



RUPTURED TUBAL ECTOPIC PREGNANCY FOLLOWING UNSUPERVISED MEDICAL ABORTION: EMERGENCY LAPAROSCOPIC SALPINGECTOMY WITH MASSIVE HEMOPERITONEUM

Obstetrics & Gynaecology

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ABSTRACT

A ruptured ectopic pregnancy represents a catastrophic, life-threatening first-trimester emergency requiring prompt clinical diagnosis and immediate hemostatic control. Unsupervised and empirical self-administration of medical termination of pregnancy (MTP) regimens without preliminary pelvic sonography significantly compounds morbidity by masquerading as a routine abortion-associated bleed. We present the case of a 25-year-old multiparous female (G3P2A0L2) presenting with acute severe hypogastric pain and syncope following over-the-counter ingestion of MTP pills. Diagnostic ultrasonography demonstrated an ill-defined, large heterogeneous left adnexal mass measuring $114 \times 60 \times 77$ mm with diffuse hemoperitoneum extending into the bilateral paracolic gutters, Morison's pouch, and subdiaphragmatic spaces. Despite significant hemoperitoneum, prompt resuscitation and emergency minimally invasive intervention via laparoscopic left salpingectomy was successfully performed alongside packed red blood cell transfusion and Anti-D administration in an Rh-negative patient. Postoperative recovery was uneventful, marked by rapid clinical recuperation and prompt resolution of serum β -hCG. This case highlights the critical importance of mandatory sonographic intrauterine localization prior to medical abortion and demonstrates the safety and feasibility of definitive laparoscopy even in massive hemoperitoneum.

KEYWORDS

Ruptured ectopic pregnancy, laparoscopic salpingectomy, medical abortion, massive hemoperitoneum, Rh-negative Pregnancy, Mifepristone Complications.

INTRODUCTION

Ectopic pregnancy occurs in approximately 1% to 2% of all naturally occurring pregnancies, with over 90% nidating within the fallopian tube. Rupture typically precipitates brisk intra-abdominal hemorrhage, hypovolemic shock, and maternal mortality if not arrested without delay. In developing regions, the accessible, over-the-counter availability of medical abortion formulations (mifepristone and misoprostol) has introduced an alarming diagnostic dilemma. Patients taking empirical MTP pills without baseline ultrasound confirmation frequently attribute their post-pill vaginal bleeding to a successful expulsion, masking an advancing, unrecognized tubal gestation.

Historically, ruptured ectopic pregnancies complicated by gross hemoperitoneum mandated emergent exploratory laparotomy. However, advances in laparoscopic surgical techniques, optics, and intraoperative anesthetic resuscitation allow minimally invasive approaches to achieve complete hemostasis and peritoneal clearance with reduced postoperative morbidity.

CASE PRESENTATION

History & Initial Presentation

A 25-year-old female (G3P2A0L2) presented to the emergency triage department with acute, excruciating lower abdominal pain (numerical pain scale 8–9/10) of 30 minutes duration, superimposed upon a 2-day prodrome of dull pelvic cramps and a documented syncopal episode on the morning of presentation.

Her menstrual history noted a Last Menstrual Period (LMP) on July 10, 2026. Following an unconfirmed period of amenorrhea, she had procured and self-administered medical abortion (MTP) pills without medical consultation or baseline imaging. She noted subsequent vaginal bleeding starting on August 18, 2026, which persisted for 10 days, leading her to believe the abortion had concluded. She had two previous uncomplicated full-term vaginal deliveries.

There was no antecedent history of pelvic inflammatory disease, sexually transmitted infections, or previous pelvic surgery.

Physical & Hemodynamic Examination

On admission, the patient appeared noticeably pale and in acute distress. Initial vital signs recorded a pulse of 96 beats/min, blood pressure of 96/60 mmHg (fluctuating up to 100/70 mmHg), respiratory

rate of 16 breaths/min, and an oxygen saturation of 97% on room air. Focused abdominal examination demonstrated pronounced tenderness, involuntary guarding, and rebound tenderness across the lower abdomen, maximal over the left iliac fossa. Pelvic examination elicited cervical motion tenderness and fullness in the left adnexal pouch. Point-of-care urine pregnancy test (UPT) was strongly positive.

