

Ruptured Abdominal Ectopic Pregnancy in a 45-Year-Old Woman Using Long-Term Contraception: A Case Report in Salmaniya Medical Complex

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Abstract

Background: Abdominal ectopic pregnancy is a rare and potentially life-threatening condition. Prompt diagnosis and surgical intervention are critical. **Case Presentation:** A 45-year-old woman presented with acute abdominal pain and hemodynamic instability. A positive pregnancy test and imaging revealed a ruptured abdominal ectopic pregnancy. **Management:** Emergency laparotomy confirmed omental implantation with massive hemoperitoneum. The patient required transfusion support and later developed a pulmonary embolism. Histopathology confirmed products of gestation. **Conclusion:** This case underscores the importance of pregnancy testing in all reproductive-aged women with an acute abdomen, regardless of contraceptive use.

Keywords

Abdominal Ectopic Pregnancy, Laparotomy, Hemoperitoneum, β -hCG, Pulmonary Embolism, Progestin-Only Contraception, Acute Abdomen

1. Introduction

Ectopic pregnancy refers to the implantation of a fertilized ovum outside the uterine cavity. Abdominal ectopic pregnancy is the rarest form, accounting for less than 1% of all ectopic pregnancies. It carries a high risk of morbidity due to delayed diagnosis and potential for massive hemorrhage. This case report presents a surgically managed ruptured abdominal ectopic pregnancy and highlights key diagnostic and management challenges [1]-[5].

2. Literature Review

Abdominal ectopic pregnancies have been reported in various anatomical locations including the omentum, bowel, and peritoneal surfaces. Risk factors include prior pelvic surgery, tubal damage, and assisted reproductive techniques. However, cases also occur in women without identifiable risk factors. Diagnostic challenges stem from atypical presentations and limitations of transvaginal ultrasound. Surgical intervention remains the mainstay of treatment, with laparotomy preferred in unstable patients [6] [7].

3. Case Presentation

3.1. Patient Profile

- Age: 45 years
- Gravida/Para: Para 3
- Contraception: Implanon for 4 years
- Last Menstrual Period: Irregular

3.2. Clinical Presentation

The patient presented to the emergency department in Salmaniya medical complex with sudden severe abdominal pain, dizziness, and signs of hypovolemic shock. Vitals on arrival: BP 80/50 mmHg, HR 130 bpm, SpO₂ 92% on room air. Abdominal examination revealed distension, tenderness, guarding, and rebound tenderness. Pelvic exam showed no vaginal bleeding and a closed cervix.

3.3. Laboratory Findings

- WBC: $21.3 \times 10^9/L$
- Hemoglobin: 5.3 g/dL → 13.2 g/dL post-transfusion
- Platelets: 261 → $135 \times 10^9/L$
- PT: 14 sec, INR: 1.1
- TSH: 0.5 mIU/L, T4: 14.2 pmol/L
- RBS: 14.2 mmol/L
- Creatinine: 87 $\mu\text{mol/L}$
- β -hCG: 6259 IU/L → 2191 IU/L (Day 1) → 822 IU/L (Day 3)

3.4. Imaging

- Ultrasound: No intrauterine pregnancy, significant hemoperitoneum.
- CT Pulmonary Angiography (Day 1): Subsegmental PE in apicoposterior segment of left upper lobe, bilateral consolidation, minimal pleural effusion.

4. Management

4.1. Surgical Findings

Emergency laparotomy revealed approximately 3 liters of hemoperitoneum with clots mainly in the left upper quadrant. The fallopian tubes and ovaries were nor-

mal. A thickened mesenteric segment with active bleeding was identified and clamped. The bleeding source was confirmed to be an abdominal ectopic pregnancy implanted on the omentum.

4.2. Transfusion Support

- 6 units PRBC
- 4 units FFP
- 4 units platelets (**Figure 1** and **Figure 2**)

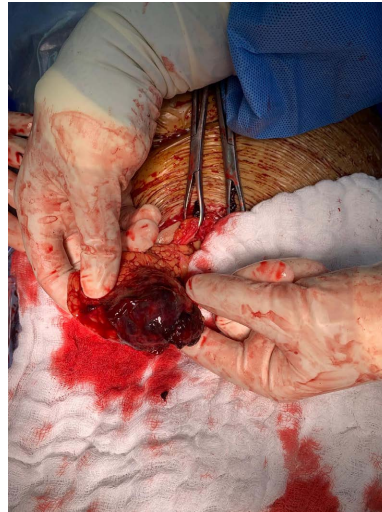


Figure 1. Intraoperative image showing ruptured abdominal ectopic pregnancy with hemoperitoneum and active bleeding from the omental implantation site.



Figure 2. Intraoperative image showing the gestational sac implanted on the omentum, surrounded by hemoperitoneum.

4.3. Outcome and Follow-Up

Postoperatively, the patient developed a pulmonary embolism, confirmed by CT pulmonary angiography. Anticoagulation therapy was initiated.

Histopathological examination of the excised omental tissue revealed adipose tissue with blood clots, decidua, and chorionic villi (some hydropic). No villitis or gestational trophoblastic disease was identified. The findings confirmed products of gestation in the omentum, consistent with abdominal ectopic pregnancy.

Serial β -hCG levels showed a consistent downward trend, confirming complete removal of trophoblastic tissue and successful resolution.

5. Discussion

This case illustrates the diagnostic complexity of abdominal ectopic pregnancy, particularly in the context of contraceptive use. Progestin-only contraceptives, such as Implanon, may increase the risk of ectopic implantation due to altered tubal motility and endometrial receptivity.

The postoperative pulmonary embolism likely reflects a multifactorial etiology, including the prothrombotic state of pregnancy, major abdominal surgery, and massive transfusion. These overlapping risk factors emphasize the importance of thromboembolic prophylaxis.

6. Conclusion

Abdominal ectopic pregnancy remains a rare but critical diagnosis. Clinicians must maintain a high index of suspicion, especially in patients presenting with an acute abdomen and hemodynamic instability. Pregnancy testing should be routine in all reproductive-aged women presenting with abdominal pain, regardless of contraceptive history.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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