

A Dangerous Implantation

Cesarean Scar Ectopic Pregnancy and the Role of Definitive Surgery

Kari Anna Byrnes, MD • Eleanor Johnston, MD • Kristen Powell, MD • Shawna Tonick, MD
Department of Obstetrics and Gynecology, Intermountain Health Saint Joseph Hospital, Denver, Colorado

Introduction

Cesarean scar ectopic pregnancy (CSEP) is a rare but increasingly encountered complication of cesarean sections, driven by increasing global cesarean rates and improved detection methods. The incidence of CSEP is estimated to be 1 in 2,000 pregnancies with a mean gestational age at time of diagnosis of 7.5 ± 2.5 weeks.¹ CSEP carries risk of life-threatening hemorrhage, placenta accreta spectrum, and uterine rupture. Management strategies vary from medical management to fertility-sparing surgical options, but optimal treatment remains unknown.² We present a complex CSEP case highlighting the importance of multidisciplinary planning and an important role for definitive surgical management.

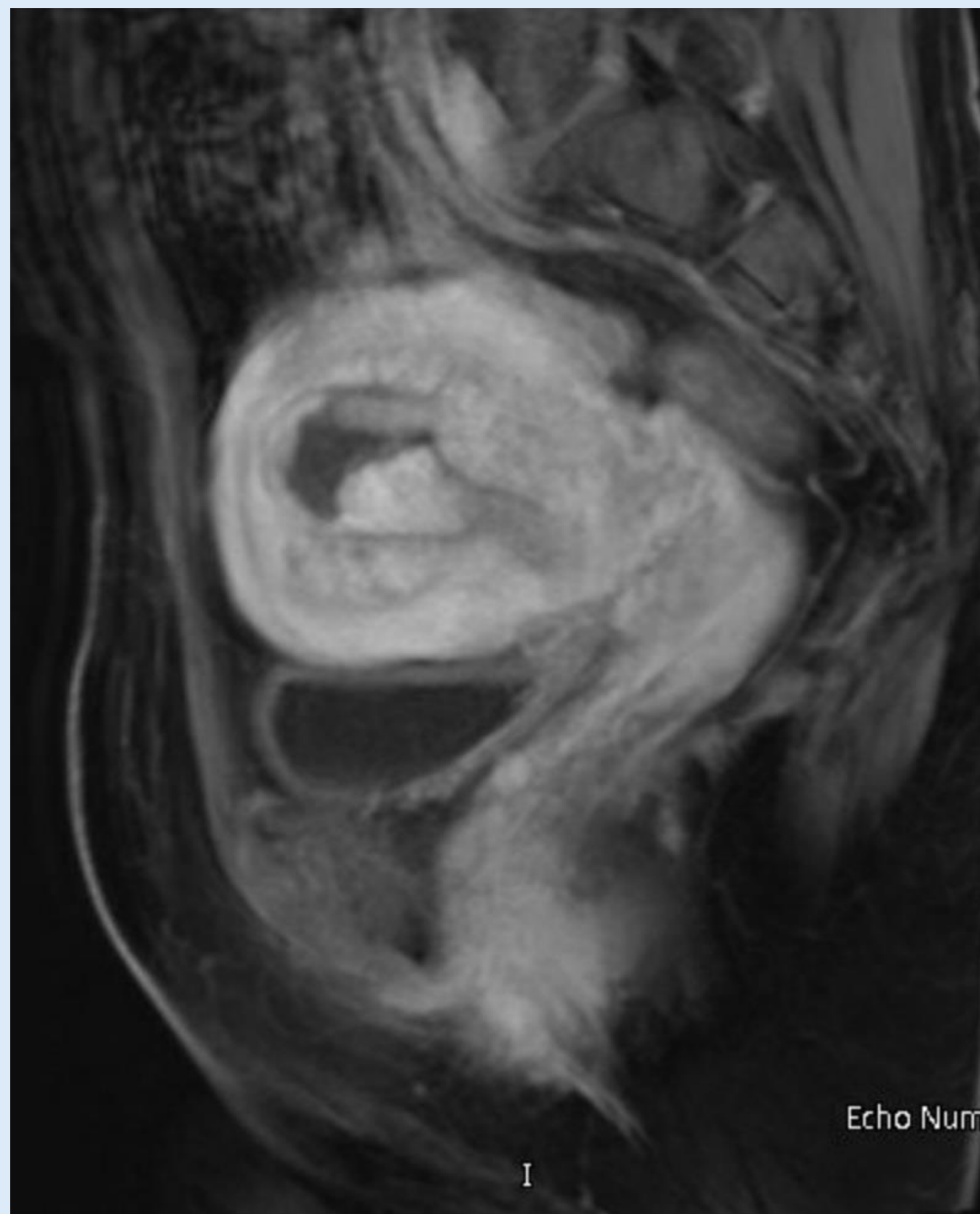


Fig 1. Preoperative MRI of ectopic pregnancy with placental tissue extending into the myometrium and disruption of the uterine serosal contour

Case

43-year-old G6P3033 with a history of one cesarean section and two dilation and curettage procedures presented for an initial prenatal visit at 9 weeks, where bedside ultrasound was initially suspicious for a failing intrauterine pregnancy. Formal ultrasound demonstrated an anterior myometrial defect at the cesarean scar with endometrial contents protruding through the defect. Subsequent MRI revealed lobular soft tissue extending into the cesarean-scar site that was concerning for placenta accreta spectrum, cesarean scar ectopic pregnancy, and/or uterine dehiscence with retained products of conception.

