



### **A Rare Case of Caesarean Scar Ectopic Pregnancy: Case Report.**

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#### **Abbreviations**

TVUS- Transvaginal ultrasound

EPU-Early pregnancy unit

β-HCG- Beta human chorionic gonadotrophin

MBL-measured blood loss

### **Abstract**

*Caesarean scar ectopic is one of the rarest of all ectopic pregnancies. It is defined as when a blastocyst implants on a previous caesarean scar. The incidence of caesarean scar ectopic pregnancies has increased due to increase in number of caesarean deliveries. Early diagnosis is crucial as delay can lead to increased maternal morbidity and mortality. Fortunately, the use of first-trimester ultrasound imaging has led to a significant number of these pregnancies being diagnosed and managed early. We report a rare case of a lady in third pregnancy with 8 weeks pregnancy with previous one caesarean delivery who attended Early Pregnancy Unit with history of bleeding since 1 day, diagnosed as Caesarean scar ectopic pregnancy with the help of trans-vaginal ultrasound. Patient underwent suction evacuation under ultrasound guidance and on histopathological examination confirmed products of conception. Here, we highlight the importance of early diagnosis and treatment of caesarean scar ectopic pregnancies.*

### **Introduction**

Caesarean section scar ectopic pregnancy is a rare complication of pregnancy, occurring in approximately 1 in 2000 pregnancies [1, 2]. Its incidence is rising in parallel with the increase in primary and repeat caesarean sections. Globally, the incidence of primary caesarean section averages 18.6% of all births and is around 25% in UK. [3]. A scar ectopic pregnancy has also been reported following previous myomectomy, uterine evacuation, previous abnormally adherent placentation, manual removal of placenta, metroplasty and hysteroscopy [4].

The usual presentation is with vaginal bleeding and pelvic pain in the first trimester. The investigation of choice is transvaginal ultrasound (TVUS) with Colour Doppler, which may be combined with a transabdominal scan for a panoramic view. Treatment modalities include expectant, medically with methotrexate or surgically with suction evacuation, laparoscopy or hysteroscopy [2, 5]. This case report highlights the importance of early pregnancy imaging in women with previous caesarean delivery to decrease maternal morbidity.

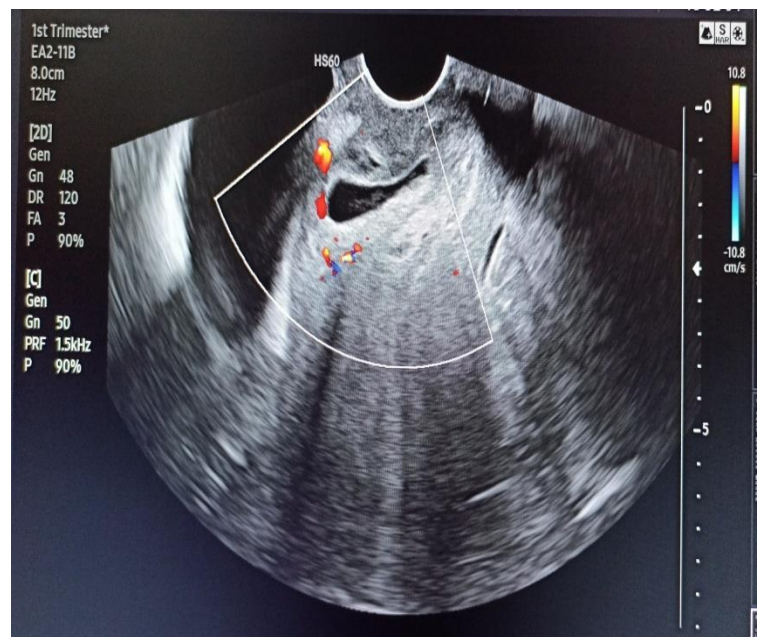
## Case Report

A 25-year-old G3P1L1 with 8 weeks pregnancy presented to the Early Pregnancy Unit (EPU) with per vaginum bleeding since 2 days. She did not have any abdominal pain or discomfort. The patient had a history of caesarean section 2 years back for abruption. She had no significant medical or any other abdominal surgery and had a BMI of 22. At presentation, her general physical examination and observations were within normal limits. Routine blood investigations were done including haemoglobin, hematocrit and white cell count which were normal. Quantitative Beta HCG was 42,727IU/L at presentation.

