

CESAREAN SCAR ECTOPIC PREGNANCY: A CASE REPORT

¹Fehmida Shaheen, ¹Rukhsana Afzal, ¹Mahwash Jamil

¹Department of Gynecology and obstetrics
HITEC-IMS, Taxila

ABSTRACT

Cesarean scar ectopic pregnancy (CSP) is the least common site of ectopic pregnancy. The rate of caesarean sections is rising, which is why the incidence of CSP is rising. A considerable increase in maternal morbidity and mortality can result from its delayed diagnosis. Early first trimester ultrasound helps us identify location of pregnancy so one diagnosis is made the early management can be done accordingly. The case of an ectopic pregnancy in a patient who had previously undergone two caesarean sections is presented in this case report. At 12 weeks pregnant, this woman reported with an acute abdomen. Transvaginal ultrasonography suggested the diagnosis. At the time of the laparotomy, the placenta was found to be projecting through the previous scar with active bleeding from the scar. The gestational sac and fetus were removed. The burst scar was repaired, protecting the uterus and patient's fertility in the future.

Keywords: *Obstetrics, Cesarean scar, Ectopic pregnancy*

How to cite: Shaheen F, Afzal R, Jamil M. Cesarean scar ectopic pregnancy: a case report. HMDJ 2022; 02(01): 40-42

INTRODUCTION

Extra-uterine implantation of embryo is known as ectopic pregnancy ¹. More than 90% happen in the fallopian tube². Ectopic pregnancy may very rarely occur in the cervix, ovary, abdominal cavity, or in scars of a cesarean section. Ectopic pregnancies account for 9% of pregnancy-related fetal fatalities causing maternal morbidity and mortality ³. A prior hysterectomy, uterine manipulation, and invitro fertilization all contribute to extopic pregnancy. Around 1 in 2000 pregnancies result in an ectopic pregnancy in a cesarean scar ⁴. Around 161 cases have been documented as of today after the first incident was reported in 1978 ³.

Scar ectopic pregnancies are seen in two different varieties. Type-1 starts in the myometrium, expanding internally toward the uterine cavity, while Type-2 advances externally toward the uterine serosa. Type 2 ectopic pregnancy is more likely to result in complications such uterine rupture, uncontrolled bleeding, and maternal death. Pelvic pain and vaginal bleeding during the

first trimester are the usual symptoms. The most widely used and reliable investigation is transvaginal ultrasonography. In ambiguous situations, a magnetic resonance imaging (MRI) scan may be required for confirmation of the diagnosis ⁴.

This case report and literature review describes a rare instance of a first-trimester caesarean scar pregnancy with uterine rupture in which the uterus was repaired, protecting the patient's fertility in the future.

CAPSULE SUMMARY

This study presents a case of cesarean scar ectopic pregnancy, suspected on a transvaginal ultrasound and confirmed on laparotomy. Gestational sac and fetus were removed and scar repaired, hence preserving the uterus and future fertility.

CASE PRESENTATION

A 28-year-old woman, Gravida 4, Para 2 with a history of two prior scars presented with acute abdomen at 12 weeks gestation. Her first cesarean was performed under emergency circumstances when her first stage of labour failed to proceed, and her second delivery took place two years ago during an elective

repeat cesarean. Three years ago, she had spontaneously miscarried in the first trimester. This time she arrived at the emergency room complaining of lower abdominal pain since the morning. Her blood pressure was 100/60 mm Hg, pulse was 100/min, and she seemed clinically pale. An examination of the abdomen revealed tenderness with signs of peritonitis. Her hemoglobin (Hb) level was 7 g/dl. The radiologist performed an urgent abdominopelvic ultrasound, which revealed an intrauterine fetus of 6.7cm Crown Rump Length (CRL) in the lower segment of the uterus with normal fetal movements and heart activity, as well as significant free fluid in the Morrison's pouch and the pelvis. On ultrasound, the right adnexal region revealed possible clots and there was hemoperitoneum, raising

Correspondence to: Dr. Mahwash Jamil, Department of Gynecology and obstetrics HITEC-IMS, Taxila