At gestational age of approximately 10 weeks, the patient was transferred to our hospital for evaluation and management by a multidisciplinary surgical team (Generalist OB/GYN, Maternal Fetal Medicine, Gynecologic Oncology, Interventional Radiology [IR], Urology). This team together proposed a treatment plan involving uterine artery embolization by IR, systemic methotrexate administration. Given the proximity of the lesion to the bladder and the patient's lack of desire for future fertility, the decision was made to proceed with total abdominal hysterectomy (TAH) after bilateral ureteral stent placement by Urology.

This plan was successfully implemented and TAH was performed without complication without Gynecologic Oncology. Findings: 12-week sized uterus with 3 cm cystic pregnancy tissue extruding from midline of the c-section scar site. Pathology confirmed chorionic villi in the myometrium consistent with placenta percreta. After two days postoperatively and five days in the hospital total, the patient was discharged home in stable condition.

Discussion

Although optimal guidelines for CSEP management remain uncertain, this case demonstrates the need to deviate from typical management because of the advanced gestational age and preoperative MRI findings concerning for bladder involvement. Generally, medical management can be pursued with intra-gestational sac methotrexate administration with or without systemic methotrexate. Surgical management includes operative resection via transvaginal or laparoscopic approaches, ultrasound guided uterine aspiration, or, less commonly, hysterectomy.² This case is unique in its use of definitive open surgical management, with uterine artery embolization performed by IR, ureteral stents placed by Urology, and hysterectomy with systemic methotrexate administration by OB/GYN.



Fig 2. Uterus and cervix status post hysterectomy for definitive removal of ectopic pregnancy

