

# A Case Series of Four Cesarean Section Scar Ectopic Pregnancies

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## ABSTRACT

Cesarean section scar ectopic pregnancy is associated with high morbidity and mortality. With increasing number of cesarean sections being performed, it is likely that we will see increasing rates of cesarean section scar ectopic pregnancies. Ultrasound remains the mainstay of diagnosis however as in two of our cases the diagnosis may not be evident until during management of miscarriage. We present four cases at our hospital, two women with a history of two previous cesarean sections and two women with a history of four previous cesarean sections. We aim to highlight the importance of suspecting cesarean section scar ectopic pregnancy.

**Keywords:** Case report, Cesarean section, Cesarean scar ectopic pregnancy, Ectopic pregnancy.

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## INTRODUCTION

Ectopic pregnancy most commonly occurs within the fallopian tube, however, can occur within the ovary, cervix, abdomen, and also in previous uterine scars from the cesarean sections (CS).

Cesarean scar ectopic pregnancy is the rarest form of ectopic pregnancy which presents difficulties in both diagnosis and management.<sup>1,2</sup>

We present a case series of four cesarean scar ectopic pregnancies.

## CASE DESCRIPTION

### Case 1

A 34-year-old woman, with two previous CS, presented with ultrasound-confirmed non-continuing pregnancy at 9 weeks near the fundus. The patient opted for surgical management. On the introduction of suction curette into the endometrial cavity, there was profuse bleeding and the decision was taken for laparotomy due to suspicion of uterine perforation.

There was no evidence of uterine perforation, however, a swelling at the site of her previous uterine scar was noted. On opening the scar, placental tissue was demonstrated. As there was ongoing significant bleeding, a subtotal hysterectomy was undertaken. The total blood loss was 3500 mL.

Histopathology confirmed the diagnosis of cesarean scar ectopic pregnancy.

### Case 2

A 37-year-old woman with two previous CSs was diagnosed with non-continuing pregnancy by ultrasound scan; irregular 30 mm gestational sac with a small yolk sac and no fetal pole. The patient opted for medical management. She reported vaginal bleeding but did not pass any decidual tissue.

Ten weeks later the pregnancy test still remained positive and a further round of medical management. Ultrasound scan appearances were the same as the two previous scans. Serum  $\beta$ HCG was 26 IU/L. Conservative management with antibiotic cover was advised over the next week and a follow-up scan was arranged for 1 week.

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The ultrasound scan showed areas of mixed echoes at the cervix 54 mm in diameter. Patient was counselled regarding her options and chose manual vacuum aspiration (MVA).

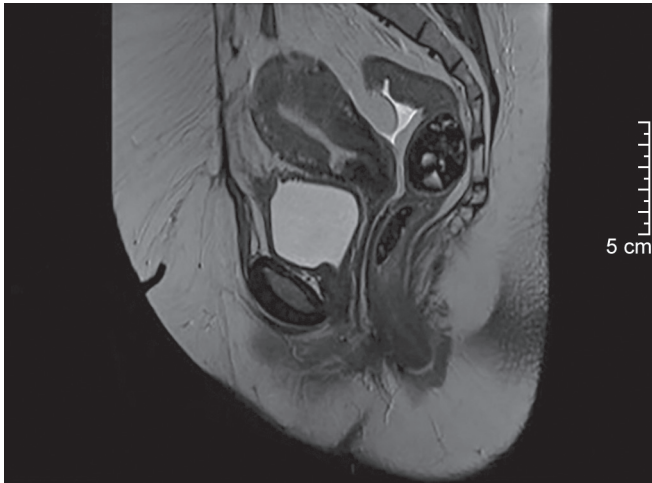
At MVA, only a small amount of tissue was obtained. This was followed by heavy vaginal bleeding and hemodynamic compromise. The bleeding settled with fluid resuscitation and bimanual compression. Ultrasound scan identified products of conception of 47 mm with peripheral Doppler flow at level of cesarean scar line confirming a cesarean scar ectopic pregnancy.

Following conservative management, the serum human chorionic gonadotropin (HCG) fell to <2, USS and subsequently an MRI scan confirmed complete resolution (Fig. 1).

### Case 3

A 42-year-old woman with four previous CSs presented to the Early Pregnancy Assessment Unit with an episode of PV bleeding. An ultrasound scan confirmed seven weeks' pregnancy with fetal heart activity low and towards the anterior border of the uterus raising the possibility of cesarean scar ectopic pregnancy. Repeat ultrasound confirmed likely diagnosis with thin myometrium at the level of pregnancy and previous scar.

The patient wished for a second opinion and scan images were sent to London for review. Decision was taken following a repeat scan at 8<sup>+4</sup> weeks' gestation which confirmed previous findings, to proceed with surgical management. The patient underwent MVA



**Fig. 1:** Sagittal view MRI pelvis—a ballooned defect to the anterior uterine wall lower segment in keeping with a resolving cesarean scar ectopic

under general anesthetic and ultrasound guidance. The procedure was uncomplicated and with minimal blood loss.

Human chorionic gonadotropin was tracked weekly from 19801 to 34, 4 weeks later.

#### Case 4

A 28-year-old woman with four previous CSs presented considering termination of pregnancy.

Ultrasound confirmed gestational sac with a fetal pole with crown-rump length both 1.8 mm. The gestational sac was adjacent to the previous CS scar with myometrial thickness at the level of the scar of 6.9 mm in keeping with cesarean scar pregnancy.

The patient opted for surgical management and underwent suction evacuation of the uterus under ultrasound guidance. The procedure was uncomplicated with minimal blood loss.

Human chorionic gonadotropin was tracked weekly from 13879 to 13, three weeks later.

#### DISCUSSION

As the incidence of CS rises, so does the incidence of cesarean scar ectopic pregnancies (Pillai et al.).<sup>3</sup> There is significant morbidity

and mortality associated with complications of this type of ectopic, in particular life-threatening hemorrhage and hysterectomy.<sup>4</sup> The high degree of suspicion is necessary to diagnose cesarean scar ectopic pregnancies. Diagnosis may well only be evident at the time of surgical management of non-continuing pregnancy. Ultrasound is the primary tool for diagnosis, however, MRI may be used to confirm the diagnosis.<sup>5</sup> Management can be surgical, medical or combination. Medical management is with the use of methotrexate.<sup>6</sup> Surgical management includes surgical evacuation, hysteroscopic resection, and hysterectomy.<sup>7</sup>

Given the difficulties in diagnosis and differing opinions with regard to management, it is important that cases are discussed in a multi-disciplinary format for a robust and safe management plan. Furthermore, given the rarity of these cases and the challenges encountered in diagnosis and management, it is important that these cases are discussed and disseminated for future knowledge.

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