

LAPAROSCOPIC MANAGEMENT OF AN ECTOPIC PREGNANCY IN A PREVIOUS CAESAREAN SECTION SCAR: A CASE REPORT

Obstetrics & Gynecology

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ABSTRACT

Caesarean scar ectopic is one of the rarest forms of ectopic pregnancy [3]. The diagnosis and treatment of it is challenging. It is important to diagnose the condition as early as possible in order to administer appropriate, timely treatment and to avoid complications. A rare case of laparoscopic management of an ectopic pregnancy in a previous Caesarean section scar is reported here. Laparoscopy enabled the successful treatment of an unruptured ectopic pregnancy in a previous Caesarean scar and made it possible to preserve the patient's reproductive capability. In this report we present a case of 30 year old gravida 2, para 1, living 1 with cesarean scar ectopic pregnancy managed laparoscopically.

KEYWORDS

ectopic pregnancy, caesarean section scar, laparoscopy

INTRODUCTION

Caesarean scar pregnancy is an ectopic pregnancy implanted in the myometrium at the site of a previous caesarean scar [1]. It is a rare and life-threatening condition. However, incidence of such cases seems to be on the rise and has increased alongside the cesarean delivery rate [1] and also more widespread use of transvaginal scan allows earlier detection of such pregnancies [2]. This type of pregnancy is prone for complications like uterine rupture, life-threatening hemorrhage, and hypovolemic shock.

Several types of conservative treatment have been used such as dilatation and curettage, excision of trophoblastic tissues (laparotomy or laparoscopy) [3], local and/or systemic administration of methotrexate, bilateral hypogastric artery ligation associated with trophoblastic evacuation, and selective uterine artery embolization combined with curettage and/or MTX administration [4,5].

We describe the case of an ectopic gestation in a previous Caesarean section scar to be diagnosed by ultrasound and managed successfully by operative laparoscopy.

CASE REPORT

A 30 year old woman, gravida 2, para 1, living 1, was admitted to our hospital with complaints of bleeding per vagina with pain abdomen since 2 days. She had undergone term transverse lower segment Caesarean section 7 years previously and was then transfused with 1 pint packed cell in view of low hemoglobin. A urine pregnancy test was positive. Abdominal ultrasound revealed a single live pregnancy of 7.4 weeks at lower uterine segment with thinning and stretching of myometrium at scar site more on maternal side. Doppler showed significant blood flow in the area of the mass. Quantitative assay of the β -subunit of human chorionic gonadotrophin (β -HCG) was 85,000 mIU/ml.

Patient was posted for diagnostic and possible operative laparoscopy. Under general endotracheal anesthesia, the patient was placed in the 15 degree Trendelenburg position. A Foley catheter was inserted pre-operatively in order to enable continuous monitoring of urine output during the operation. The Veress needle was inserted through a small incision just inferior to the umbilicus. Pneumoperitoneum was created by insufflating carbon dioxide at a maximal pressure of 15 mm Hg. After the Veress needle was removed, an operative 10 mm trocar was inserted into the abdomen. A laparoscope with an attached camera was inserted through the cannula to visualize the intra-abdominal organs, mild hemoperitoneum was noted. Four additional 5 mm trocars were inserted at the level of the anterior superior iliac spine, lateral to the epigastric blood vessels. Uterus was seen soft, bulky, around 10 weeks size. Bilateral adnexa were normal. Bladder was adherent to anterior uterine wall. The adhesion caused by anterior uterine wall was removed carefully and completely.

We began with surgical laparoscopy but with staff and equipment prepared for immediate laparotomy if required. A low transverse incision was taken on the previous scar, gestational sac was visualized densely adhered to the scar. Dark reddish tissue suggestive of the products of conception was removed using grasping forceps. One layer of continuous endoscopic sutures along the affected uterine wall was made with 1-0 Vicryl. Homeostasis was achieved using bipolar forceps at 20 W. Gestational tissue was removed from the vaginal end. The total operative time was 55 min. Blood loss was limited. Histopathology revealed decidual and chorionic villi which was consistent with ectopic pregnancy. The patient was discharged on postoperative day three after an uneventful recovery. No subsequent abnormal uterine bleeding was noted during regular follow-up for 6 months.