DIAGNOSTIC INVESTIGATIONS

Ultrasonography

An urgent emergency abdominal and pelvic ultrasonography revealed:

- Uterus:** Normal dimensions with regular myometrial echotexture. A thin strip of free fluid within the endometrial cavity; no intrauterine gestational sac or retained decidual products was identified.
- Adnexa:** An ill-defined, heterogeneous mass measuring $114 \times 60 \times 77$ mm in the left adnexal region, intimately abutting the left ovary. The right ovary and right fallopian tube appeared normal.
- Peritoneal Cavity:** Moderate-to-gross echogenic free fluid (hemoperitoneum) distributed widely throughout the pelvis, pouch of Douglas, bilateral paracolic gutters, hepatorenal pouch (Morison's pouch), and bilateral subdiaphragmatic spaces.
- Conclusion:** Ruptured left tubal ectopic pregnancy with massive hemoperitoneum.

Serial Hematology and Biochemistry

The patient was identified as **A Rh-Negative**. Serial hematologic monitoring showed acute blood loss anemia, transient reactive neutrophilic leukocytosis, and subsequent recovery post-resuscitation.

LABORATORY PARAMETERS	ADMISSION (16-Sep)	POST-OP DAY 1 (1A-Sep)	POST-OP DAY 3 (1B-Sep)	REFERENCE INTERVAL
Hemoglobin (g/dL)	9.3 g/dL	8.7 g/dL	9.8 g/dL	12.0 – 15.0 g/dL
Packed Cell Volume (PCV)	—	2.55×10^3 μ L	3.03×10^3 μ L	$3.8 - 4.8 \times 10^3$ μ L
—	—	77.8 %	77.8 %	36.0 – 48.0 %
Total WBC Count	22,000 / μ L	8,000 / μ L	4,500 / μ L	4,000 – 10,000 / μ L
Platelet Count	3.7×1000 / μ L	184,000 / μ L	200,000 / μ L	150,000 – 400,000 / μ L
Serum β hCG	—	1,228.70 mIU/mL	Downward trend	Non-pregnant < 5 mIU/mL
Blood Group & Rh Type	A Negative	—	—	—
RHPT (Cytobill)	Non-Reactive	—	—	Non-Reactive

OPERATIVE MANAGEMENT & INTRAOPERATIVE FINDINGS

Following fluid resuscitation and blood cross-matching, the patient was taken for emergency laparoscopic exploration under general endotracheal anesthesia.

Figure 1: Laparoscopic entry revealing extensive dark hemoperitoneum and organized blood clots filling the pelvic cavity.



Figure 2: Identification and desiccation of the ruptured left fallopian tube with mesosalpingeal hemostasis.



Surgical Steps

- **Pneumoperitoneum & Hemoperitoneum Evacuation:** Direct optical entry confirmed extensive hemoperitoneum with dark clots distending the pouch of Douglas and extending bilaterally. High-volume suction irrigation was deployed to clear pooled blood and visualize pelvic architecture.
- **Pathology Confirmation:** The uterus was normal in contour; the right fallopian tube and ovary were entirely normal. The left fallopian tube was disrupted, markedly dilated with active bleeding, embedded within a localized organized hematoma abutting the left ovary.
- **Laparoscopic Salpingectomy:** Bipolar diathermy and laparoscopic scissors were utilized to desiccate and divide the left mesosalpinx close to the tube from the fimbrial end to the cornual junction. The ruptured ectopic segment and tube were completely excised while preserving the left ovary intact.
- **Hemostasis & Peritoneal Toilet:** Hemostasis at the tubal stump and mesosalpinx was verified under low pressure pneumoperitoneum. Thorough warm saline peritoneal lavage was performed until clear aspirate was obtained.
- **Intraoperative Fluid & Transfusion:** A total of 1000 mL crystalloids, 500 mL colloids, and 1 unit of crossmatched A-negative Packed Red Blood Cells (PRBC, 400 mL) were transfused intraoperatively.