Email: mahwashdr26@gmail.com

Conflict of Interest: None

Financial Disclosure: None

Received: 09-07-2021

Accepted: 20-07-2022

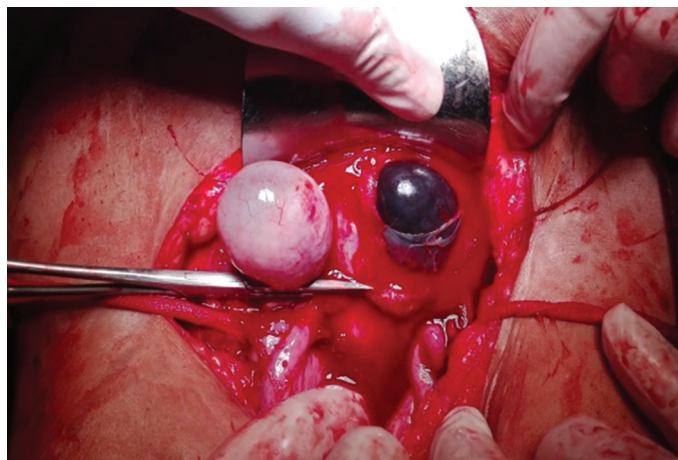


Figure 1: Gestational sac protruding through previous scar

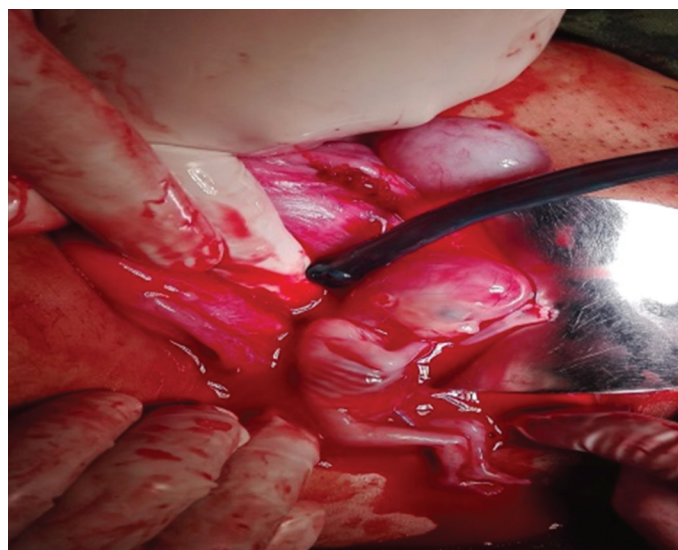


Figure 2: Fetus of 12 weeks coming out of previous scar

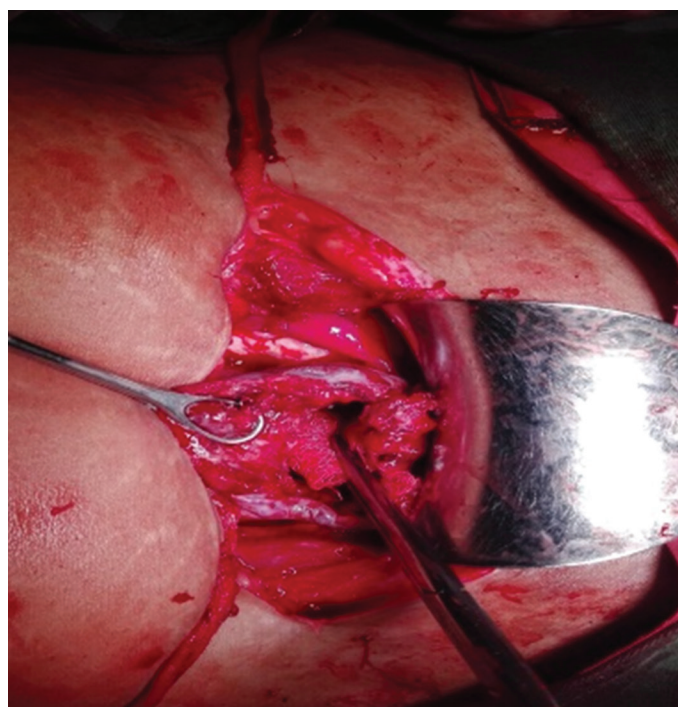


Figure 3: Scar area after surgical resection

the possibility of an ectopic pregnancy or a burst right adnexal hemorrhagic cyst.

Emergency laparotomy was performed because of the acute abdomen. About 500 cc of clots were removed during laparotomy. Bleeding was found in the prior scar, with the placenta protruding through. It was removed in bits. Gestational sac and fetus were removed. Hemostatic sutures were used to secure hemostasis. We closed the uterus in two layers (Figures 1,2,3 : Pictures taken during surgery) . An intraperitoneal drain was inserted. We closed the abdomen in reverse order. Blood was transfused (03 units), 01 during surgery and 02 afterwards. Her Hb level was 7.9 g/dl, post-operatively. Parenteral iron (05 doses) was administered. Her serum beta human chorionic gonadotropin (hCG) level was 5230 mIU/ml.

Patients recovered smoothly, and was discharged from the hospital on the sixth post-op day, in good health, with instructions to return to the gynecology out-patients department after seven days with a report of her serum beta HCG levels.

DISCUSSION

Ectopic pregnancy within a cesarean scar is uncommon. i.e. less than one percent of total pregnancies ⁵. There is a rise in the incidence of scar ectopic pregnancies with an increased rate of cesarean section deliveries. According to the Centers for Disease Control and Prevention (CDC), the percentage of caesarean delivery in the United States was 20.7 in year 1996, but it is now 32 percent in 2017. Because of the increased availability of transvaginal ultrasound, an increasing number of cases are being diagnosed pre-operatively.

