Biomedical and Biopharmaceutical Research
Abbreviation: Biomed. Biopharm. Res.
Volume: 22: Issue: 01 |Year: 2025
Page Number: 176-180

A rare presentation of caesarean scar ectopic pregnancy as retained product of conception: A case report

Dr.Shrikrishna Deore[1] , Dr.Sushil Sikchi[2]

[1]Junior Resident III, Dept. of radiology, Dr. PDMMC, Amrawati)
[2]Professor, Dept. of radiology, Dr. PDMMC, Amrawati)

Corresponding Author

Dr. Shrikrishna Deore
Junior Resident III, Dept. of radiology, Dr. PDMMC, Amrawati)

Article Received:28-01-2025

Article Accepted:21-03-2025

Abstract

Caesarean scar ectopic pregnancy (CSEP) is a rare but life-threatening complication. It is an abnormal implantation of the gestational sac into the myometrium and a fibrous scar after a previous caesarean section. The incidence of such cases is on the rise due to the increase in caesarean sections worldwide. A 24-year-old G2P1L1 (previous lscs 2 years back)presented with complaints of vaginal bleeding and lower abdominal pain. She was diagnosed as a case of CSEP with retained products of conception by ultrasonography and confirmation of the diagnosis was done by histopathological examination. An exploratory laparotomy was performed and the patient was successfully managed. Treatment must be individualized depending on the patient's hemodynamic profile, size, extent, depth, and vascularity, caesarean pregnancy, future fertility wishes, and compliance for follow-up.

Keywords: Caesarean Scar Ectopic Pregnancy,Retained Products of Conception,Ultrasound Diagnosis Transvaginal Sonography, Surgical Management, Hemorrhage Control, Fertility Preservation, Placenta Accreta Spectrum

INTRODUCTION

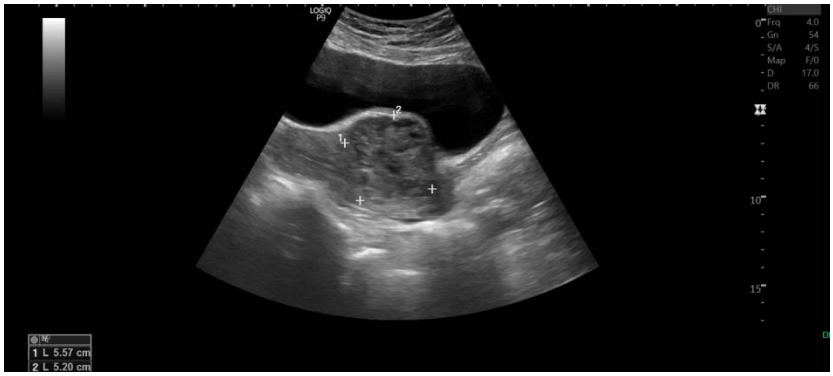
A Caesarean scar ectopic pregnancy (CSEP) is defined as the implantation of a gestational sac into the myometrium of a previous caesarean scar. Its incidence is approximately 1 in 2,000 cases with an increased number of caesarean sections.1-3 Generally, symptomatic patients present early with vaginal bleeding and pain in the lower abdomen. In pregnancy with a caesarean scar, implantation is found in two patterns, namely exogenous and endogenous. 1 Of these two types, exogenous CSEP undergo hysterectomy mostly with the spectrum of placenta accreta at delivery.1 We reported a case of retained products of conception at the site of a caesarean section scar, which was successfully treated by surgical method with special attention to preserve patient's fertility.

