



## Introduction

Ectopic pregnancy is a rare and serious complication and significant contributor to the morbidity and mortality rates related to pregnancy.<sup>1</sup> Although greater than 95% of cases are tubal in origin, implantation can occur abdominally.<sup>7</sup>

## Objectives

To present a sub-optimally excised abdominal ectopic pregnancy and review the literature for recommended surgical and medical management.

## Case

A 27-year-old healthy woman, Gravid 2 Parity 0-0-1-0 at 7 weeks gestational age by sure LMP presented to the emergency room with severe, worsening abdominal pain for 8 hours and mild nausea. The pain was diffuse and poorly localized. She also reported mild vaginal bleeding over the past few days, lighter than a normal menstrual period.

Objectively, vital signs showed pulse = 80, blood pressure = 112/67, temperature = 36.5°C, respiratory rate = 17, and weight = 77 kg. The patient was lying still in bed for the exam, showing a soft abdomen with generalized tenderness in all four quadrants and severe pain in the right lower abdomen. Mild rebound was noted on the right side.

Lab work showed WBC = 13.2, Hgb = 12.5g/dl, Hct = 38.6%, with platelets 260,000. Urine pregnancy test was positive with a beta-hCG = 5,928 mIU/ml. Pelvic ultrasound showed a normal sized 8.0 x 5.0 x 4.9 cm uterus, an endometrial stripe = 9 mm, and trace free fluid within the pelvis. An ectopic pregnancy was identified "in the cornua or alongside the cornua." The gestational sac was seen with a yolk sac and a fetal pole measuring 0.58mm with fetal heart rate at 106 bpm.

The patient was taken to the operating room and underwent diagnostic laparoscopy, which revealed an abdominal ectopic pregnancy along the right uterosacral ligament, embedded in the peritoneum overlying the right ureter. Complete excision of the gestational sac was not feasible due to its firm adherence to the peritoneum and its proximity to the ureter. Partial removal was therefore performed using laparoscopic forceps. As the area was hemostatic, the intraoperative decision was made to abandon further attempts at complete excision and proceed with medical management.

Postoperatively, the patient was observed overnight and treated the following morning with intramuscular methotrexate (50 mg/m<sup>2</sup>). She was then followed closely as an outpatient with complete resolution.

## Results

This case adds to the literature on the management of sub-optimally excised ectopic pregnancies. A review of nine case reports and seven literature reviews on the medical management of abdominal ectopic pregnancy, as well as ACOG's practice bulletin on tubal ectopic pregnancy, was conducted. In this case, the patient was successfully managed with partial excision of an abdominal pregnancy followed by postoperative methotrexate. This case demonstrates that adjunctive methotrexate can be effective in achieving complete resolution, highlighting a practical approach for optimizing outcomes in patients with incompletely excised abdominal ectopic pregnancies.

