International Clinical and Medical Case Reports Journal
Case Report (ISSN: 2832-5788)

Abdominal Pregnancy Secondary to Ruptured Tubal Ectopic

Ananya Das[1*], Sukalyan Halder[2], Anusuya Sarma[3], Khulakpam Rimabati[4], Donboklang Lynser[5], Pranjal Kalita[6]

[1-6]Department of Obstetrics and Gynaecology, NEIGRIHMS, Shillong, Meghalaya, India

Citation: *Ananya Das, Sukalyan Halder, Anusuya Sarma, Khulakpam Rimabati, Donboklang Lynser, Pranjal Kalita. Abdominal Pregnancy Secondary to Ruptured Tubal Ectopic. Int Clinc Med Case Rep Jour. 2025;4(6):1-8.*

Received Date: 08 June 2025**; Accepted Date:** 18 June 2025**; Published Date:** 22 June 2025

[*]**Corresponding author:** Ananya Das, MD, Department of Obstetrics and Gynaecology, NEIGRIHMS, Shillong, Meghalaya, India

ABSTRACT

Introduction: Ectopic pregnancies are a major cause of morbidity and mortality in the reproductive age group women. It is the implantation of the blastocyst in sites other than the endometrial cavity. An abdominal pregnancy is implantation of the fetus in the peritoneal cavity, excluding the tubes, ovaries and intraligamentous pregnancies.

Case report: A 28-year-old woman G3P2L2 attended the Emergency Department with the complaints of amenorrhoea for two months, abdominal distension and pain abdomen. She was pale with period of gestation of 12 weeks 2 days. On per abdomen examination a firm mass of 18-20 weeks felt, with irregular surface and restricted vertical mobility. An ultrasound scan showed features suggestive of ovarian/fimbrial ectopic pregnancy with no intrauterine gestational sac. A well-defined heterogenous lesion noted in right adnexa and Pouch of Douglas with surrounding echogenic structure suggestive of placental tissue, with macerated fetal head of bi-parietal diameter corresponding to 14 weeks of gestation. MRI also revealed the same picture. On exploratory laparotomy, hemoperitoneum of 700 ml was seen along with the fetus in peritoneal cavity. A rent was seen on the posterior surface of right fallopian tube with adherent products of conception evident on the inner surface. Bilateral ovaries were within normal limit.

Discussion: Abdominal pregnancy is an uncommon obstetric condition associated with significant risks for both the mother and baby. Its symptoms can vary widely, including irregular bleeding, abdominal pain, nausea, vomiting, and digestive disturbances such as flatulence, constipation, or diarrhoea. In some cases, small fetal parts may be felt through the vaginal fornices or observed outside the uterus. Diagnosis can be challenging due to its atypical presentation, often leading to delays. Typically, a secondary abdominal pregnancy arises after the early rupture of a tubal ectopic pregnancy [2]. Medical treatment for abdominal pregnancy is considered when surgical intervention poses a high risk of severe hemorrhage, particularly in cases where the pregnancy is located in the liver or spleen. Surgical intervention remains the primary treatment for ectopic abdominal pregnancy. Laparotomy is often preferred over laparoscopic surgery due to the risk of severe perioperative hemorrhage, which can be difficult to control at the implantation site.

Conclusion: Diagnosing and managing abdominal pregnancy requires a high level of clinical suspicion, as its symptoms can often mimic other conditions. Given its rarity and potential complications, vigilance is crucial in identifying signs early to prevent severe maternal risks. Clinical correlation-which involves comparing symptoms with imaging findings-is essential for confirming the diagnosis.