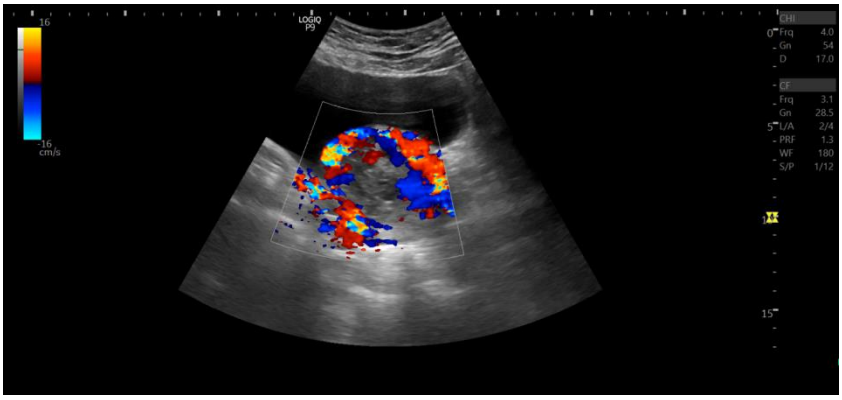
CASE REPORT

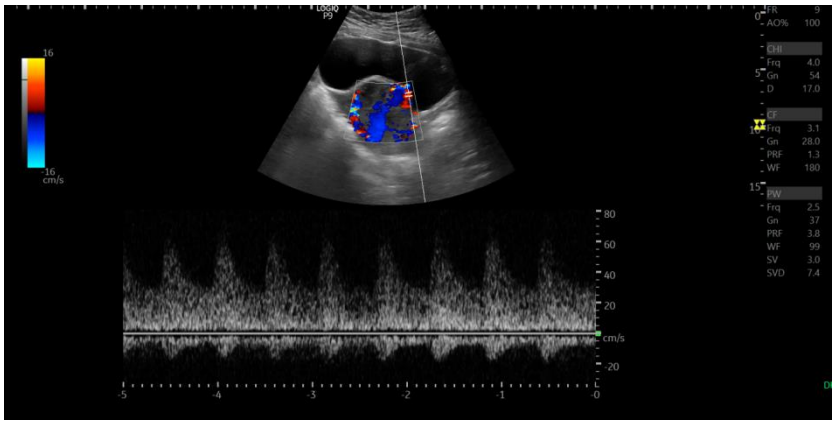
A 24-year-old G2P1L1 (previous lscs 2 years back) presented to the OBGYN emergency department with complaints of bleeding per vaginum and lower abdominal pain for the past four months. She had history of spontaneous abortion followed by suction and evacuation. During general examination, the patient was hemodynamically stable. On abdominal examination, abdomen was soft but tender on palpation. On per speculum examination cervical os was closed and no active bleeding was observed. On per vaginal examination, uterus was normal in size, retroverted, cervical os was closed, and the bilateral fornices were free. There was no cervical motion tenderness.

USG Findings

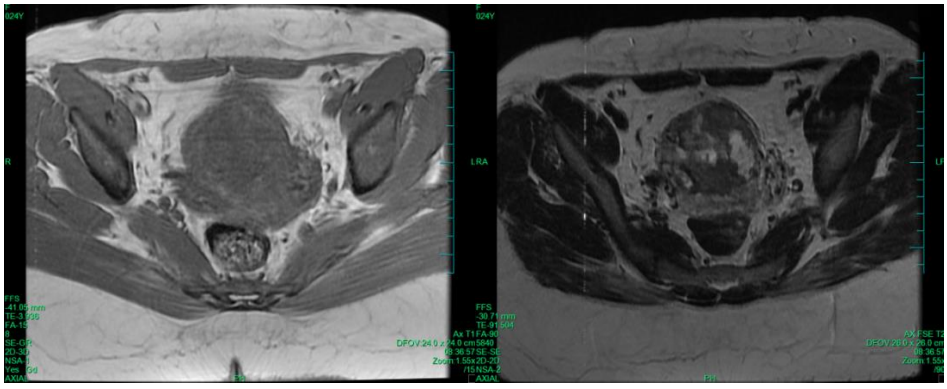
Transvaginal ultrasound scan revealed a large heterogenous area which was vascular on Doppler study and fixed at the anterior wall of lower uterine segment and cervix and retro-vesicular fold at the previous scar site measuring 5.5 × 5.2 cm suggestive of retained products of conception due to incomplete evacuation of caesarean scar ectopic pregnancy by suction and evacuation procedure.

