**Case Report**

# Exogenous Caesarean Scar Pregnancy; A Diagnostic Challenge

Raheela Farhat Ch, Rooha Tariq

**ABSTRACT**

Caesarean scar ectopic pregnancy is a pregnancy in which the ectopic is in the scar tissue of a previous caesarean section. This is a life threatening condition if proper diagnosis and management does not take place in time. It is not compatible with a successful pregnancy. The clinical diagnosis can be obscure, especially in the initial stages; therefore clinicians should be acquainted with the sonographic hallmarks of caesarean scar pregnancy on radiographic. It is very similar to a spontaneous abortion in progress which is why the misdiagnosis is common. We present a case of caesarean scar pregnancy which was managed by performing an emergency laparotomy.

**KEYWORDS:** Caesarean scar pregnancy, Ectopic pregnancy, Hysterectomy.

## INTRODUCTION

Caesarean section scar ectopic pregnancy is a rare event with a high risk of hemorrhagic shock, disseminated intravascular coagulation and the need of emergency lifesaving hysterectomy. Here we describe a case of ectopic gestation in a previous caesarean section scar which was initially misdiagnosed as "spontaneous abortion in progress", which resulted in uncontrollable bleeding which required an emergency laparotomy.

## CASE REPORT

A 31 year old woman, G6P2A3, was admitted to Aziz Fatimah Hospital, Faisalabad with the complaint of vaginal bleeding, cramping and lower abdominal pain. She had an amenorrhea of 8 weeks gestation. She also had a caesarean section for failure to progress in labour in her first pregnancy 7 years ago. This was followed by three first trimester termination of pregnancies at 8 weeks of gestation for which an evacuation was done. The second baby was delivered through cesarean section. On receiving, she was haemo-dynamically stable. On general physical examination, pulse was 90/min; BP was 100/60mmHg.

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On abdominal examination, no significant finding was there; abdomen was soft and non-tender. On vaginal examination, cervical os was open and fresh blood was oozing through the vagina. A trans-vaginal ultrasound was done by a professional. It showed a non-viable intrauterine pregnancy in the anterior lower uterine segment (LUS) with a gestational age of about 8 weeks. All of a sudden the patient began to bleed profusely. After initial resuscitative measures, all the baseline investigations (Complete Blood Count, Random Blood Glucose, Renal Function Tests, Liver Function Tests, coagulation profile, and viral markers) were sent.

It was decided to shift the patient to Operation Theater for evacuation. The patient was given spinal anesthesia and per speculum examination was done. The cervical os was patulous and the bleeding through the os was moderate. Throughout the procedure there was inrush of fresh blood resulting in hemodynamic compromise.

**Figure 1: A bulging mass seen, arising from the scar site in the uterus**

Four units of blood were arranged on emergency basis and the patient's vitals were constantly monitored. On P/V examination, it felt that the placenta is attached to the scar site of old caesarean section. A diagnosis of scar pregnancy became clear. Patient's family was counseled and taken consent for an emergency laparotomy.

The diagnosis of ectopic pregnancy in previous caesarean section was confirmed. The placenta was adherent to the scar. The gestational sac and placenta were removed from the scar which was then excised and repair of uterus was done. Three units of blood were transfused in the operation theatre and the patient remained vitally stable throughout the procedure. The patient was discharged three days after her laparotomy. There was no abnormal uterine bleeding in the follow up.

## DISCUSSION

Ectopic pregnancy is a pregnancy in which there is implantation of ovum in an unusual site. Caesarean scar pregnancy (CSP) is a type of ectopic pregnancy which results in implantation of ovum in the previous Caesarean scar. This accounts for 6.1% of all ectopic pregnancies and 1 in 1800-2200 pregnancies. Better imaging techniques and understanding of this disease has led to an increase in the diagnosis of Caesarean scar pregnancy.[1,2] Placenta accreta and CSP are histologically similar, other than caesarean section history, there are not enough risk factors established for this condition.

