INNOVARE JOURNAL OF MEDICAL SCIENCES

Vol 13, Issue 3, 2025

Online - 2321-4406
Print - 2614-5006

Case Study

A CASE STUDY ON A RARE SCENARIO OF CESAREAN SCAR ECTOPIC PREGNANCY

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Received: 18 February 2025, Revised and Accepted: 21 March 2025

ABSTRACT

Cesarean scar Ectopic pregnancy (CSEP) is a potentially life-threatening pregnancy of which incidence has increased in the past decades due to an increase in cesarean deliveries. CSEPs are an underdiagnosed condition and can be a life-threatening condition which may lead to hemorrhage or uterine rupture. In the present study, a 30-year-old pregnant female presented herself with the complaint of pain and bleeding with a history of two lower segment cesarean sections (LSCS). Upon investigation, a decision for immediate laparotomy was made to remove the ectopic pregnancy and to avoid further complications. Pre-operative embolization of the uterine arteries was done to prevent excessive bleeding. Early diagnosis along with prompt intervention, is very important for proper care. Using sonography combined with Doppler flow imaging followed by magnetic resonance imaging can be helpful for a proper prognosis. Thus, a multidisciplinary approach involving obstetrics, gynecology, and radiology can help in the management of such rare and complex cases.

Keywords: Cesarean scar ectopic pregnancy, Cesarean deliveries, Radiodiagnosis, Obstetrics and gynecology.

 DOI: http://dx.doi.org/10.22159/ijms.2025v13i3.53994. Journal homepage: https://innovareacademics.in/journals/index.php/ijms

INTRODUCTION

A cesarean scar ectopic pregnancy (CSEP) is a very rare event and is defined as a pregnancy in which implantation has occurred on a scar that was developed due to a previous C-section. They are a very rare form of extrauterine pregnancy which can result in life-threatening conditions leading to maternal hemorrhage or even mortality. The frequency of such events has increased in the last couple of decades because of the increase in number of cesarean deliveries worldwide [1]. The presentation of such cases may vary in different patients, and some cases might also present themselves as asymptomatic. Early detection in CSEP can be very difficult [2]. Hallad and Vatavati 2021 [3] have reported that over 4 million cesarean deliveries took place in the year 2020–21 in India. Other than the increased cesarean deliveries other reasons for increased incidences can be conferred to improved imaging with ultrasound and magnetic resonance imaging (MRI), increased use of transvaginal ultrasonography, and possibly due to increased awareness among the medical professionals. There are two categories of CSEP, i.e., endogenic and exogenic. In endogenic CSEP, the implantation is on the scar and the foetus grows inside the uterine cavity. Another category of CSEP is exogenic, in which the gestational sac is deeply implanted and grows toward the abdominal cavity or bladder [4]. Diagnosis in the first trimester is of will be of utmost importance for the prognosis of the condition. Endogenic pregnancies might be viable but can lead to excess bleeding or life-threatening situations. Exogenic pregnancies might need to be terminated as soon as they are diagnosed [5].

CASE STUDY

In the present investigation, a 30-year-old pregnant female presented herself in the emergency department of Geetanjali Medical College and Hospital, Udaipur (Rajasthan). The chief complaints were of intermittent bleeding from the past 1 month along with acute pain in the lower abdominal area. The patient complains of pain in the same area where previous cesareans have occurred. The patient had undergone two cesarean sections in the past years.

The pregnancy was confirmed by a urine pregnancy test (UPT) in a home setting only by the patient herself. After which the patient observed some spotting, which resulted her in visiting a nearby government hospital in Santrampura. After examination, the doctors decided to proceed with D & C (dilation and curettage), which resulted in an incomplete abortion. The patient was then referred to a higher centre in Dungarpur due to excessive bleeding. The doctors after examination, concluded it as a case of CSEP. The patient was advised to visit Geetanjali Medical College and Hospital (GMCH) for an obstetric hysterectomy.

In GMCH, she was thoroughly examined. The vitals were stable, and abdomen was palpable and soft with no palpable mass. Although some tenderness at the scar site was observed. On pelvic examination, the cervix stenosis was observed and minimum amount of blood was found in the vaginal canal. The doctors also observed bilateral fornices were free with minimal cervical motion tenderness. Investigations such as complete blood profile, urine analysis, and liver and renal function tests were conducted. All the reports exhibited normal levels of complete blood count, liver function test, renal function test, and urine analysis. Her Beta-human chorionic gonadotropin (βHCG) level was 5662 mIU/mL and hemoglobin (Hb) was 9.8 gm (Table 1).

Ultra sound sonography of pelvis was done which revealed a large heterogenous lesion measuring approx 63 mm × 47 mm involving the lower uterine body and cervical region predominantly in myometrium with vascular channels showing high-velocity flow within and displacing endometrium posteriorly (Fig. 1). The uterus was bulky and both the ovaries were normal. The patient was thoroughly informed of the risks, and a written consent was obtained from her for the surgery.

Prophylactic bilateral uterine artery embolization was done. Diagnostic laparoscopy showed a large mass with 6 cm of length and 5 cm breadth. The wall of the bladder was also very thin, and its positioning was also on the higher side. Due to multiple adhesions and to avoid

Table 1: βHCG and Hb levels detected in the patient

Parameter	In patient	Normal range
βHCG	5662 mIU/mL	1500 mIU/mL (For ectopic pregnancies
Hb	9.8g/dL	12–16 g/dL

bladder injury along with catastrophic hemorrhage, the decision to laparotomy was made. The abdomen was opened, and the uterus was located. There was a soft and vascular mass present at the previous LSCS scar. Myometrium was absent at the implantation site, and a fold of peritoneum was covering the mass. A transverse incision was made, and the product of conception was carefully removed. The uterine cavity was communicating with the ectopic pregnancy. The edges of scar tissue were excised, freshened, and closed. A diagnostic hysteroscopy followed by gentle curettage was done. Laparotomy cesarean scar excision was done successfully (Fig. 2).