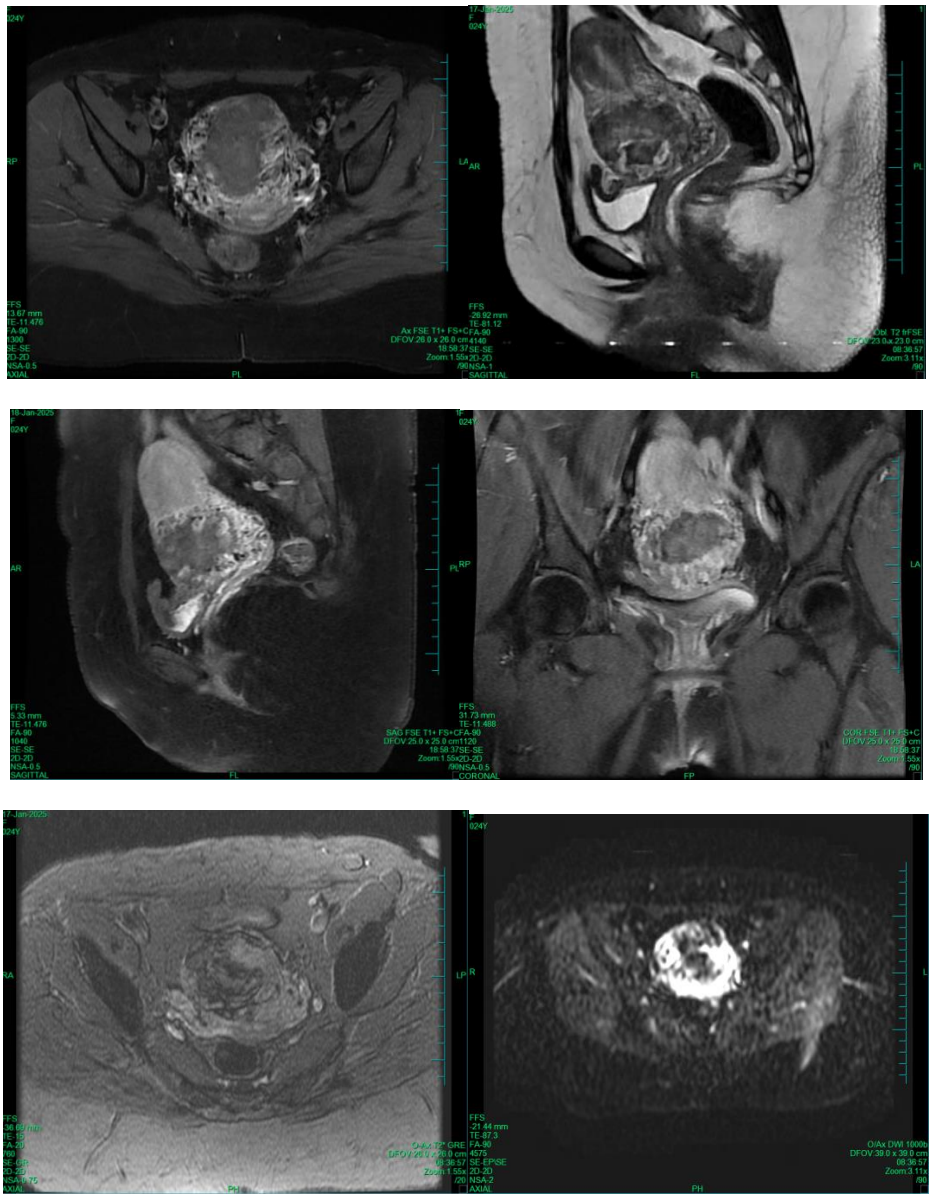






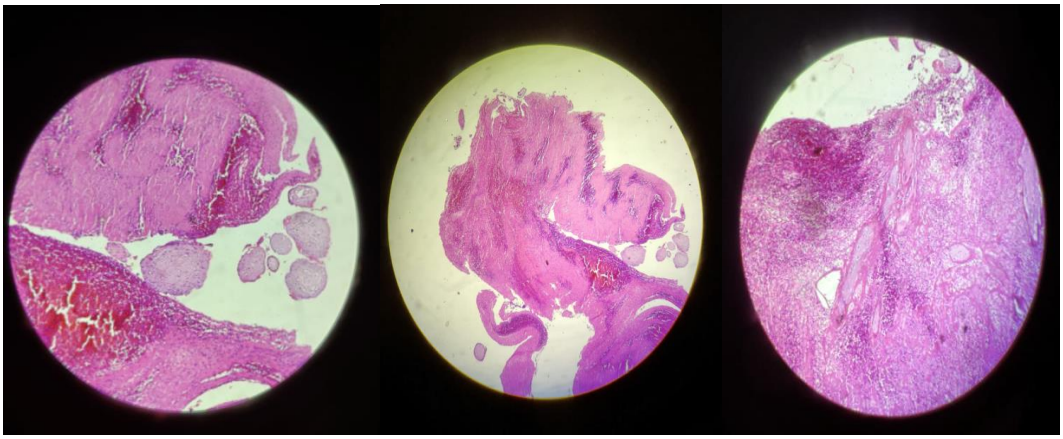
MRI Findings:A multilobulated lesion measuring 6.1 x 5.0 x 5.9 cm is seen in the lower uterine segment, extending into the anterior cervix. It shows T1 isointense and T2 hyperintense signals with areas of blooming on GRE, but no contrast enhancement. The lesion involves the anterior myometrium, causing distortion of the lower uterine segment, internal os, and upper anterior cervix. The endocervical canal remains intact, and the serosal lining is preserved. The upper uterine segment, fundus, and upper endometrial cavity appear normal.