INTRODUCTION

Ectopic pregnancies are a major cause of morbidity and mortality in the reproductive age group women. It is the implantation of the blastocyst in sites other than the endometrial cavity. An abdominal pregnancy is implantation of the fetus in the peritoneal cavity, excluding the tubes, ovaries and intraligamentous pregnancies [1]. It can be primary or secondary abdominal pregnancy with secondary being more common [3]. The reported incidence of abdominal pregnancy is 1 per 10,000 births to 1 per 30,000 births according to various publications accounting for 1.4 percent to 3.3 percent of ectopic pregnancies [4]. Studdiford established three criteria for diagnosis of a primary abdominal pregnancy, in 1942, which are a) the presence of normal tubes and ovaries, b) no evidence of uteroperitoneal fistula, and c) the presence of a pregnancy related exclusively to the peritoneal surface and early enough in gestation to eliminate the possibility of secondary implantation after primary nidation of the tube. Secondary abdominal pregnancies, refer to those that originate in the tubes or ovaries, and subsequently reimplant in the peritoneum [5]. Abdominal pregnancy has a high maternal mortality rate of 0.5 to 8%, which is approximately seven times higher than ectopic pregnancy and about 90 times higher than intrauterine pregnancy and even higher perinatal mortality rate between 40 and 95% [3]. We are presenting a case of a secondary abdominal pregnancy, who presented in her second trimester and was managed accordingly.

CASE REPORT

A 28-year-old woman G3P2L2 attended the Emergency Department with the complaints of amenorrhoea for two months, abdominal distension in the last one week and pain abdomen for three days. She did not complaint of any abnormal bleeding per-vaginum. However, she had spotting per-vagina for two days after one month of amenorrhoea. Urine pregnancy test was done which was positive. Her period of gestation at the time of presentation was 12 weeks 2 days and she had two live issues. On general physical examination, patient was clinically pale. On per abdomen examination a mass of 18-20 weeks was felt, firm, irregular surface, with restricted vertical mobility. On gentle per speculum examination cervix was seen pulled up and no growth/lesion/bleeding was noted. A serum beta hCG was done along with complete blood count and other routine blood investigations. An ultrasound whole abdomen scan was also done. Initial scan done was suggestive of gestational trophoblastic neoplasm which justified the per abdomen examination finding of 18-20 weeks size mass, however her serum beta-hCG value in diluted sample was of 30577 mIU/ml which was not corroborating with the diagnosis of GTN. A repeat scan was scheduled for the next day. In the mean-time patient was transfused two units of PRBC as her haemoglobin level was 6 gm/dl. A repeat ultrasound scan on the following day by senior consultant radiologist showed features suggestive of ovarian/fimbrial ectopic pregnancy with no intrauterine gestational sac. A well-defined heterogenous lesion noted in right adnexa and Pouch of Douglas with surrounding echogenic structure suggestive of placental tissue, and rounded cystic structures

surrounding the lesion suggestive of ovarian follicles (Figure 1). A macerated fetal head of bi-parietal diameter corresponding to 15 weeks of gestation was also noted in the lesion (Figure 2).

Figure 1: Ultrasound image showing well-defined heterogenous lesion with surrounding ovarian follicles.

