Successful Treatment of a Cesarean Scar Ectopic Pregnancy Using a Novel Approach with Oral Mifepristone followed by Trans Cervical Suction Evacuation with Prophylactic Tranexamic Acid: A Case Report

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Abstract

Cesarean scar pregnancy is a rare form of ectopic pregnancy where the conceptus is implanted at the site of a previous cesarean section scar which poses life-threatening complications if not diagnosed and managed timely. Though numerous types of treatment approaches have been described there is no consensus on the optimal treatment modality which is a challenge to clinicians. Current treatment approaches are a combination of medical and surgical interventions with varying success rates and complications.

In this paper, we report a case of viable cesarean scar pregnancy classified as Type 1 with higher serum level of serum β-hCG which was treated successfully by oral administration of mifepristone alone without the use of methotrexate followed by trans-cervical suction evacuation of the conceptus under real-time ultrasound guidance with minimal blood loss. Hemorrhage following evacuation being the commonest complication of this combined approach which is commonly managed with intrauterine Foley catheter tamponade, our patient was treated with prophylactic intravenous tranexamic acid during evacuation warranting no further surgical interventions.

Given the successful outcome in our case with minimum morbidity, the option of oral mifepristone followed by suction evacuation with prophylactic use of tranexamic acid must be give consideration when a cesarean scar pregnancy presents with a higher level of serum β-hCG, a live fetus and where it is classified as Type-1.

Keywords

Cesarean, Ectopic, Mifepristone, Pregnancy, Scar, Tranexamic acid

Introduction

Cesarean scar pregnancy (CSP) is a rare form of ectopic pregnancy where the conceptus is implanted at the site of a previous cesarean section scar [1]. Its incidence was reported in the range of 1/1800 to 1/2400 of all pregnancies and represents 6% of all ectopic pregnancies in women with prior cesarean delivery [2,3]. Symptoms of cesarean scar pregnancy vary highly and majority of women may be asymptomatic [4].

Considering the rarity of such pregnancies and its serious and life-threatening complications, it is important to make an early and accurate diagnosis, plan treatment strategies to prevent serious complications and to preserve future fertility if possible [5,6]. CSP is also considered a precursor of morbidly adherent placenta and an expectant approach to this condition does not seems to be an option [7].

Though numerous types of treatment approaches have been described there is no consensus on the optimal treatment modality and CSP still is a challenge...
Though the use of intravenous tranexamic acid is recommended for the treatment of postpartum hemorrhage and has been shown to be safe and effective in trauma and surgery, with no apparent increase in vascular occlusive events [13,14]. The use of intravenous tranexamic acid has not been described in any reported cases of CSP.

In this paper, we report a case of viable cesarean scar pregnancy classified as Type 1 that was treated successfully by oral administration of mifepristone alone without the use of methotrexate followed by transcervical suction evacuation of the conceptus under real-time ultrasound guidance with a prophylactic intravenous tranexamic acid, warranting no further surgical interventions.

Case Description

A 34-year-old gravida 3 para 2, with two previous caesarean sections presented at a period of amenorrhea of 8 weeks and a positive urine pregnancy test.

Transabdominal and a transvaginal scans performed revealed an empty uterine cavity and empty endocervical canal. A gestational sac was located in the anterior wall of the isthmic portion, at the level of the previous caesarean section scar confirming a diagnosis of CSP. The myometrium between the gestational sac and the bladder was thin measuring only 3 mm.

A live single fetal pole and a yolk sac were visible with a crown rump length of 12 mm, equaling 7 weeks of gestation (Figure 1).

Based on our imaging this CSP was classified as Type-1 or endogenic as the gestational sac was more towards the uterine cavity. There was also a 33 mm corpus luteal cyst is seen in the cul de sac.
occupying the site of her caesarean scar pregnancy and the serum β-hCG had dropped to 4564 IU/L (Figure 2).

The patient was discharged home 24 hours after the evacuation as she was hemodynamically stable with minimal prevaginal bleeding. On a regular follow up two weeks after the evacuation she was asymptomatic and her β-hCG has dropped to undetectable levels and was prescribed with combined oral pills as contraceptive.

Conclusion

With the increasing awareness and clear ultrasonic criteria to diagnose cesarean scar pregnancy, early suspicion and diagnosis of this condition is possible with transvaginal ultrasound scan.

Transvaginal ultrasonographic diagnosis is made by visualization of a mass embedded in the hysterotomy scar, an empty uterine cavity, and thinning of a visible defect in the myometrium cavity between the bladder and the sac.

Though a combined approach of management namely systemic methotrexate followed by suction evacuation seems to be the commonest approach of treatment, its low efficacy rates, higher complication rates including some serious side effects of systemic methotrexate and poor acceptance by patients deters its use certain patients.

Systematic reviews of its management approaches have failed to identify the leading method for treatment of cesarean scar pregnancy supporting the need for further studies in this field [8].

The anti-pregestational mifepristone has significantly lower side effect profile compared to methotrexate and use of this drug before the suction evacuation must

Figure 2: A follow up transvaginal ultrasound image performed 24 hours after the suction evacuation revealed 35 mm hemostatic clot occupying the site of her caesarean scar pregnancy.
be considered as a first line approach on such patient in whom systemic methotrexate is considered less effective.

Hemorrhage following evacuation is a recognised complication of this combined approach which was commonly managed with intrauterine Foley catheter tamponade. Our decision to use intravenous tranexamic acid during evacuation was supported by its proven efficacy in the treatment of postpartum hemorrhage, trauma and surgery, with no apparent increase in vascular occlusive events.

Given the successful outcome in our case with minimum morbidity, the option of oral mifepristone followed by suction evacuation with prophylactic use of tranexamic acid must be give consideration when CSP presents with a higher serum level of hCG, a live fetus and where the CSP is classified as Type-1.

Data Availability

No data were used to support this study.

Consent

The patient has given written informed consent for the case to be published not disclosing her identity.

All information has been deidentified to preserve confidentiality.

Conflicts of Interest

The authors have no conflicts of interest.

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