Investigations and histopathological report Her hemoglobin was 9.45 gms%, beta HCG findings is given below. On histopathogical report: Multiple section studies shows predominantly blood clots mixed with degenerated products of conception

TIME	BETA HCG
DAY 5 OF S AND E	14000
DAY 8 OF S AND E	8000
DAY 15 OF S AND E	1000
DAY 22 OF S AND E	300



Intraoperative findings: During surgery, the uterus was held with Shirodkar's uterine holding forceps, and a large hematoma (7 cm x 8 cm) was found over the isthmic and upper cervical region, covered by thin peritoneum and serosa. The bladder was densely adherent to the uterus, and while separating it, a uterine rent developed and extended. Friable retained products of conception (RPOCs) were removed, and profuse bleeding was controlled by internal iliac artery ligation. Three units of packed cells were transfused intraoperatively, and the uterus was sutured using chromic catgut no. 1 in a continuous interlocking manner. An abdominal drain (ADK drain) was placed intraperitoneally.

DISCUSSION

Cesarean scar ectopic pregnancies are rare, comprising less than 1% of all pregnancies.[1] In recent years, the incidence has increased due to the growing frequency of cesarean sections. The Centers for Disease Control and Prevention (CDC) reported a cesarean section rate of 20.7% in 1996, which grew to 32% in 2017 in the United States. This increase in rate of CSEP detection may also be due to improvements in image quality of transvaginal ultrasound as well as the increasing use of transvaginal POCUS. This uncommon condition was first described by Larsen and Solomon in 1978, with only 19 additional cases documented until 2001.7,[5] It now accounts for nearly 5% of all ectopic pregnancies in women with prior cesarean deliveries.[6]

Ultrasound is the initial imaging test of choice for diagnosis of CSEP with a sensitivity of 86.4%.8 When evaluating a first trimester pregnancy by transvaginal ultrasound, there are multiple criteria used to diagnose CSEP.
Ultrasound criteria for diagnosis of cesarean scar ectopic pregnancy.[4]

1. Empty uterus with clearly visualized edometrium
2. Empty cervical canal
3. Gestational sac implanted in the lower anterior uterine segment at the presumed site of cesarean section incision scar
4. Thin or absent myometrium between the gestational sac and the bladder. (Majority of cases have a myometrium thickness < 5 millimeters)

A CSEP is diagnosed when the uterine cavity and cervical canal are empty and the gestational sac is in the anterior portion of the uterine isthmus.[5] The thickness of the myometrium at the site of implantation is thin; this can be measured at the site between the gestational sac and the bladder, and is abnormal when less than eight millimeters.[3,7] Approximately two-thirds of cases of CSEP have a myometrial thickness less than five millimeters.[4] This abnormal implantation occurs when the blastocyst implants into the scar tissue from a prior cesarean incision; it invades into the remaining tract from the prior uterine wall disruption.[8] Women who have had multiple cesarean deliveries carry a higher risk of abnormal implantation into the fibrotic scar tissue.[6]
There are two types of CSEP, differentiated by the depth of invasion. The first type is implanted deeply into the scar defect, up to the serosal lining and possibly into the bladder or abdominal cavity. This type is very dangerous; it has a high risk of uterine rupture and hemorrhage.[9] The second type implants in the scar but grows away from the serosal lining and toward the uterine cavity.[1]
When evaluating a pregnant patient with vaginal bleeding or abdominal pain, it is important to consider ectopic pregnancy, abnormally invasive placenta and spontaneous abortion.[2] Taking a thorough history including outcomes of all prior pregnancies is crucial. When considering CSEP, cervical ectopic pregnancy and abortion in progress should also be included in the differential. A cervical ectopic pregnancy will have the gestational sac implanted in the cervix, with the sac located in the endocervical canal rather than embedded in the anterior lower uterine segment. This may look similar to a CSEP, but the anterior myometrium will be of normal thickness. When examining an abortion in progress, the

cervical os may be open, the anterior myometrium will also be of normal thickness, and the fetus may be seen within the cervical canal without fetal cardiac activity. The cervical os is closed in a CSEP, so the pelvic exam is useful to help further differentiate these diagnoses.[6, 10]