Ultrasound is extremely helpful for diagnosis CSP within its early stages, with a sensitivity of 86.4% and a specificity of 92.3%. Adherences to a customary set of diagnostic criteria could facilitate us in understanding and diagnosing this case as soon as possible with the minimal harm done to the patient. CSP sometimes presents as a heterogeneous mass, containing cystic-solid, or mixed echoes among the caesarean scar or lower female internal reproductive organ section.[3] Late diagnosis of CSP has detrimental effects like scar rapture and massive hemorrhage. Thereby, early diagnosis and intervention is important to minimize the risk of these complications from arising.[1,2,3]

CSP is of two types on the basis of ultrasound findings; type 1 (Endogenic CSP) and type 2 (Exogenic CSP). Type 1 is distinguished by amniotic sac protrusion into the uterine cavity and cervico-isthmic space. Type 2 is characterized by implantation which bulges towards serosa, 4mm less from the bladder wall. Type 1 is less severe, with chance of progression to full term but with a high risk of massive haemorrhage. Our patient presented with type 2 exogenous CSP. Ultrasound is a powerful tool in order to make decisions and formulate individual management plan on the basis of myometrium thickness, sac location, perfusion and gestational age.[2]

CSP often presents with abdominal pain, abnormal vaginal bleeding and an increased level of beta hCG, leading to a misdiagnosis of an early miscarriage.[5] In CSP, the gestational sac appears well perfused, whereas in spontaneous abortion in progress, the gestational sac is seen in the cervical canal and the sac appears avascular. In CSP, there is a decidual reaction surrounding the gestational sac which indicates implantation in scar area and not the retained products. If the patient is stable and CSP is suspected, then magnetic resonance imaging (MRI) or an interval ultrasound can be used to reach the diagnosis. MRI with contrast enhancement is helpful in a better diagnosis of CSP in 95.5% of cases in comparison to 88.6% with normal ultrasound. Despite the high accuracy in diagnosis, the use of MRI is limited due to prolonged acquisition time.

It is pivotal to have early diagnosis and prompt treatment of CSP in order to have better, safer and less invasive management options for the patient with less chances of complications along with a decreased chance of endangering the fertility of the patient.[2,7]

## TREATMENT

Persistent or massive vaginal bleed, delay in treatment and diagnosis along with failure of preservation of fertility lead to hysterectomy in CSP patients. Approximately 2 to 12.5% CSP results in hysterectomy. Another management option is bilateral uterine artery ablation (UAA). It leads to lesser haemorrhage along with less progression to hysterectomy. However, UAA cannot be employed in each case due to its unavailability or when the patient has excessive bleeding. Ultrasound usage is significant as it allows the ultrasound guided administration of embryocidal agents directly into the sac. This form of local treatment is extensively practiced and it proves to be effective in reducing systemic therapy as well as reducing the need for hysterectomy.

Ultrasound itself can be used as an embryocidal agent with the help of High Intensity Focused Ultrasound. This technique uses the heat energy which is directly focused at the sac which stops the cardiac activity and results in a rapid fall of hCG level.[3]

Weekly hCG coupled with weekly to monthly ultrasounds can be used as follow up to see its

resolution since no proper protocol has been set for this condition. Transvaginal ultrasound is 100% sensitive and specific for the detection of defects in the caesarean scar with the help of salinsonohy stereography.

To summarize, CSP is a very rare condition which requires proper attention and protocols to reduce the risk of complications. CSP must be considered a viable diagnosis in patients with vaginal bleed and abdominal pain by the clinicians and the sonographers; the consequences of a missed diagnosis are detrimental. This may form the basis for advising women on the spacing of subsequent pregnancies after a cesarean delivery. Fortunately for our patient, the right diagnosis was made after initially being mistaken for spontaneous abortion in progress. So this highlights the difficulty in differentiating between CSP and spontaneous abortion and hence the importance of high index of suspicion in women with risk factors.

***Conflicts of Interest:*** None.

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***Author's Contribution:***

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| **Dr. Raheela Farhat Ch** | Provided all material for case report. Accountable for given information. |
| **Dr. Rooha Tariq** | Manuscript writing. |