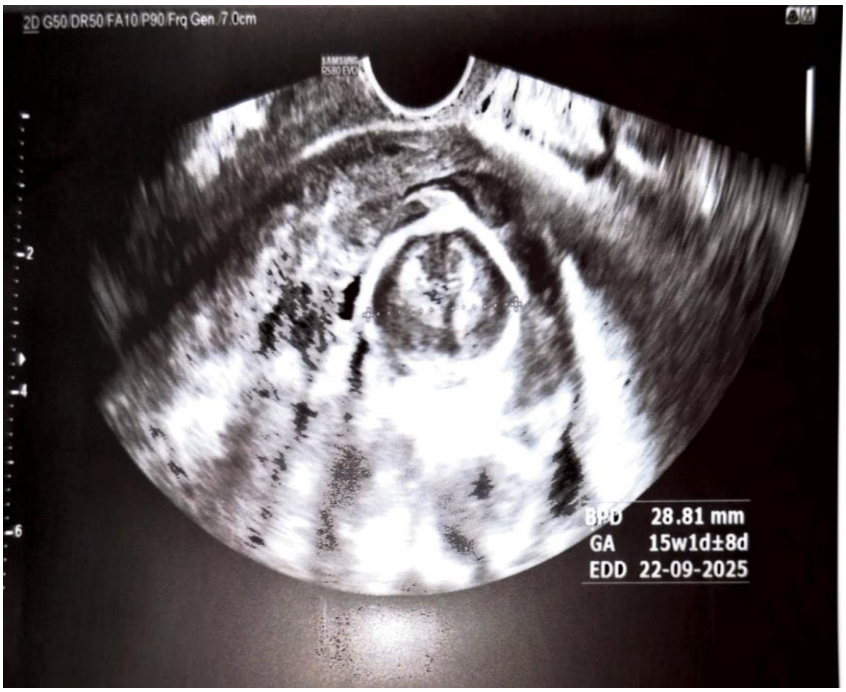

Figure 2: Ultrasound Image showing the Bi-parietal diameter of 28.81 mm, corresponding to 15 weeks period of gestation, in the peritoneal cavity.

An MRI was also done for the same since an ovarian ectopic pregnancy in second trimester is very unlikely. However, MRI also revealed the same picture that was suggestive of ovarian ectopic pregnancy. Exploratory laparotomy was planned for the patient. On opening the abdomen, via a suprapubic transverse incision, hemoperitoneum of 700 ml was seen along with the fetus in peritoneal cavity (Figure 3).

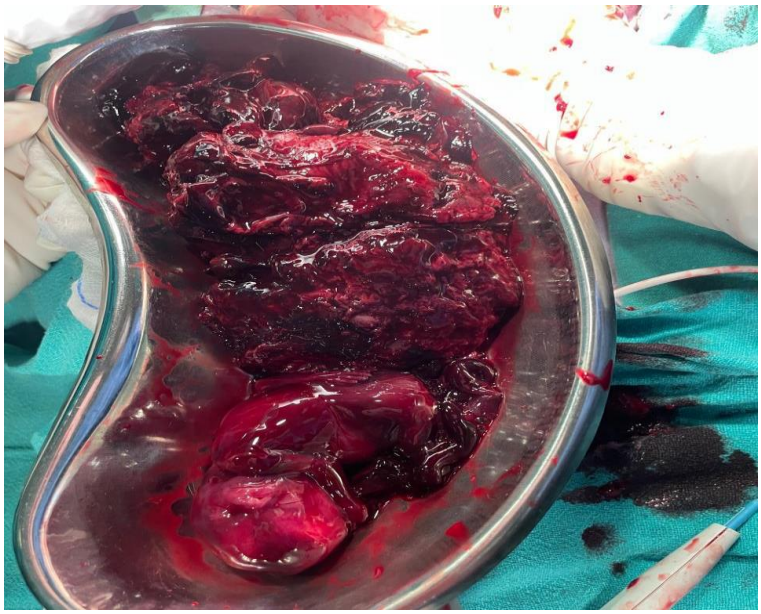

Figure 3: Macerated fetus along with placental tissue and clots removed from peritoneal cavity.

The uterine surface was examined for presence of any utero-peritoneal fistula or any rent on the uterine surface. It was observed that the uterus was intact on all the surfaces. A rent was seen on the posterior surface of right fallopian tube with adherent products of conception evident on the inner surface (Figure 4).

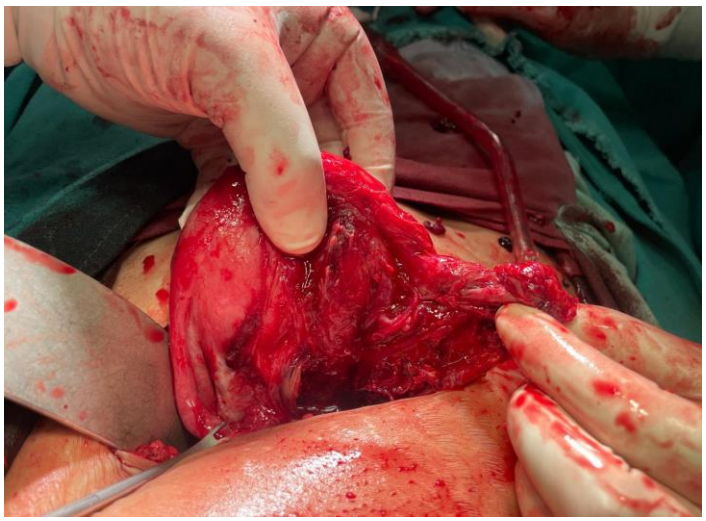

Figure 4: Uterus, left fallopian tube and left ovary seen within normal limits, with the rent seen on the posterior surface of the right fallopian tube.

