

## CASE REPORT

# 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



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### KEYWORDS

Abnormal pregnancy;  
Cesarean section;  
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**Abstract** Obstetrician should be aware of the diagnosis of abnormal pregnancy whether cesarean ectopic or early placenta accreta and considers evaluation of scar with ultrasound. We present a patient with this condition that was accurately diagnosed and appropriately treated.

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## 1. Introduction

Cesarean Scar Pregnancy is a rare type of ectopic pregnancy where the trophoblasts implant on the niche of the scar. It represents about 5% of ectopic pregnancy in women with previous cesarean section. The increases in the rate of cesarean section together with the increase in awareness of the current

attending obstetricians are behind its increase incidence in the last two decades (1,2).

No definite data about the risks or the recurrence of CSP are found. Studies about the techniques of cesarean scar closure techniques or inter-pregnancy intervals as risks for CSP had yield inconclusive results (2).

Early diagnosis by transvaginal ultrasound is the gold standard way in prevention of the catastrophic hemorrhage. Early diagnosis allows elective informed choice of treatment. Although various treatment modalities had been proposed for treatment of CSP; neither of them had been evidenced and most obstetricians deal with it according to their personal preferences or technical capabilities. The most commonly published treatment is methotrexate intra-lesional and/or intramuscular. Others report ultrasound guided

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manual vacuum aspiration with or without isthmic balloon insertion. There are many reports about the laparoscopic management of CSP in experienced hands. Whatever the treatment choice, it is better than encountered with massive hemorrhage that ends in most of cases by total hysterectomy (2,3).

The differential diagnosis of CSP includes early placenta accreta, cervical abortion (abortion in progress) and cervical ectopic pregnancy. Unlike CSP; in cervical ectopic pregnancy there is a healthy (thick) myometrium intervening between the maternal bladder and the sac together with the ballooned cervical canal that give the uterus an hour glass appearance. In cervical abortion there is no peritrophoblastic flow. The internal os in cervical ectopic and abortion may be opened or closed but it is always closed in CSP (2).

## 2. Case report

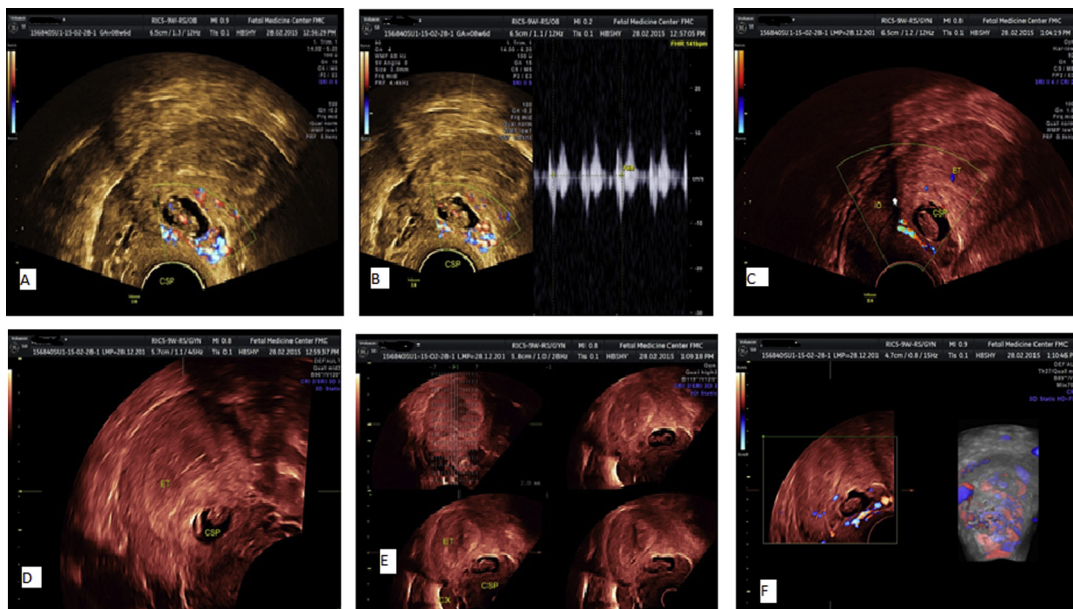
A 30-year-old female, gravida 3 para 2, was referred by her attending obstetrician to our center seeking the confirmation of a pregnancy of abnormal location with vaginal spotting, and mild abdominal pain for days. She had history of two previous cesarean sections and had no other significant medical or social history. Serum  $\beta$ -HCG was 2670 mIU/mL.

She was noted to have closed cervix on pelvic examination, with small amount of dark blood in vaginal vault and no active vaginal bleeding. All other examinations were unremarkable. Transvaginal ultrasound showed Empty uterine cavity, pulsating 7 week embryo out-pouches from the uterus at the site of the scar. The overlying myometrium is too thin (indistinct) and vascular. The internal cervical os is closed. Empty cervical canal and no intrauterine pregnancy or adnexal masses. This was considered to be cesarean scar ectopic pregnancy or early

placenta accreta. (Fig. 1). She was managed using intramuscular methotrexate (50 mg). After about two weeks she developed accidentally massive vaginal bleeding that warrants laparotomy that confirmed the cesarean ectopic pregnancy (Fig. 2) where excision of the gestational sac was done and trimming of the surrounding myometrium and enclosure in 2 layers. Her symptoms subsided and  $\beta$ -HCG was noted to be trending down adequately. She was discharged home and her follow-up ultrasound revealed no residual mass at the scar and a  $\beta$ -HCG level less than 5 mIU/mL within 2 weeks of her treatment.

## 3. Discussion

Cesarean scar ectopic pregnancy is a rare lethal variant of ectopic pregnancy, where gestational sac implants at the previous uterine scar (4,5). Cesarean scar ectopic pregnancy is often misdiagnosed as incomplete abortion and patients mistakenly undergo curettage leading to life threatening hemorrhage. Diagnosis of cesarean scar pregnancy requires a high degree of suspicion, especially when no intrauterine gestational sac can be identified and a pregnancy of unknown location is suspected. Differential diagnosis of cesarean scar ectopic pregnancy includes cervical pregnancy, early placenta accreta and incomplete abortion. Timor et al. concluded in their review that cesarean scar ectopic pregnancy and early pregnancy placenta accreta are the consequences of increasing rate of cesarean deliveries (6). They explored the similarities in symptomatology, diagnosis and treatment of these two conditions. Cesarean scar pregnancy can be diagnosed with transvaginal ultrasound which can identify a gestational sac or mass located in the lower uterine segment, within the cesarean scar. MRI can accurately detect the exact location of



**Fig. 1** The embryo out-pouches the scar on 2D US with vascular thinned myometrium at scar site (a), viable pregnancy nearly 7 weeks(b), closed internal cervical os below the pregnancy with empty cervical canal (c), 3D ultrasound imaging of the uterus using the multi-planner reconstruction (MPR) mode shows that the embryo outside the empty endometrial cavity (d), 3D ultrasound imaging of the uterus shows the out-pouching of the CS pregnancy at the site of the scar (e), 3D power Doppler ultrasound confirms the vascularity of the thinned myometrium overlying the pregnancy (f).

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