Post-surgery, the sample was sent for histopathology, and its report confirmed scar ectopic pregnancy. One unit of packed red blood cells was transfused post-operative. As the further course was uneventful, the patient was discharged 7 days after surgery.

DISCUSSION

Ectopic pregnancies incidences are usually found in 1–2% of the total cases and CSEP occurs in about 0.05% of the cases which implies around 1 in 2000 of all pregnancies [6]. Cesarean scar pregnancy incidences have been increasing with a higher number of cesarean section rates around the globe. While one-third cases of CSEP can be incidental findings on dating scans, such cases might result in some complications such as rupture of uterine wall or hemorrhage, which can lead to life-threatening situations. Ergo, timely interpretation of a pregnancy as a cesarean scar pregnancy is of utmost importance. This can be achieved using varying tools such as sonography combined with Doppler flow imaging. The diagnosis can be confirmed using an MRI of pelvic region. The final conclusion can be drawn by studying the related symptoms depends on symptoms, knowledge of previous pregnancy's scar, βHCG levels in the serum, and transvaginal sonography (TVS). A CSEP is detected is by finding an empty uterus and cervix. Distinguishing itself from a normal pregnancy, the implantation of embryo occurs on the scar tissue from a previous C-section. This pregnancy is growing outside the uterus, separate from the lining of the uterus and the fallopian tubes [7]. Such incidences can often be misdiagnosed as intrauterine low-lying gestation. Expectant management in such cases not be an option due to the high risk of rupture and hemorrhage [8]. Medical professionals usually prefer to treat ectopic pregnancies with methotrexate [9]. In case the medicines are ineffective, doctors shift towards surgical options, which include laparotomy (open surgery) and laparoscopy (minimally invasive surgery). Surgeons may advise for surgeries in some special cases as well. These procedures aim to remove the ectopic pregnancy and repair the scar on the uterus. Studies have reported that hysteroscopic resection leads to a swift transformation of serum βHCG values to normal levels and requires less follow-up visits [10]. By using the technique of prophylactic bilateral uterine artery chemoembolization, we reduce the risk of hemorrhage also.

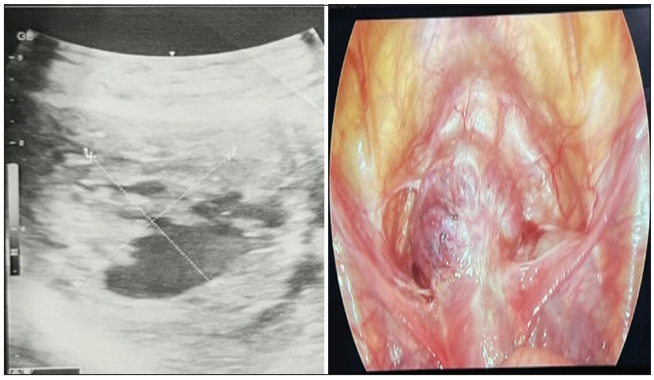

Fig. 1: Representation of scar ectopic through Ultrasonography film (Left) and Laparoscopic view of peritonium (Right)

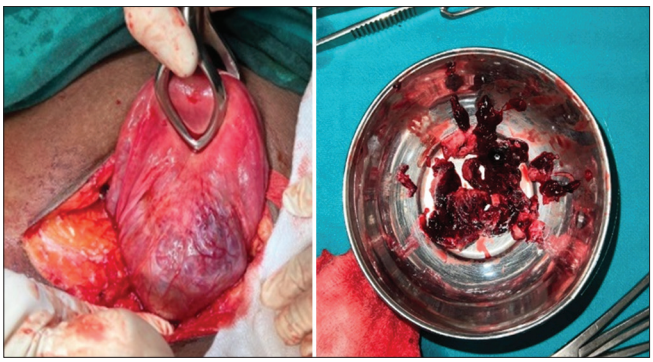

Fig. 2: Highly vascular, soft cesarian scar ectopic gestation (Left) and retrieved products of conception (Right)

CONCLUSIONS

Scar ectopic pregnancies or CSEPs are emerging as a serious and complicated condition with increased incidences with a rise in cesarean deliveries. Early diagnosis and a combination of treatment approaches are crucial to protect the mother's health.

In ideal conditions, the treatment for a scar ectopic pregnancy should start in the early weeks of pregnancy i.e. during the first three months of pregnancy. This allows for the best possible outcomes, including safely ending the pregnancy before it can cause problems for the mother and removing the pregnancy tissue with careful stitching to preserve the ability to have future children and prevent the pregnancy from happening again in the same place.

CONFLICTS OF INTEREST

The authors have none to declare.

CONSENT FOR PUBLICATION

For the publication of this case report, written and informed consent was obtained from the patient.

FUNDING

The authors received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

AUTHOR CONTRIBUTION

Shivam Bansal: Writing – review and editing, Writing – original draft, Visualization, Methodology, Investigation. Ravinder Kumar Kundu: Writing – review and editing, Supervision, Resources.

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