

# Cesarean Scar Ectopic Pregnancy: A Case Report

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## Background

- Cesarean scar ectopic pregnancies account for less than < 1% of extrauterine pregnancies. Similar to patients with ectopic pregnancy in other locations, affected patients may present with vaginal bleeding and pelvic pain. However, a large number of affected women are asymptomatic, causing delays in diagnosis and treatment which often result in greater morbidity.
- Treatment should be tailored to the individual patient and factors such as clinical presentation, hemodynamic stability and desire for future fertility should be considered
- This case is about a 27-year-old G4P1021 with a previous history of ectopic pregnancy and one cesarean section who presented with her second ectopic pregnancy, this time in her cesarean scar.

## Objective

- To present multi-modality treatment for cesarean scar ectopic with successful outcome and preservation of fertility.

## Case Presentation

27 y/o G4P1021 with a history of prior cesarean section and ectopic pregnancy presented with a pregnancy of unknown location. Diagnostic imaging including TVUS and MRI confirmed a pregnancy located in the previous hysterotomy consistent with a cesarean scar ectopic pregnancy. Initial bHCG was 4,607 IU/L. Patient was hemodynamically stable and opted for medical management with MTX. Ultrasound-guided transabdominal local injection of MTX was unsuccessful and was followed by intramuscular administration. The following day the bHCG was 8,339 IU/L.

In the outpatient setting, bHCG continued to increase. Patient received a total of 2 doses of intramuscular MTX. On day #7 after initial MTX administration, we discussed the potential failure of medical management. Given the high risk of rupture and bleeding, patient opted for surgical management. Repeat bHCG on the second admission was 14,545 IU/L.

Patient was consented for hysteroscopy, exploratory laparotomy, uterine cesarean section scar excision and possible hysterectomy. During the hysteroscopy, the endometrial cavity was found to be normal but visualization of the area where the scar was located was not optimal. During the laparotomy, no gestational sac was visualized bulging through the external wall of the uterus. A wedge was taken through the area containing the previous scar and it was removed in toto with all its contents. Post op course was uneventful.

