


A Rare Case Report: An Abdominal Ectopic Pregnancy in Subfertile Patient Managed with Minimal Invasive Surgery

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ABSTRACT

Background: Primary abdominal pregnancy occurs when the gestational sac attaches directly to the abdominal peritoneum. It is difficult to establish a confirmed diagnosis in an acute setting and half of them are only confirmed during operation. Most of the cases were diagnosed at the time of the surgery which increases the chances of morbidity and mortality if prior suspicion is not considered which leads to grave injury to the female psychologically as well as physically.

Case description: We present a case of an abdominal pregnancy of a 26-year-old woman conceived after ovulation induction and presented with a symptom of spotting and pain abdomen and operated laparoscopically. The patient recovered completely after surgery and followed up weekly till β -human chorionic gonadotropin (β -hCG) normalized.

Conclusion: A high suspicion of abdominal pregnancy should always be kept in the mind because of the various presentations, especially in early pregnancy. Early diagnosis and management are the foremost goal to prevent this life-threatening condition. A combined multidisciplinary approach should be opted for the management of abdominal ectopic pregnancy and laparoscopy has a miraculous approach to diagnosing and treating abdominal pregnancy.

Keywords: Abdominal pregnancy, Ectopic pregnancy, *In vitro* fertilization, Laparoscopy, Ovulation induction.

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INTRODUCTION

An abdominal pregnancy is one that is implanted inside the abdominal cavity other than the part of the female reproductive organs. In an abdominal pregnancy, the trophoblast may implant in at least one or several abdominal structures. In most cases, abdominal pregnancies are secondary; the foremost common mechanisms are implantation on the peritoneum after a tubal abortion. In the last two decades, the incidence of ectopic pregnancy has increased significantly because of the increased use of assisted reproductive technologies (ARTs) and the spread of sexually transmitted diseases. Abdominal pregnancy has become a concern since then as it is associated with a high risk of maternal morbidity and mortality due to hemorrhagic complications. The management of the first forms is predicated on surgery and requires surgical expertise and in most cases, a multidisciplinary team is required to manage life-threatening bleeding during the operation.

CASE DESCRIPTION

The patient was a 26-year-old South Asian woman, with a history of one left-sided ectopic pregnancy (E1), she came to the ART clinic because of secondary infertility for 2 years. She was presented with a history of irregular menstrual and a known case of asthma using an inhaler occasionally and was diagnosed as a case of demyelination syndrome in 2017. She was investigated in the line of secondary infertility and her medical, sexual, and family history was insignificant with the normal general and physical examination. She was started on clomiphene citrate 100 mg/day for 5 days, and monitored ultrasonographically for ovulation. After confirming the ovulation, the patient was asked to try timed intercourse. In the same cycle, she came with a positive urine pregnancy test at 4 weeks and a complaint of mild spotting and

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started on progesterone and booked for the scan at 5 weeks. After 5 days patient started complaint of lower abdominal pain and gastritis. Ultrasound scanning was done which revealed thick endometrium, with a right adnexal mass measuring 3.2 cm \times 3.8 cm containing a yolk sac and fetal pole without any cardiac activity with bilateral normal ovary and no free fluid seen in the pouch of Douglas (Fig. 1). A blood investigation was done and β -hCG was reported as above 10,000 and decided for laparoscopic treatment. Under general anesthesia, laparoscopic surgery was performed, and found the mass was attached to the mesentery of the colon and adherent to the posterior wall of the uterus in the peritoneal cavity (Fig. 2). The ectopic mass was dissected completely from the mesentery of the colon and the posterior wall of the uterus. The right-side tube was found to be normal and the left-side tube was absent due to the previous history of salpingectomy. Both ovaries and the right tube were properly evaluated and conserved. After the removal of the

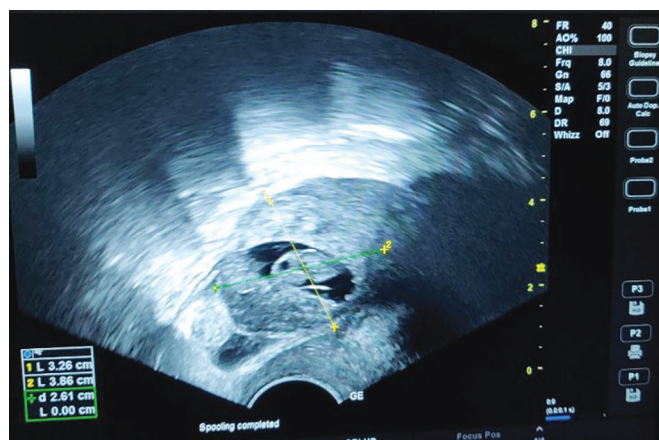


Fig. 1: Pelvic ultrasound findings. Abdominal ectopic pregnancy adherent to the posterior wall of the uterus measuring 3.26 cm × 3.86 cm



