow-up showed decreasing beta hCG levels.

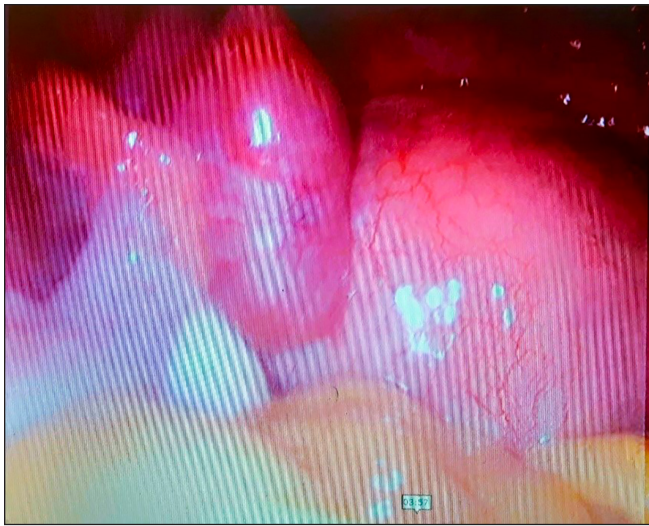


Figure 4: Laparoscopic finding of left isthmic unruptured tubal ectopic pregnancy.

DISCUSSION

Ectopic pregnancy is a serious, life-threatening complication in the first trimester if not diagnosed and treated early. It has maternal mortality of 9%–13%.² The primary site of ectopic pregnancy is the fallopian tube, with the ampulla (70%) being the most frequent.¹⁰ The isthmus of the tube (12%) is an uncommon site for implantation, but these pregnancies rupture early.⁶ As the EP was increasing in size and the hCG levels were rising, the decision to intervene was taken in the current case. There are some risk factors for ectopic pregnancy, including a history of infertility, previous ectopic pregnancy, tubal adhesions due to previous surgeries, endometriosis and advanced maternal age.⁹ In the present case, endometriosis, and previous operative history can be the reasons for ectopic implantation.

Serial serum Beta-hCG levels and ultrasound are frequently used to diagnose ectopic pregnancies.⁹ In our case, transvaginal ultrasonography was used to confirm the diagnosis. The treatment modalities depend on the patient's health, the size of the mass, gestational age, fertility, beta-hCG levels, and fetal heart activity. It's crucial to monitor the hCG levels and fetal heart activity. Unruptured isthmic pregnancy is treated with salpingectomy, segmental salpingectomy, segmental resection, and anastomosis.^{6–8}

In our case, laparoscopic salpingectomy was conducted because of the size of the tumor, the gestational age, and the serum hCG levels. Because of the isthmic component of the tubal pregnancy, which typically has a tiny lumen and rupture occurs during the first few weeks of pregnancy, an early intervention saved the rupture of ectopic pregnancy with minimum morbidity of the patient and a fruitful outcome which is unusual in many cases.

CONCLUSION

Vigilant follow-up with investigations in a patient suspicious of ectopic gestation with early intervention can prevent unwanted outcomes in the form of ruptured ectopic, shock, maternal morbidity, and mortality. Every woman coming to the hospital for amenorrhea with spotting and abdominal pain should be at first excluded for ectopic pregnancy by clinical and hematological with radiological support.

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