

A Novel Approach to the Management of Cesarean Scar Ectopic Pregnancy: A Case Report

Vineet V Mishra¹, Smit B Solanki², Kunur Shah³, Rohina Aggarwal⁴, Sumesh Choudhary⁵

ABSTRACT

Cesarean scar pregnancy (CSP) is a life-threatening ectopic pregnancy that is frequently misdiagnosed. Ectopic pregnancy affects 2% of all pregnancies, while cesarean scar ectopic pregnancy affects about 1 in 2,000 of all pregnancies. Cesarean scar pregnancy is likely to become more common as cesarean section rates rise, resulting in complications such as uterine rupture and hemorrhage. We discuss the case of a 26-year-old woman who had previously undergone one cesarean section and was diagnosed with a type I cesarean section scar ectopic pregnancy based on transvaginal ultrasonography. Patient was managed by aspiration under ultrasound guidance which resulted in avoiding major invasive procedures. The precise cause of pouch or niche formation is still unsolved, yet the risk factors for its growth are commonly known. They include hysterotomy scar site, history of multiple previous cesarean section, technique of suturing, and diabetes/smoking. Here, with this unique technique, we emphasize the need of early detection and treatment of CSP.

Keywords: Aspiration, Cesarean scar, Diagnosis, Ectopic pregnancy.

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INTRODUCTION

Scar ectopic pregnancy is a rare and serious type of aberrant embryo implantation in the myometrium with fibrous tissue from a prior cesarean scar (CS); dilatation and curettage; hysterotomy; and uterine surgery such as myomectomy and hysteroscopy. Following a cesarean surgery, however, scar ectopic pregnancy is the most prevalent. In 1978, the first case of an ectopic pregnancy caused by a CS was published in the English medical literature.¹ With increasing information regarding CSP, there is a significant increase in CSP due to the increased rate of cesarean section. Cesarean scar pregnancy occurs in 1 in every 1,800–2,000 pregnancies, with a risk of 0.2% in women who have had a previous cesarean surgery and 5.8% of all ectopic pregnancies.² In a study of 45 women with cesarean scar ectopic pregnancies, 42 of them (93%) had only one cesarean procedure, indicating that multiple cesarean sections may not increase the risk of CS ectopic pregnancy.³ Scar ectopic pregnancy occurred in 52% of cases after one cesarean section, 36% after two cesarean sections, and 12% after three or more cesarean sections, according to a systemic review.⁴

CASE DESCRIPTION

A 26-year-old female (G2P1A0L1) presented for routine checkup with 1 month and 7 days of amenorrhea. She had no complaints of abdomen pain or bleeding and no signs of discomfort. She had undergone cesarean section for breech presentation 4 years back under spinal anesthesia without any complications. She had no other history of medical illness or surgery. She had regular menses with moderate flow for 5–7 days. She presented with urinary pregnancy test (UPT) positive at 4 weeks and 7 days. She was vitally stable. She had a soft, nontender abdomen with healthy cervix and vagina. On per vaginal examination, her uterus was just bulky. Her blood counts were within normal limits. Transvaginal ultrasonography findings showed empty uterus, empty cervical canal, development of gestational sac in anterior part of lower uterine segment, and an absence of myometrium between the

^{1–5}Department of Obstetrics and Gynaecology, Institute of Kidney Diseases and Research Centre-ITS, Ahmedabad, Gujarat, India

Corresponding Author: Vineet V Mishra, Department of Obstetrics and Gynaecology, Institute of Kidney Diseases and Research Centre-ITS, Ahmedabad, Gujarat, India, e-mail: vineet.mishra.ikdrc@gmail.com

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bladder wall and the gestational sac, (GS) suggestive of CS ectopic grade I (Figs 1 and 2). Henceforth, she was advised for serum beta-HCG levels. Her beta-HCG level was 5390 IU/L at presentation.

After discussion with the patient regarding her potential threats of continuation of pregnancy, she underwent transvaginal ultrasound-guided aspiration under general anesthesia and the