Currently there are several acceptable methods of treatment for CSEP. A retrospective chart review conducted by Riaz, et al. of 20 women with CSEPs found that these patients were treated with a combination of intramuscular methotrexate, local embryocidal methotrexate injection, or surgery.[10] Five of the 15 patients who received methotrexate had successful abortions, although three of those patients required additional doses. Although single-dose therapy has been found to be effective in some cases, it is likely that patients will require additional doses or more invasive treatments for successful termination of the ectopic pregnancy. There is no widely accepted consensus on the matter; practice patterns vary based on patient, provider, and facility in which the treatment takes place. The goals of therapy are the same, however, which are to prevent dangerous blood loss or uterine rupture while preserving the woman's fertility for future conceptions.[10] When methotrexate fails or is not an option, the next-line therapy is laparoscopic resection.[11]

CONCLUSION

It is important to diagnose the caesarean scar ectopic pregnancy at initial stages of pregnancy as the management changes compared to normal intrauterine pregnancy. In this case, the diagnosis was missed in early pregnancy and so the management.It was the follow up usg of the patient and review of previous films the diagnosis of caesarean scar ectopic pregnancy and subsequent diagnosis of retained product of conception was done, which was established on post-operative and histopathologicalfindings.So, it is important to diagnose the location of intrauterine pregnancy in early pregnancy scans, thus helping in better and specific management of caesarean scar ectopic pregnancy.

REFERENCES

1. Abbas A, Ali S, Nagy M, et al. Accidental diagnosis and conservative management of a case of first-trimester cesarean scar ectopic pregnancy. Int J ReprodContraceptObstet Gynecol. 2018;7(4):1628–30. [Google Scholar]
2. Maheux-Lacroix S, Li F, Bujold E, et al. Cesarean scar pregnancies: a systematic review of treatment options. J Minim Invasive Gynecol. 2017;24(6):915–25. doi: 10.1016/j.jmig.2017.05.019. [DOI] [PubMed] [Google Scholar]
3. Birch Petersen K, Hoffmann E, Rifbjerg Larsen C, et al. Cesarean scar pregnancy: a systematic review of treatment studies. FertilSteril. 2016;105(4):958–67. doi: 10.1016/j.fertnstert.2015.12.130. [DOI] [PubMed] [Google Scholar]
4. Osborn DA, Williams TR, Craig BM. Cesarean scar pregnancy: sonograpahic and magnetic resonance imaging findings, complications, and treatment. J Ultrasound Med. 2012;31(9):1449–56. doi: 10.7863/jum.2012.31.9.1449. [DOI] [PubMed] [Google Scholar]
5. Ash A, Smith A, Maxwell D. Ceasean scar pregnancy. BJOG. 2007;114(3):253–63. doi: 10.1111/j.1471-0528.2006.01237.x. [DOI] [PubMed] [Google Scholar]
6. El-badawyAwad ES, Samy El-agwany A, Mahmoud El-habashyA, et al. Lower uterine segment pregnancy (Cesarean scar pregnancy and early placenta accreta): a rising complication from cesarean section with possible and similar early ultrasound diagnoses and management. Egypt J RadiolNuc Med. 2015;46(4):977–80. [Google Scholar]
7. Timor-Tritsch IE, Monteagudo A, Cali G, et al. Easy sonographic differential diagnosis between intrauterine pregnancy and cesarean delivery scar pregnancy in the early first trimester. Am J of Obstet and Gyneol. 2016;215(2):225.e1–7. doi: 10.1016/j.ajog.2016.02.028. [DOI] [PubMed] [Google Scholar]
8. Aich R, Solanki N, Kekadiya K, et al. Ectopic pregnancy in caesarean section scar: a case report. Radiol Case Rep. 2015;10(4):68–71. doi: 10.1016/j.radcr.2015.08.001. [DOI] [PMC free article] [PubMed] [Google Scholar]
9. Godin PA, Bassil S, Donnez J. An ectopic pregnancy developing in a previous caesarian section scar. FertilSteril. 1997;67(2):398–400. doi: 10.1016/S0015-0282(97)81930-9. [DOI] [PubMed] [Google Scholar]
10. Riaz RM, Williams TR, Craig BM, et al. Cesarean scar ectopic pregnancy: imaging features, current treatment options, and clinical outcomes. Abdom Imaging. 2015;40(7):2589–99. doi: 10.1007/s00261-015-0472-2. [DOI] [PubMed] [Google Scholar]
11. Ades A, Parghi S. Laparoscopic resection of cesarean scar ectopic pregnancy. J Minim Invasive Gynecol. 2017;24(4):533–5. doi: 10.1016/j.jmig.2016.11.006. [DOI] [PubMed] [Google Scholar]