In order to establish the confirmed diagnosis of a cesarean scar ectopic pregnancy, transvaginal ultrasound with color, spectral and power doppler imaging is in frequent use. The sensitivity of transvaginal ultrasonography is 84.6%. Three-dimensional ultrasonography is a more recent diagnostic tool utilized in tertiary care facilities with sophisticated equipment. In situations where the diagnosis is uncertain, Magnetic Resonance Imaging (MRI) and diagnostic laparoscopy can be used. Several diagnostic criteria for cesarean scar ectopic pregnancy were proposed by Timor-Tritsch;

1. Empty uterine cavity as well as endocervical canal.
2. Gestational sac is situated next to the scar from the prior cesarean delivery in the anterior part of the lower segment of the uterus.
3. Doppler ultrasonographic evidence of a functional trophoblastic tissue at the site of implantation in the scar.
4. During <8 weeks gestation, a triangular gestational sac filling the scar niche (after eight weeks of gestation, a round or oval sac may be seen).-

5. Cervical canal, closed & empty.
6. Fetal pole and/or yolk sac with or without cardiac activity.
7. Absent or deficient healthy myometrium between the bladder & the gestational sac ⁶.

Several theories have been proposed to explain the pathogenesis of caesarean scar ectopic pregnancy. According to one theory, after past uterine surgery, most frequently a previous cesarean section, the embryo at the blastocyst stage invades the myometrium in a microscopic portion of the uterine dehiscence tract. However, patients without a history of uterine surgery can have scar ectopic pregnancy ⁷. Another theory is that scar pregnancy occurs as a result of trauma to the birth tract and uterus during manual placenta removal or assisted reproductive techniques ⁵. The patient mentioned in this case report, had a history two cesarean sections, putting her at risk for scar ectopic pregnancy in the scar.

The basics of CSP treatment are an early diagnosis and management, and maintenance of reproductive function as much as possible ⁸. Conservative treatment is not recommended because it can lead to significant hemorrhage later on⁹. Methotrexate as systemic therapy is also less effective for CSP than it is for other sites of ectopic pregnancy, such as tubal ectopic pregnancy. Recently, improved outcomes have been reported with local administration of intralesional methotrexate injection under ultrasound guidance. Local administration is done either transvaginally or transabdominally ⁶.

A newer advance in these cases is uterine artery embolization (UAE). A combination of intralesional methotrexate injection with UAE therapy has recently been reported with significant success. After treatment, suction and curettage can be used if vaginal bleeding still occurs ¹⁰.

Following a CSP diagnosis, planned or emergency surgical

intervention is a safe and commonly used option ⁹. During a laparotomy, the ectopic sac and previous scar tissue are resected in such a way that all products of conception are removed. In such cases, a laparoscopic approach can be used if it is thought feasible and sufficient expertise is available ¹⁰.

Concluding it all, a tailored treatment based on gestational age, fetal viability, the intensity of symptoms, blood hCG levels, and ultrasonographic results can help treat CSEP successfully ⁹. The key to successful treatment and lower maternal morbidity and death is an early and prompt diagnosis ⁶.

REFERENCES

1. Brancazio S, Saramago I, Goodnight W, McGinty K. Cesarean scar ectopic pregnancy: Case report. *Radiol Case Rep.* 2019; 14:354-9.
2. Kenny L, Bickerstaff H, editors. *Gynaecology by Ten Teachers.* CRC Press; 2017 May 8.
3. Hummeida ME, Rahman EA, Ahmed A. Cesarean scar ectopic pregnancy case report and literature review. *Sudan Med J.* 2015;51: 45-52.
4. Majangara R, Madziyire MG, Verenga C, Manase M. Cesarean section scar ectopic pregnancy-a management conundrum: a case report. *J Med Case Rep.* 2019; 13:1-4.
5. Hoffman T, Lin J. Cesarean scar ectopic pregnancy: diagnosis with ultrasound. *Clin Pract Cases Emerg Med.* 2020; 4: 65-72.
6. Koplay M, Dogan NU, Sivri M, Erdogan H, Dogan S, Celik C. Ectopic pregnancy in a Cesarean section scar: successful management using vacuum aspiration under laparoscopic supervision mini review of current literature. *Case Reports in Surgery.* 2016 Nov 24;2016.
7. Al Gadeeb S, Al Gadeeb M, Al Matrouk J, Faisal Z, Mohamed A. Cesarean Scar—Unusual Site of Ectopic Pregnancy: A Case Report. *Cureus.* 2019 Oct 22;11(10).
8. Fu LP. Therapeutic approach for the cesarean scar pregnancy. *Medicine.* 2018 May;97(18).
9. Jayaram PM, Okunoye GO, Konje J. Cesarean scar ectopic pregnancy: diagnostic challenges and management options. *Obstet Gynaecol.* 2017; 19:13-20.
10. Najam S, Malik SE, Aqeel S, Rizwan N, Haider AR. Viable caesarean scar pregnancy: A case report. *Biomedica.* 2020; 36:10-4.