Fig. 1: Scar ectopic

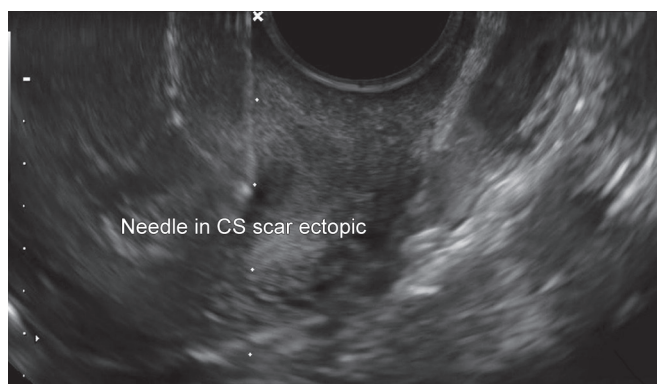


Fig. 2: Needle in CS scar ectopic

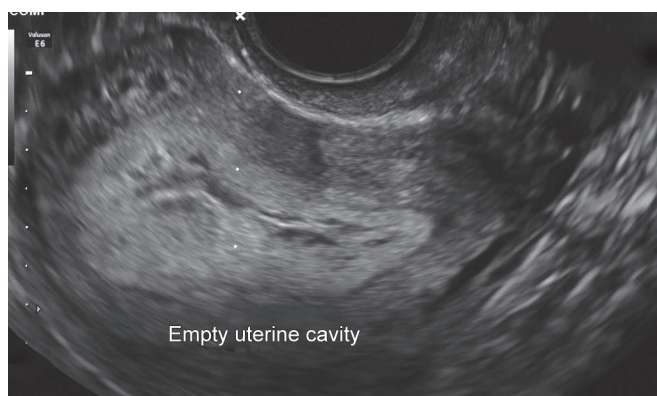


Fig. 3: Empty uterine cavity

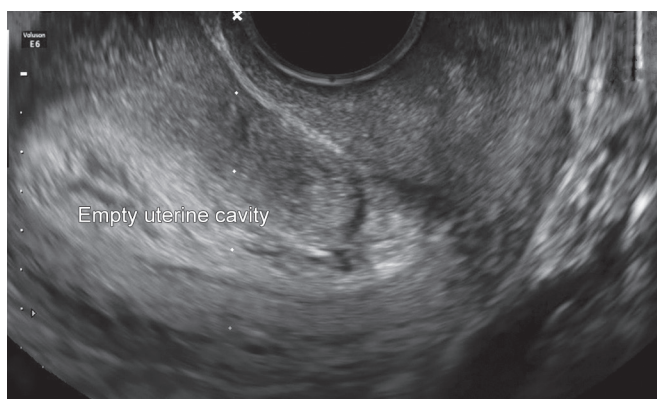


Fig. 4: Empty cavity after aspiration

aspirated material was sent for histopathological examination (Figs 3 and 4).

She was discharged on second postoperative day.

Her serum beta-HCG level was repeated after 48 hours of the first report which was 6197 IU/L.

She was called for follow-up ultrasound after 1 week and which was suggestive of endogenous growth of gestational sac and then the patient was managed with dilatation and evacuation and later serum beta-HCG levels showed declining trends.

DISCUSSION

At 4 weeks and 7 days, we present a case of cesarean scar ectopic pregnancy. She had history of cesarean section 4 years back for breech. She had no other complaints. Transvaginal ultrasound was used for the diagnosis, and ultrasound-guided aspiration was done for management.

Ectopic pregnancy may present with abdomen pain or with only bleeding.¹ Our patient was totally asymptomatic at presentation. These pregnancies being life-threatening are essential to make early diagnosis and manage effectively to reduce mortality and morbidity.³

Females who use ovulation induction drugs, infertility, previous pelvic or abdominal surgery, use of contraceptive pills in the last 6 months, present or history of use of an intrauterine contraceptive device (IUD) in the last 6 months, history of ectopic pregnancy, *in vitro* fertilization, history of documented pelvic inflammatory disease (PID), documented tubal pathology, and smoking³ are all risk factors.

CSP Grading System on Ultrasound

Grade I CSP indicates that the CSP is lodged in less than one-half of the thickness of the lower anterior corpus. Cesarean scar pregnancy in grade II occupied more than half the thickness of the lower anterior corpus. The GS bulged out the overlying myometrium and uterine serosa in grade III CSP. The GS formed an amorphous tumor with abundant vascularity at the CS in grade IV CSP.⁵

Current evidence is limited and indicates high rates of adverse maternal outcomes like profuse bleeding, uterine rupture, and need for hysterectomy (Table 1).

For grade I CSP, transcervical resection is usually sufficient; however, for grades III and IV CSP, hysterotomy or even hysterectomy is usually required.⁶ Many patients received systemic chemotherapy, which included an intramuscular injection of MTX 1 mg/kg and tetrahydrofolate 0.1 mg/kg. Other surgical options for scar ectopic pregnancy care include transcervical excision by hysteroscopy, hysterectomy by laparoscopy or mini-laparotomy,

Table 1: 10-point scoring system for assessing the severity of cesarean scar pregnancy⁶

Characteristic	Classification	Score
Remnant myometrial thickness	>3	0
	1-3	0.54
	<1	2.92
Grading of color Doppler signal	I	0
	II	0.21
	III	3.01
Location of gestational sac	Superficial	0
	Partial	0.13
	Complete	0.52
Number of cesarean sections	1	0
	2	0.11
	3	0.23
Fetal heartbeat	Negative	0
	Positive	1.23
Diameter of gestational sac (mm)	≤25	0
	>25	2.1

and hysterectomy.⁷ The anterior branch of the internal iliac artery was catheterized selectively in several cases of severe bleeding, followed by embolization using gel foam sponge particles. However, many of the techniques listed above are complicated and necessitate specialized knowledge. Despite the fact that many treatments exist, there is no universal agreement on how to control CSP.

Women scoring below 4 could be successfully treated with aspiration/evacuation alone, according to the initial creation of the 10-point scoring system for the treatment of cesarean scar ectopic pregnancy.⁶ Scar ectopic pregnancy has been treated with a variety of treatments all around the world. In this case, we are taking a completely different strategy. Aspiration was done with ultrasound guidance. This method is unique in that it has fewer consequences and is a less intrusive and novel technique of treating scar ectopic scars, as it is a day-care procedure.

CONCLUSION

Early detection and active therapy of ectopic scar pregnancy can greatly minimize mortality and morbidity, as seen in our instance. Abnormally rising β HCG levels, clinical suspicion, and ultrasonographic guidance can lead to the early diagnosis and its successful management.

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