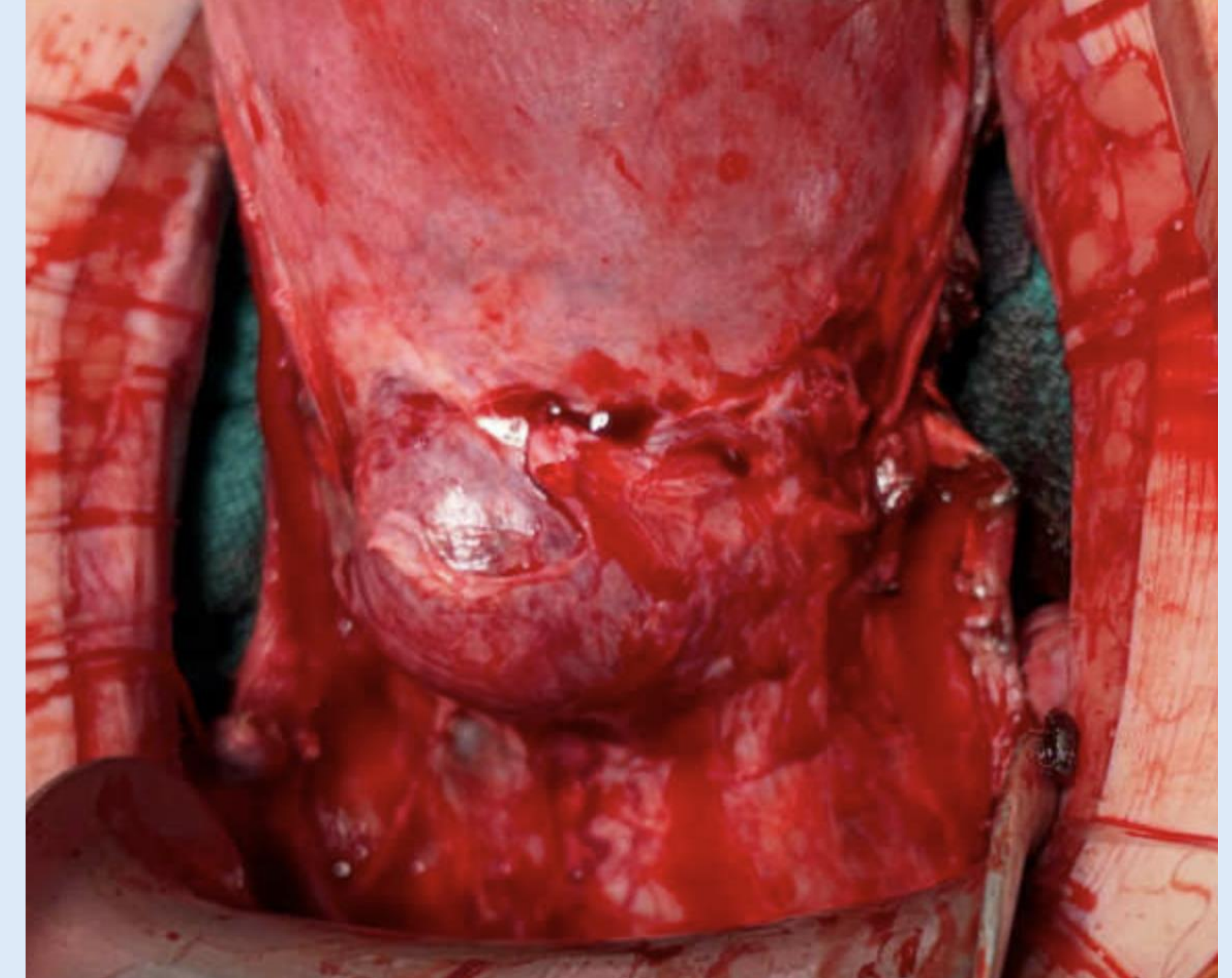


Fig 3. Intraoperative photo of cesarean section ectopic pregnancy

Conclusion

Cesarean scar ectopic pregnancy remains a rare and potentially life-threatening condition. This case highlights the value of a multidisciplinary approach and demonstrates that hysterectomy may serve as a safe and effective treatment strategy when patient and clinical circumstances favor definitive management and the patient does not desire fertility preservation.

References

1. Rotas MA, Haberman S, Levigur M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. *Obstet Gynecol.* 2006;107(6):1373-1381. doi:10.1097/01.AOG.0000218690.24494.ce
2. Miller R, Gyamfi-Bannerman C. Society for Maternal-Fetal Medicine Consult Series #63: Cesarean scar ectopic pregnancy. *American Journal of Obstetrics and Gynecology* 2022;227(3):B9-B20. doi:10.1016/j.ajog.2022.06.024