Bilateral ovaries were within normal limit along with left fallopian tube. Hence, a diagnosis of secondary abdominal pregnancy was made intra-operatively, secondary to tubal ectopic rupture. Both fallopian tubes were resected to reduce the possibility of future ectopic pregnancy, with prior consent from the patient as her family was complete. Patient was transfused one more PRBC intra-operatively and one unit in the post-operative period. Her post-operative period was uneventful and she was discharged subsequently on post-operative day 4. The histopathology report was collected and showed features consistent with tubal ectopic pregnancy, which ruptured and led to secondary abdominal pregnancy (Figure 5-8).

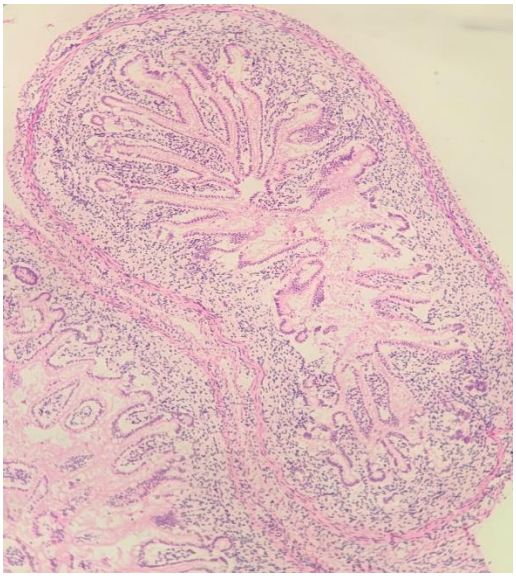

Figure 5: Histomorphology showing well-formed fetal intestinal tissue (H & E 200x)

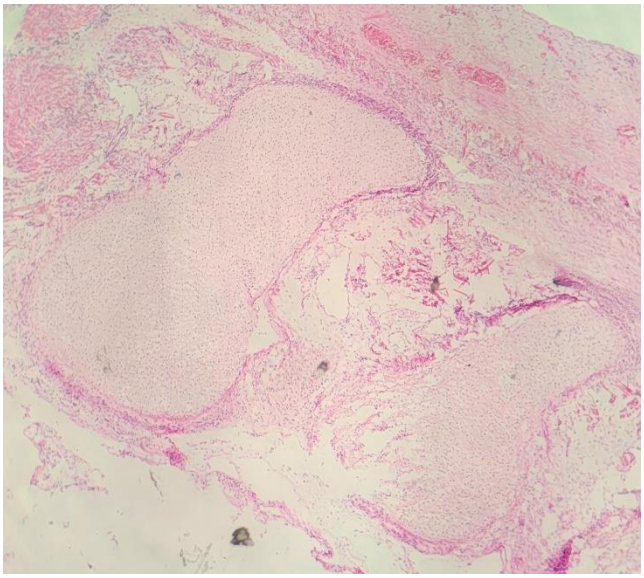

Figure 6: Histomorphology showing well-formed fetal cartilage tissue (H & E 40x)

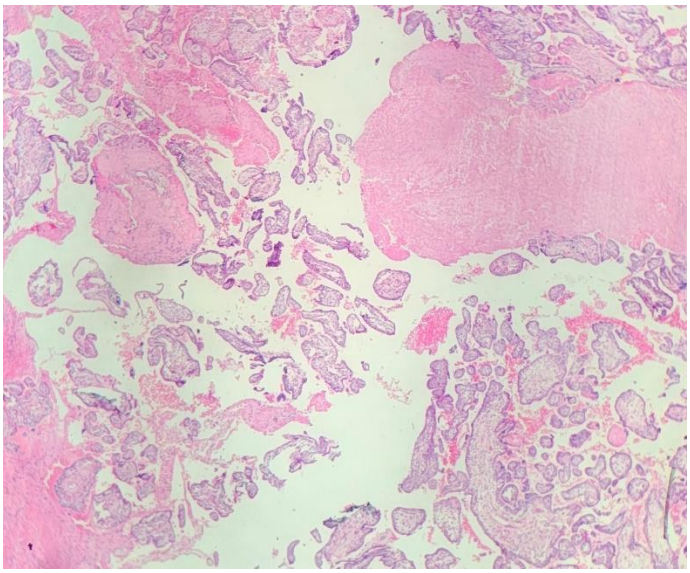

Figure 7: Chorionic villi along with areas of hemorrhage suggestive of products of conception (H&E 40x)