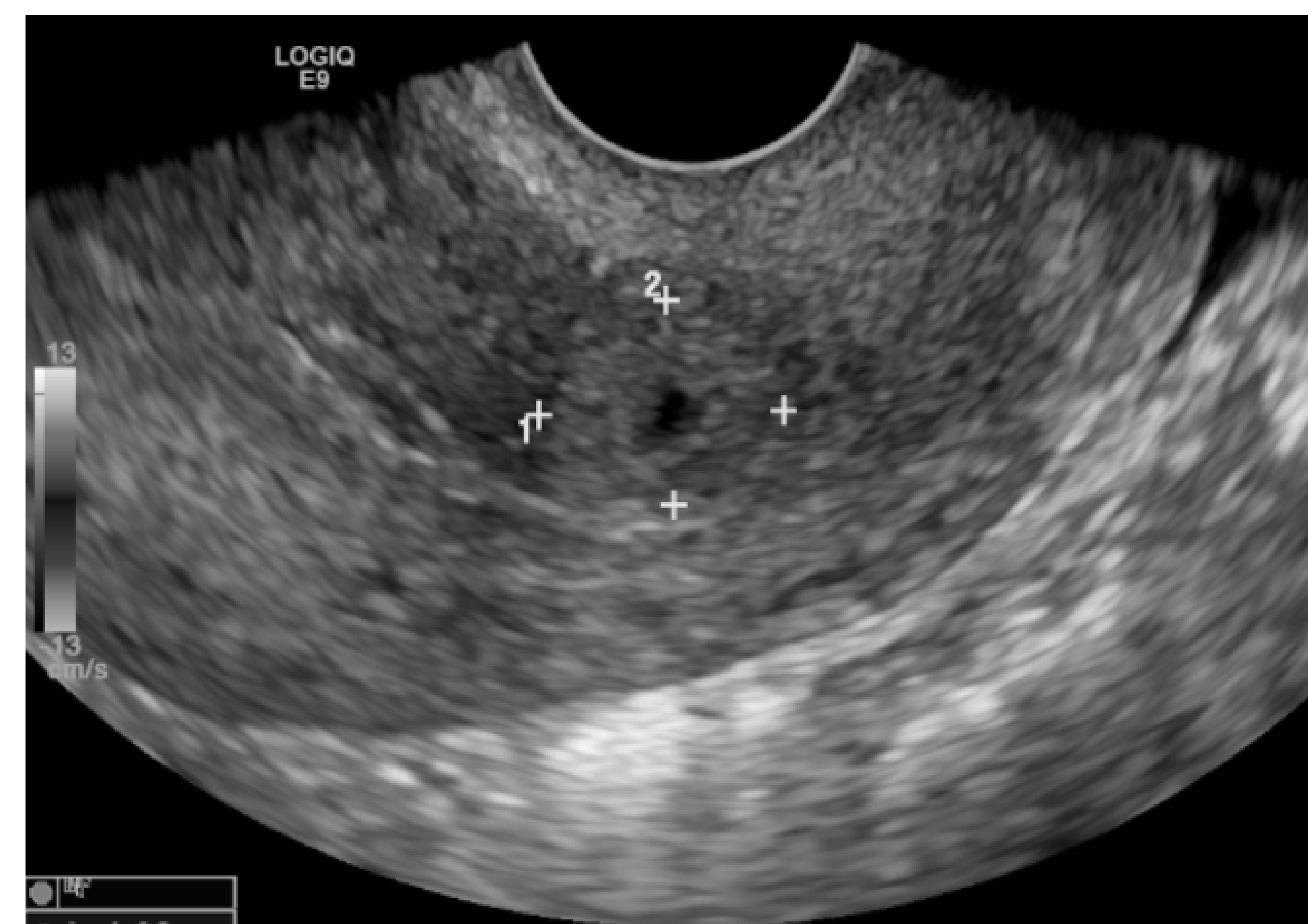
## Discussion

Similar to patients with ectopic pregnancies in other locations, TVUS is essential for diagnosis. Diagnostic criteria include: an empty uterine cavity and empty endocervical canal, placenta or gestational sac embedded in the hysterotomy scar niche, a thin myometrial mantle between the gestational sac and bladder, and a prominent vascular pattern at the scar. Currently, the standard of care for CSP is termination, although there have been reported cases of expectant management ending with live births. As with many diagnoses, treatment selection depends on the patient's hemodynamic status, preference for treatment and desire for future fertility. Contraindications to MTX therapy should also be considered.

Medical management is an option for patients who are hemodynamically stable and decline surgery. Treatment regimens include image-guided local injection of MTX with or without potassium chloride, systemic MTX, or a combination of both. Although there are no clear guidelines established for this procedure in terms of approach and anesthesia, we opted for local anesthesia followed by transabdominal approach. One of the limitations we encountered was the inability reach the CSP through the abdomen and not being able to use transvaginal approach due to patient discomfort. Using general anesthesia or sedation can be options we can incorporate in the future.

Some approaches for treating CSP include resection through transvaginal approach, laparoscopy, UAE in combination with D&C and hysteroscopy. Laparoscopic and open wedge resection provides the opportunity to repair the lower uterine segment and theoretically reduce the risk for recurrence.

UAE: Uterine Artery Embolization  
CSP: Cesarean Scar Pregnancy  
D&C: Dilation and Curettage  
MTX: Methotrexate  
TVUS: Transvaginal ultrasound  
bHCG: Human Chorionic Gonadotropin



## Conclusion

- The incidence of CSP has increased due to increase in number of cesarean deliveries. Prompt diagnosis, management and patient follow-up are essential to avoid uterine rupture, massive hemorrhage and death. The management of CSP often requires multi-modality treatment for successful outcome.

## References

1. Hoffman, B., Schorge, J., Bradshaw, K., Halvorson, L., Schaffer, J., & Corton, M. (2020). Chapter 7: Ectopic Pregnancy. Williams Gynecology, 4<sup>th</sup> Ed, 161-178. McGraw-Hill Education / Medical.
2. I, T., & P. Mirable, C. (2020). Expectant Management of Cesarean Scar Ectopic Pregnancy: A Case Report. Gynecology & Obstetrics Case Report, 06(01). <https://doi.org/10.36648/2471-8165.6.1.84>
3. Glenn, T. L., Bemby, J., Findley, A. D., Yaklic, J. L., Bhagavath, B., Gagneux, P., & Lindheim, S. R. (2018). Cesarean Scar Ectopic Pregnancy: Current Management Strategies. Obstetrical & Gynecological Survey, 73(5), 293–302. <https://doi.org/10.1097/ogx.0000000000000561>
4. Birch Petersen, K., Hoffmann, E., Ribbjerg Larsen, C., & Nielsen, H. S. (2016). Cesarean scar pregnancy: a systematic review of treatment studies. Fertility and Sterility, 105(4), 958–967. <https://doi.org/10.1016/j.fertnstert.2015.12.130>
5. Deepika, Gupta, T., & Wahi, S. (2017). A Rare Case Report of Caesarean Scar Ectopic Pregnancy. JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH, 11(8), QD10–QD11. <https://doi.org/10.7860/jcdr/2017/24611.10523>