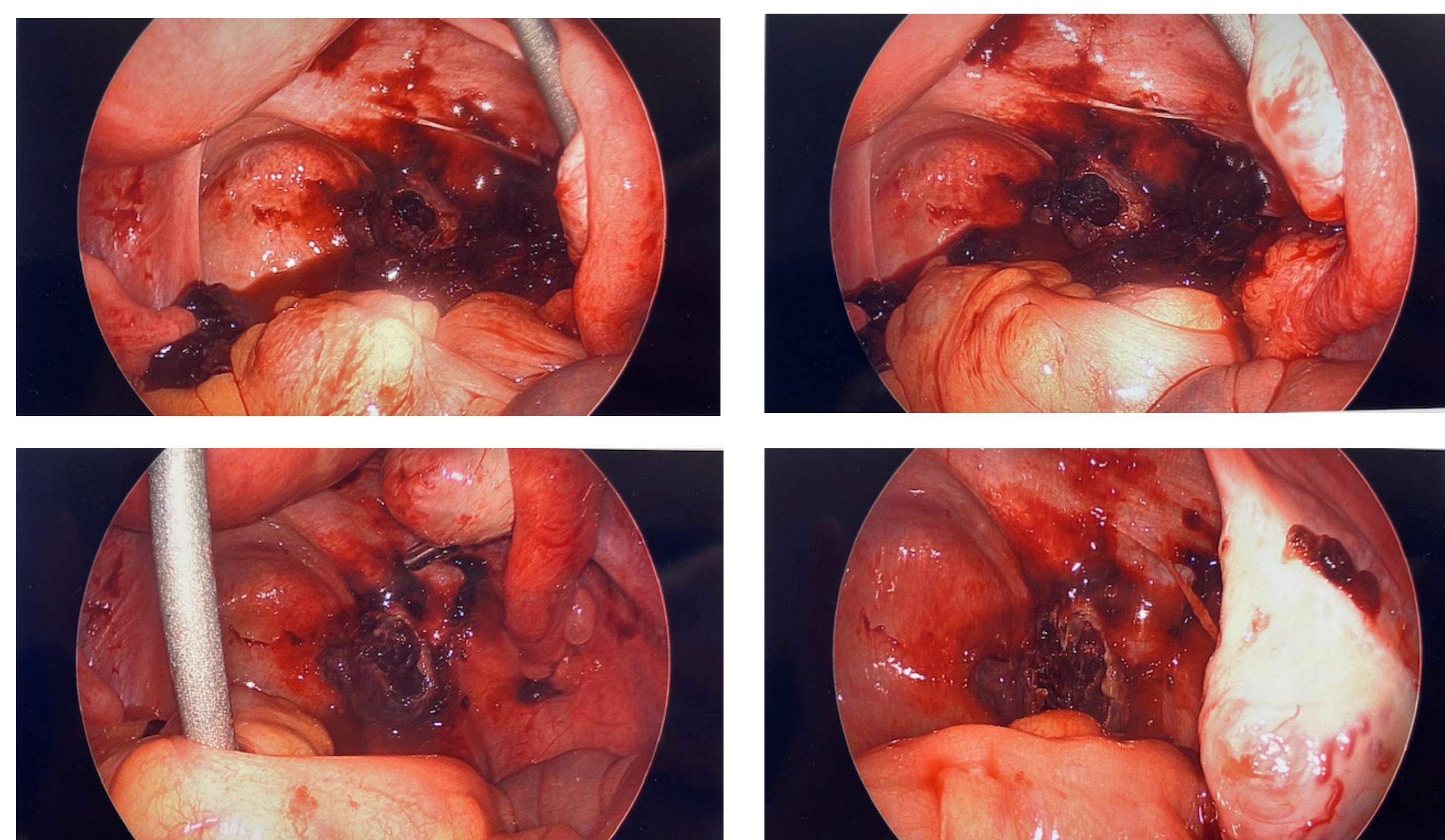


Figure 1. Images taken during diagnostic laparoscopy demonstrate an abdominal ectopic pregnancy adhered to the right uterosacral ligament and peritoneum.

## Conclusions

There has yet to be an established, therapeutic protocol for the management of ectopic abdominal pregnancy due to the complexity of such cases. The literature advocates for laparoscopic management when the diagnosis is made earlier than 12 weeks.<sup>10</sup> Although not preferred, medical management with methotrexate can be considered when the risk of hemorrhage is deemed too high for surgical intervention.<sup>10</sup> Historically, laparotomy was favored when concern for perioperative hemorrhage existed. However, advances in surgical technology have led some to argue that laparoscopy alone may be sufficient in select cases.<sup>10</sup> When complete excision cannot be achieved, existing literature supports the use of postoperative methotrexate with close surveillance. Current ACOG guidelines for ectopic pregnancy management (Level B) state that in women with an initial hCG level greater than 3,500, a two-dose regimen of methotrexate may be considered rather than a single-dose regimen.<sup>1</sup> Nevertheless, there remains no clear consensus regarding the optimal methotrexate regimen for medical management of ectopic pregnancy.<sup>1</sup>

## References

1. ACOG Practice Bulletin No. 193: Tubal ectopic pregnancy. (2018). *Obstetrics & Gynecology*, 131(3). <https://doi.org/10.1097/aog.0000000000002560>
2. Alur-Gupta, S., Cooney, L. G., Senapati, S., Sammel, M. D., & Barnhart, K. T. (2019). Two-dose versus single-dose methotrexate for treatment of ectopic pregnancy: A meta-analysis. *American Journal of Obstetrics and Gynecology*, 221(2). <https://doi.org/10.1016/j.ajog.2019.01.002>
3. Barel, O., Suda, R. R., Stanleigh, J., & Pansky, M. (2019a). Laparoscopic removal of an abdominal pregnancy in the pelvic sidewall. *Journal of Minimally Invasive Gynecology*, 26(6), 1007–1008. <https://doi.org/10.1016/j.jmig.2018.12.020>
4. Barnhart, K. (2003). The medical management of ectopic pregnancy: A meta-analysis comparing "single dose" and "multidose" regimens. *Obstetrics & Gynecology*, 101(4), 778–784. [https://doi.org/10.1016/s0029-7844\(02\)03158-7](https://doi.org/10.1016/s0029-7844(02)03158-7)
5. Barnhart, Kurt, Hummel, A. C., Sammel, M. D., Menon, S., Jain, J., & Chakhtoura, N. (2007). Use of "2-dose" regimen of methotrexate to treat ectopic pregnancy. *Fertility and Sterility*, 87(2), 250–256. <https://doi.org/10.1016/j.fertnstert.2006.06.054>
6. Bouyer, J. (2002). Sites of ectopic pregnancy: A 10 year population-based study of 1800 cases. *Human Reproduction*, 17(12), 3224–3230. <https://doi.org/10.1093/humrep/17.12.3224>
7. Compadre, A. J., Ukoha, E. P., & Zhang, W. (2021). Combined surgical and medical management of a broad ligament ectopic pregnancy: A case report. *Case Reports in Women's Health*, 31. <https://doi.org/10.1016/j.crwh.2021.e00316>
8. Cosentino, F., Rossitto, C., Turco, L. C., Gueli Alletti, S., Vascone, C., Di Meglio, L., Scambia, G., & Malzoni, M. (2017). Laparoscopic management of abdominal pregnancy. *Journal of Minimally Invasive Gynecology*, 24(5), 724–725. <https://doi.org/10.1016/j.jmig.2017.01.023>
9. Hajji, A., Toumi, D., Laakom, O., Cherif, O., & Faleh, R. (2020). Early primary abdominal pregnancy: Diagnosis and management. A case report. *International Journal of Surgery Case Reports*, 73, 303–306. <https://doi.org/10.1016/j.ijscr.2020.07.048>
10. Isah, A., Ahmed, Y., Nwobodo, E., & Ekele, B. (2008). Abdominal pregnancy with a full term live fetus: Case report. *Annals of African Medicine*, 7(4), 198. <https://doi.org/10.4103/1596-3519.55653>