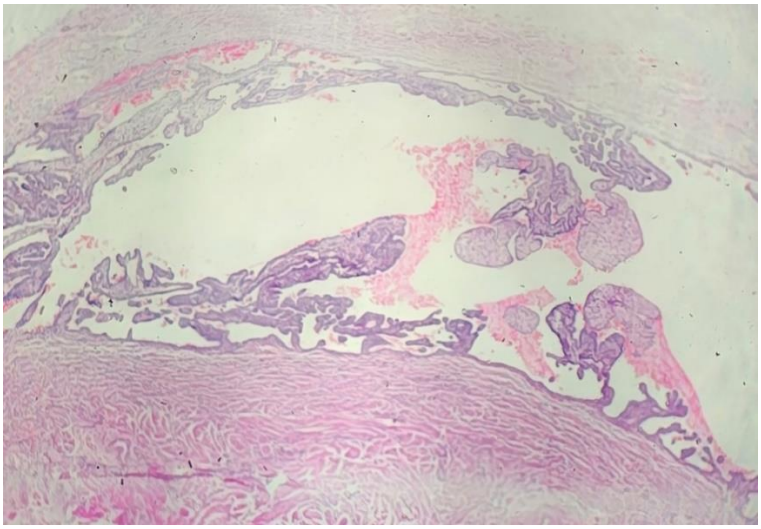

Figure 8: Fallopian tube with decidualized tissue favouring product of conception (H&E 200x)

DISCUSSION

Abdominal pregnancy is an uncommon obstetric condition, accounting for approximately 1% of extrauterine pregnancies, with an incidence ranging from 1 in 10,000 to 1 in 30,000 of all pregnancies. It is associated with significant risks for both the mother and baby. The maternal mortality rate is estimated to be 7.7 times greater than that of tubal ectopic pregnancies and 90 times higher than intrauterine pregnancies [6]. A study conducted by Atrash HK, which reviewed 5,221 cases of abdominal pregnancy, found a mortality rate of 5.1 per 1,000 cases. Additionally, 54.5% of these were early abdominal pregnancies, diagnosed before 20 weeks of gestation. The high mortality rate is

primarily due to complications such as severe hemorrhage, placental attachment to vital organs, and delayed diagnosis, which can make surgical intervention more challenging [7].

Its symptoms can vary widely, including irregular bleeding, abdominal pain, nausea, vomiting, and digestive disturbances such as flatulence, constipation, or diarrhoea. In some cases, small fetal parts may be felt through the vaginal fornices or observed outside the uterus [4].

Diagnosis can be challenging due to its atypical presentation, often leading to delays. While ultrasound is the preferred diagnostic tool, it is not always effective in differentiating abdominal pregnancy from other types of extrauterine pregnancies. In only half of cases, ultrasound can reliably identify an early abdominal pregnancy. Specific ultrasonographic criteria have been proposed for diagnosis, including the presence of a fetus and gestational sac outside the uterine cavity, detection of an abdominal or pelvic mass distinct from the uterus, absence of the uterine wall between the bladder and fetus, fetal adherence to an abdominal organ, and abnormal placental location outside the uterus. A careful assessment of the uterine contour can aid in early diagnosis. For more precise identification, MRI and CT scans serve as valuable tools [6].

Typically, a secondary abdominal pregnancy arises after the early rupture of a tubal ectopic pregnancy [2]. Meanwhile, cases of advanced secondary abdominal pregnancy have been reported in the literature, with some progressing to full term [8-10]. Our case is a presentation of a secondary abdominal pregnancy secondary to tubal ectopic rupture which was identified intra-operatively, while the radiographic picture was of an ovarian pregnancy which was highly improbable.