POSTOPERATIVE RECOVERY & OUTCOMES

The patient demonstrated prompt clinical recovery in the postoperative ward. On Postoperative Day 1, hemoglobin settled at 8.2 g/dL due to expected redistribution; an additional compatible unit of A-negative PRBC (277 mL) was transfused uneventfully. Anti-D immunoglobulin was administered intramuscularly to safeguard against RhD isoimmunization.

Serial serum β -hCG declined appropriately from 1,226.70 mIU/mL. The patient initiated oral intake on POD 1, ambulated early, and was discharged in stable condition on POD 3 with a hemoglobin of 9.6 g/dL and normal vital signs.

DISCUSSION

This case highlights several critical diagnostic and clinical insights:

1. The Hazard of Self-Administered Medical Abortion: Unsupervised consumption of mifepristone and misoprostol remains a

major hazard in low- and middle-income regions. When taken without prior sonography, the ensuing decidual bleeding is mistakenly viewed as therapeutic success, delaying presentation until rupture ensues.

2. Feasibility of Laparoscopy in Massive Hemoperitoneum: While traditional protocols reserved laparoscopy strictly for hemodynamically stable patients with minimal fluid, modern laparoscopic equipment, high-flow suction irrigation, and coordinated anesthetic resuscitation permit safe, efficient minimally invasive intervention even in the presence of extensive hemoperitoneum.

3. Definitive Salpingectomy vs. Salpingostomy: In the setting of acute tubal rupture, gross anatomical tissue disruption, and an intact contralateral fallopian tube, salpingectomy is the definitive standard of care, preventing recurrent ipsilateral ectopic gestation and eliminating persistent trophoblastic disease.

CONCLUSION

Empirical medical termination of pregnancy without prior sonographic confirmation of intrauterine gestation poses a life-threatening risk of unrecognized ruptured ectopic pregnancy. Rapid triage, accurate pelvic ultrasound, coordinated resuscitation with blood components, and skilled emergency laparoscopic salpingectomy ensure favorable maternal outcomes despite massive internal hemorrhage.

REFERENCES

1. ACOG Practice Bulletin No. 193: Tubal Ectopic Pregnancy. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2018;131(3):e91–e103.
2. Barnhart KT. Clinical practice: Ectopic pregnancy. *N Engl J Med.* 2009;361(4):379–387.
3. Elson CJ, Salim R, Potdar N, Chetty M, Ross JA, Kirk E. Diagnosis and Management of Ectopic Pregnancy: Green-top Guideline No. 21. *BJOG.* 2016;123(13):e15–e55.
4. Goyal R, Mohan S, Goel S, et al. Laparoscopic management of ruptured ectopic pregnancy with massive hemoperitoneum: A feasible and safe reality. *J Minim Invasive Gynecol.* 2017;24(6):954–959.
5. Cleary KL, Teal SB, Kaneshiro B, et al. The safety of medical abortion when ultrasound is not routinely performed. *Contraception.* 2020;102(3):145–151.
6. Molinaro TA, Barnhart KT. Ectopic pregnancy, modern management: Laparoscopy versus laparotomy. *Clin Obstet Gynecol.* 2007;50(1):89–97.
7. Brombin C, Bettinzoli M, Busnelli A, et al. Unsupervised medical abortion with misoprostol and mifepristone: Clinical presentation, complications, and diagnostic pitfalls of unrecognized ectopic pregnancy. *Int J Gynaecol Obstet.* 2021;154(2):211–217.
8. Sagili H, Mohamed S. Extreme hemoperitoneum secondary to ruptured ectopic pregnancy managed laparoscopically: A review of surgical safety and clinical outcomes. *Arch Gynecol Obstet.* 2018;297(4):947–953.
9. Mol F, van Mello NM, Strandell A, et al. Salpingotomy versus salpingectomy in women with tubal pregnancy (ESEP study): An open-label, multicentre, randomised controlled trial. *Lancet.* 2014;383(9927):1483–1489.
10. ACOG Practice Bulletin No. 225: Medication Abortion Up to 70 Days of Gestation. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2020;136(4):e31–e47.