Fig. 2: Laparoscopic view depicts an ectopic pregnancy mass close to the posterior wall of the uterus, in the pouch of Douglas

ectopic mass, dilatation and curettage was performed and sent for histopathology examination but no trophoblastic tissue was found in the report. The patient stood well during the operation with average blood loss, and then extubated, and sent to the postoperative observation room. The patient was discharged on a postoperative day 5 with the standard of care at our hospital. She was re-evaluated with subsequent weekly follow-ups till β -hCG became normal. She had no complaints and her clinical profile did not document any abnormality during the follow-up visits.

DISCUSSION

Abdominal pregnancy accounts for 0.6–4% of all ectopic pregnancies and 1 in 3,372 to 1 in 21,439 live births. The extent of maternal mortality is estimated to be 7.7 times higher than that of other ectopic tubal pregnancies and is 90 times on top of intrauterine pregnancies.¹ A study showed that the mortality rate due to other ectopic pregnancies showed decreasing trend from 20% to less than 5% due to early diagnosis but abdominal pregnancy ranges from 0.5% to 18%, most of them due to delayed diagnosis.² Various sites of ectopic abdominal pregnancies were seen, the foremost common ones were as follows: Rectouterine and vesicouterine pouches. There are no distinct risk factors identified that are particularly related to extra uterine pregnancy. Some authors have reported that higher prevalence of sexually

transmitted infections which is a focus on the occurrence of abdominal ectopic pregnancy seen in lower socioeconomic countries while others pointed toward the increasing trend of ART over the world. The chances of ectopic pregnancy following *in vitro* fertilization (IVF) have been reported to be 2.2–4.9%.³ The risk factors for ecyesis following ART, especially ovarian stimulation, and the conjoint risk factors with infertility itself are responsible for ectopic pregnancy, especially tubal factor infertility.

It is difficult to diagnose an early abdominal pregnancy because during the first antenatal visit most early abdominal pregnancies are asymptomatic and no clear diagnosis could be made on the basis of ultrasound and biological criteria. Most of the diagnoses are usually made at the time of the laparoscopic/laparotomy conducted for the treatment of the suspected tubal ectopic pregnancy. Raised serum β -hCG only allows suspicious diagnosis of an ectopic pregnancy but does not help to verify the exact location of the pregnancy. Despite the fact that ultrasound is the tool of choice but does not always able to recognize an abdominal pregnancy from the other kinds of extrauterine pregnancies. In barely half of the cases, ultrasound was able to diagnose an early abdominal pregnancy, as in our case it had been diagnosed as an adnexal mass but not able to be identified the precise location. In an era of laparoscopy now it becomes a technique of choice both for diagnosis and management of abdominal pregnancy which helps to cut back the time for diagnosis in addition to the subsequent complications of delayed diagnosis.

The most typical way out for the remedial management of ectopic abdominal gestation is surgery either laparoscopically or laparotomy. Previously, laparotomy was chosen over laparoscopic surgery because of the fear of intraoperative bleeding which might be ungovernable at the site of implantation. Nowadays, laparoscopic surgeries overtook the role if the abdominal pregnancy is revealed at an early stage of pregnancy or if the implantation site acknowledges a non-hemorrhagic excision. Preoperative hemostasis control is ensured with the help of the newer technologies of electrocoagulation using bipolar forceps with minimal risk of complications. The worldwide rate of laparoscopic surgery for ectopic management was 55%.⁴ The study has shown that with the advancement in newer technology and enhanced operator skills, the surgical management of abdominal pregnancy could be possible by laparoscopy. The operator hardly ever faces difficulty in opening the sac and removing the fetus, but the management of the adhesions and more especially of the placental tissue should be prepared to deal with profuse bleeding especially when dealing with the patient of subfertility as in open surgery there are more chances for adhesions which could further deteriorate the fertility outcome.

CONCLUSION

We report a rare case of ectopic abdominal pregnancy after ovulation induction managed laparoscopically required higher expertise in surgery. Abdominal ectopic pregnancy is a scarcely occurring event and may be potentially serious because of the delayed diagnosis and related bleeding complications. The early diagnosis put forward a more robust prognosis. However, the various clinical presentations make early diagnosis difficult but the help of laparoscopic management allows an early diagnostic approach, and therefore the accurate location of the pregnancy. Therefore, it provides a stronger perspective of laparoscopic management of dreadful abdominal pregnancy with all precautions.

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