

Four Cesarean Scar Pregnancies Managed Expectantly at Accreta Center of Excellence at Medical City Dallas Hospital: A Case Series



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Background

Cesarean Scar Ectopic Pregnancy (CSEP) arises from the abnormal implantation of a gestational sac within the scar tissue of a previous cesarean section. This rare condition is becoming more prevalent, likely due to the rising rates of Cesarean deliveries.¹ The Society of Maternal Fetal Medicine (SMFM) strongly advises against expectant management of CSEP (Grade 1B), due to limited evidence and the potential for severe maternal complications such as life-threatening hemorrhage and the need for hysterectomy.¹ Consequently, there is limited data available regarding the outcomes of expectant management. This case series investigates the experiences of four patients diagnosed with CSEP who either declined termination or faced barriers in accessing abortion services during the first trimester. These patients were subsequently managed expectantly at the Accreta Center of Excellence within Medical City Dallas Hospital.

Objective

To analyze the results of expectant management in four patients with CSEP, aiming to provide new insights into the limited understanding and data surrounding this approach.

Methods

Four patients diagnosed with CSEP were referred to Accreta Specialists by MFM and underwent management following the outlined plan for antepartum, delivery, and postpartum care:

Antepartum

- Admission 32 weeks or sooner as indicated
- MFM consultation
 - Antenatal corticosteroids for fetal lung maturity
- Frequent fetal monitoring

Delivery

- 34 weeks or sooner as indicated
- Urology, IR placed Aortic Balloon catheter, cell saver, MTP available
- Modified radical hysterectomy

Postpartum

- Critical care consultation as appropriate

Expectant management involved routine prenatal care with a primary OBGYN and outpatient follow-up with MFM until reaching 32 weeks gestation, or sooner if indicated. Once patients reached this milestone, they were admitted to the antepartum unit until their scheduled delivery at 34 weeks, unless earlier delivery was medically indicated. During their inpatient stay, antenatal corticosteroids were administered for fetal lung maturity, and close fetal monitoring was performed. Delivery was carried out according to protocol, involving consultations with Urology for ureteral stent placement and intra-operative consultation as required. Interventional Radiology was consulted for the placement of a REBOA Aortic balloon catheter, delivery was performed via classical incision, and a cesarean hysterectomy was conducted via a modified radical hysterectomy approach. Following the procedure, critical care consultation was available as deemed necessary.

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Cases

- Case #1:** A multiparous patient with a history of three prior cesarean deliveries (G7P303) experienced a pregnancy complicated by a shortened cervix. Delivery occurred at 33 weeks and 5 days due to non-reassuring fetal heart tones. The EBL was 2672 ml, requiring administration of 3 units of PRBC and 4 units of FFP. Complications included cystorrhaphy with placement of a Foley catheter for two weeks, along with admission to the ICU for prolonged intubation following an allergic reaction.
- Case #2:** A multiparous patient with a history of two prior cesarean deliveries (G3P2002) desired pregnancy termination but faced challenges in accessing abortion services. Consequently, the patient underwent a scheduled delivery at 34 weeks and 1 day. The EBL was 3009 ml, requiring transfusion of 2 units of PRBC.
- Case #3:** A multiparous patient with a history of six prior cesarean deliveries (G7P6006) experienced a pregnancy complicated by Di-Di Twin gestation and anemia. The patient underwent a scheduled delivery at 34 weeks and 1 day. The EBL was 1885 ml and patient was transfused with 2 units of PRBC and 1 unit of FFP.
- Case #4:** A multiparous patient with a history of four prior cesarean deliveries (G6P4014) experienced a pregnancy complicated by pre-eclampsia with severe features. Due to worsening pre-eclampsia and abnormal umbilical artery dopplers, the patient underwent delivery at 28 weeks and 1 day. The EBL was 455 ml, and no blood products were administered.

Results

- All four patients required cesarean hysterectomy.
- Three out of four patients had post-partum hemorrhage (EBL >1000), but none required Massive Transfusion protocol, and PRBC transfusion was less than average of 6 for PAS.²
- All four patients delivered viable infants in the 3rd trimester.
- One patient experienced complications including cystorrhaphy due to disease affecting the bladder, admission to the ICU and prolonged intubation due to an allergic reaction.

	EGA at Delivery	EBL	Other Complications
Case #1	33w5d	2672 ml	Cystorrhaphy, ICU admission for allergic reaction
Case #2	34w1d	3009 ml	None
Case #3	34w1d	1885 ml	None
Case #4	28w1d	455 ml	None
Average	32w4d	2005 ml	

Discussion

The recommendation to terminate CSEP is primarily based on limited evidence from a few case series and theoretical risks. In this study, all four patients successfully delivered viable neonates without encountering uterine rupture, life-threatening hemorrhage, or maternal or neonatal death. However, it is noteworthy that all patients necessitated cesarean hysterectomy during delivery, which notably contributes to maternal morbidity. Additionally, three out of the four patients experienced postpartum hemorrhage, yet none required a massive transfusion protocol. The average estimated blood loss across all four cases was 2005 ml. This highlights the significant but manageable bleeding associated with CSEP deliveries.

Of particular interest is Case #4, which was further complicated by pre-eclampsia with severe features at an early gestational age. This raises questions about a potential correlation between CSEP and pre-eclampsia. However, drawing definitive conclusions requires further data and studies to explore this association and better understand its implications.

Conclusion

This study provides valuable insights into the outcomes of expectant management of CSEP. Despite the limited evidence guiding recommendations for termination, our findings demonstrate that successful deliveries of viable neonates can be achieved without encountering catastrophic complications such as uterine rupture or maternal or neonatal death. However, the necessity for cesarean hysterectomy in all cases emphasizes the significant contribution of CSEP to maternal morbidity. Additionally, the prevalence of postpartum hemorrhage in three out of four cases highlights the importance of close monitoring and preparation for potential complications during CSEP deliveries. Furthermore, Case #4's pregnancy complicated by pre-eclampsia with severe features prompts further investigation into the potential correlation between CSEP and hypertensive disorders of pregnancy. Overall, this study reinforces the need for continued research to enhance our understanding of CSEP and optimize management strategies to improve maternal and neonatal outcomes.

References

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