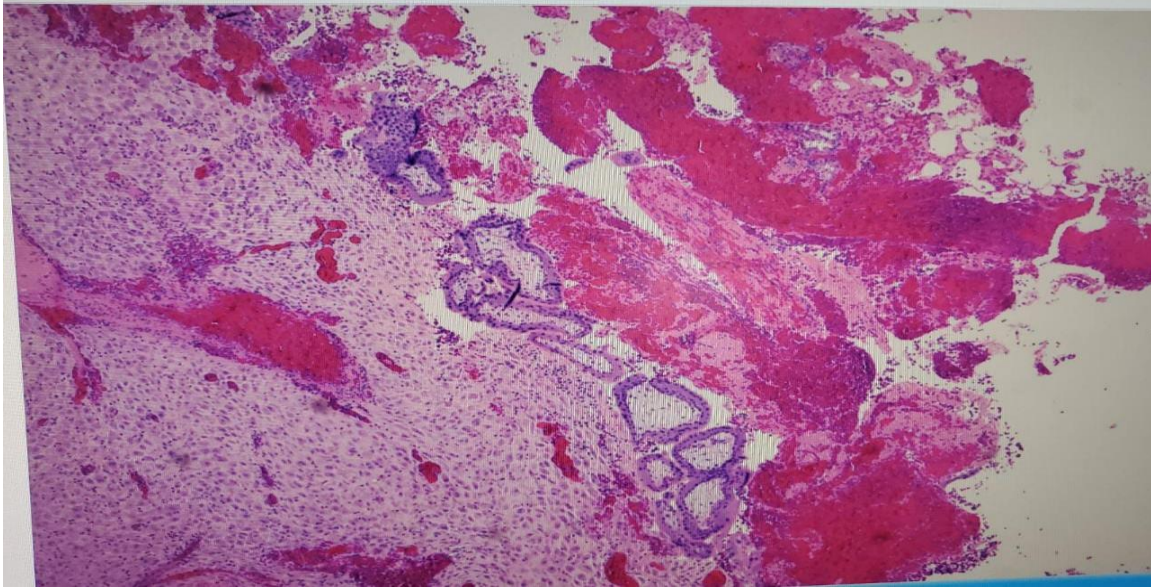
Transvaginal ultrasound in EPU demonstrated choriodecidual reaction with excessive vascularity containing gestational sac and yolk sac located within the previous caesarean scar (dated at 7 weeks and 5 days). Doppler examination revealed the main blood supply to upper margin of caesarean scar and some from the lower margin of caesarean scar, with no infiltration to the serosal area. Thin layer of myometrium noted between the gestational sac and bladder. Patient was counselled about scan findings, diagnosis, treatment options available and risks related to caesarean scar pregnancy. Suction evacuation under ultrasound guidance was chosen as quick and safe option. Gentle suction was applied with caution as not to perforate bladder. MBL-200ml. Tissue was sent for histopathological examination revealed products of conception, confirming diagnosis of caesarean scar pregnancy. Her postoperative period was uneventful. Patient was followed up with serum Beta human Chorionic Gonadotropin ( $\beta$ -HCG) level, till it came to non-pregnant level.



a)



b)



c)

a and b - Ultrasound images

c) Histo-pathology image

### **Discussion**

Here, we present the case of a patient with 1 prior caesarean delivery who presented with a caesarean scar ectopic pregnancy. She was diagnosed via transvaginal ultrasound and she underwent surgical management.

It is important to have a high clinical suspicion for a caesarean scar ectopic in a patient who presents with first trimester bleeding and previous caesarean delivery. Although the incidence of cesarean scar ectopic pregnancy is uncommon, its incidence is indeed increasing given the rise of caesarean deliveries [7], [8], [9], [5]. Delay in diagnosis can be life-threatening as they pose a great risk for maternal hemorrhage [4].

There are two recognized types of scar ectopic pregnancies. Type 1 develops in the myometrium and grows toward the uterine cavity, whereas type 2 progresses exophytically toward the uterine serosa [4]. Both have an ominous prognosis because they may result in spontaneous uterine rupture, haemorrhage, and maternal death. There is potential for loss of fertility should massive haemorrhage necessitate a hysterectomy.

The criteria for a caesarean scar ectopic pregnancy include:

- (a) Gestational sac embedded eccentrically in the lower uterine segment,
- (b) Implantation in the location of a prior cesarean delivery scar,
- (c) Empty uterine cavity and cervical canal,
- (d) Attenuated myometrium over the scar, and
- (e) Extensive Doppler vascular flow in the area of the cesarean delivery scar [10].

The case presented here highlights the importance of early diagnosis and management of a caesarean scar ectopic pregnancy. This patient's presentation was similar to other case reports found in the literature. She presented with painless first trimester vaginal bleeding [11], [12]. This patient's gestational age is also consistent with previous studies indicating a presentation between 5 and 12 weeks of gestation [4]. Because of the high clinical suspicion for a caesarean scar ectopic, the patient was able to undergo proper diagnosis and timely management. We chose suction evacuation under ultrasound guidance because it would give us better access and control of hemorrhage in this situation of type 1 scar ectopic pregnancy.

The risk of recurrent scar ectopic pregnancy is low, 3.2–5.0% [2, 13]. Women who intend to continue childbearing should be informed of the low risk of recurrence but the potential serious sequelae of a recurrence. Even with an intrauterine pregnancy, the woman is still at risk of complications such as abnormally adherent placenta, uterine rupture, massive hemorrhage, and hysterectomy. Future pregnancies require meticulous specialist follow-up.

Here, we would like to promote and emphasize on the practice of doing ultrasound scans in EPU, ideally by 8-10 weeks in pregnant women with previous caesarean births which will aid in early diagnosis and treatment. Early diagnosis will minimize life threatening risks for patient and also will be cost effective for the medical infrastructure.

## Conclusion

It is important for clinicians and radiologists managing women with risk factors for a scar ectopic pregnancy to maintain a high index of suspicion during imaging. Missed diagnosis and delay in prompt management may lead to uterine rupture, massive haemorrhage, and maternal death. Transvaginal scanning equipment and training should be readily available even in resource-limited settings in EPU especially for patients with high risk factors for caesarean scar ectopic pregnancy.

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