Medical treatment for abdominal pregnancy is considered when surgical intervention poses a high risk of severe hemorrhage, particularly in cases where the pregnancy is located in the liver or spleen. While surgery is the most common approach, medical management has been explored as an alternative in select cases. There is no established therapeutic protocol for medical treatment, and its success remains unpredictable. Some reported methods include methotrexate injections, either systemic or directly into the gestational sac, and potassium chloride injections to halt fetal development. However, these approaches require close monitoring, as complications such as hemorrhage may still necessitate surgical intervention [11].

Surgical intervention remains the primary treatment for ectopic abdominal pregnancy. Laparotomy is often preferred over laparoscopic surgery due to the risk of severe perioperative hemorrhage, which can be difficult to control at the implantation site. This is particularly relevant in cases where the pregnancy is advanced or where the placenta is attached to highly vascularized organs [7].

However, laparoscopic surgery is a viable alternative when the abdominal pregnancy is diagnosed early (before 12 weeks) or when the implantation site allows for non-hemorrhagic surgical excision. Laparoscopy offers advantages such as reduced blood loss, shorter hospital stays, and faster recovery, making it an increasingly preferred option in carefully selected cases [6].

CONCLUSION

Diagnosing and managing abdominal pregnancy requires a high level of clinical suspicion, as its symptoms can often mimic other conditions. Given its rarity and potential complications, vigilance is crucial in identifying signs early to

prevent severe maternal risks. Clinical correlation-which involves comparing symptoms with imaging findings-is essential for confirming the diagnosis. Additionally, experience plays a key role, as medical professionals familiar with ectopic pregnancies are better equipped to recognize atypical presentations and decide on the most effective treatment approach.

Ultrasound remains the primary diagnostic tool, but MRI can provide more detailed imaging, especially in complex cases. Early detection allows for laparoscopic intervention, while advanced cases may require laparotomy to manage hemorrhage and placental attachment. Proper diagnosis and timely surgical intervention significantly improve maternal outcomes.

REFERENCES

1. Panda S, Das A, Singh K, Baruah P, Sharma A. Diagnosis of Ectopic Pregnancy. In: Ectopic Pregnancy and Prenatal Diagnosis [Internet]. IntechOpen; 2022 [cited 2025 Apr 13].
2. Shanbhag A, Singh A. Secondary Intra-Abdominal Pregnancy: A Case Report. Nepal J Obstet Gynaecol. 2012;6(2):44-6.
3. Agarwal R, Sharma E, Khateja R, Suneja A, Sharma A. Secondary Abdominal Pregnancy: A Rare Presentation. J South Asian Fed Obstet Gynaecol. 2015;7(3):243-4.
4. Singh Y, Singh SK, Ganguly M, Singh S, Kumar P. Secondary abdominal pregnancy. Med J Armed Forces India. 2016 Apr;72(2):186-8.
5. Mengistu Z, Getachew A, Adefris M. Term abdominal pregnancy: a case report. J Med Case Rep. 2015;9:168.
6. Hajji A, Toumi D, Laakom O, Cherif O, Faleh R. Early primary abdominal pregnancy: Diagnosis and management. A case report. Int J Surg Case Rep. 2020:73:303-6.
7. Atrash HK, Friede A, Hogue CJ. Abdominal pregnancy in the United States: frequency and maternal mortality. Obstet Gynecol. 1987;69(3 Pt 1):333-7.
8. Amritha B, Sumangali T, Priya B, Deepak S, Sharadha R. A rare case of term viable secondary abdominal pregnancy following rupture of a rudimentary horn: a case report. J Med Case Rep. 2009;3:38.
9. Tubid R. Secondary Abdominal Pregnancy Following Uterine Perforation. J Obstet Gynaecol India. 2011;61(4):443-4.
10. Gurjar R. Full-Term Live Secondary Abdominal Pregnancy: A Rare Case Report. J Obstet Gynaecol India. 2019;69(Suppl 1):36-9.
11. Baldwin WF. Abdominal pregnancy; discussion, classification, and case presentation. Obstet Gynecol. 1954;4(4):435-9.