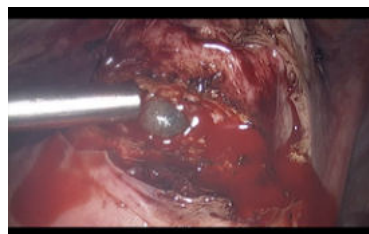


fig1. Gestational sac visualized densely adhered to the previous caesarean scar

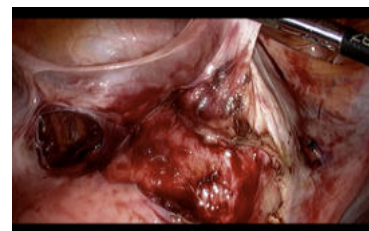


fig2. Bladder adherent to anterior uterine wall

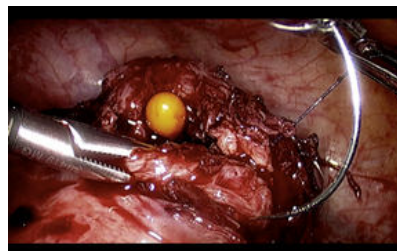


fig3. Dark reddish tissue suggestive of the products of conception was removed using grasping forceps.

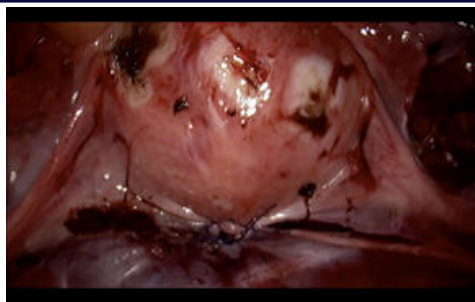


fig4. Layer of continuous endoscopic sutures along the affected uterine wall

DISCUSSION:

Cesarean scar pregnancy is the rarest kind of ectopic pregnancy, but because of the increasing number of cesarean deliveries its incidence has been rising to be about 1/2000 normal pregnancy [1,6]. Its rate accounts for 6% of ectopic pregnancies among women with a prior cesarean delivery [6,7].

Although many hypotheses have been proposed to account for this rare condition, the most reasonable seems to be migration of the embryo through either the wedge defect in the lower uterine segment or a microscopic fistula within the scar [8, 9]. Adenomyosis, in vitro fertilization, previous dilation and curettage, and manual removal of placenta are risk factors [7, 8, 9].

The clinical presentation ranges from vaginal bleeding with or without pain to uterine rupture and hypovolemic shock [8]. Although the use of ultrasonography in the diagnosis of ectopic pregnancy is well established (Cava and Russell, 1978; Ginsburg et al., 1989; Chazotte and Cohen, 1990; Brown and Doubilet, 1994; Timor-Tritsch et al., 1994; Herman et al., 1995), differential diagnosis between spontaneous abortion in progress, cervico-isthmic pregnancy and ectopic pregnancy developing in a previous Caesarean section scar remains difficult.

Although it was difficult to determine the size and status of the ectopic pregnancy pre-operatively, careful ultrasound examination might be of use in making the diagnosis of early ectopic gestation. The appearance of an anterior bulging mass outside the contour of the uterus during pregnancy should raise the suspicion of ectopic pregnancy, especially when the patient has received a prior Caesarean section. Because of the risk of uterine rupture and uncontrollable bleeding, hysterectomy is an acceptable initial choice in those desiring sterilization. It is sometimes a necessary option with heavy uncontrolled bleeding. Fertility-preserving options include systemic or locally injected methotrexate, either alone or combined with conservative surgery (Shen, 2012; Timor-Tritsch, 2012b; Yang, 2010). Surgeries include visually guided suction curettage or transvaginal aspiration, hysteroscopic removal, or isthmic excision. (Williams). No modality is entirely reliable, and none can guarantee uterine integrity.

The effectiveness of operative laparoscopy in the treatment of the reproductive and gynecological lesion is well established. In our patient, the findings on abdominal ultrasound and Doppler sonography, enabled us to perform operative laparoscopy as a diagnostic modality. Therefore, in addition to its value as a diagnostic tool, laparoscopy enabled the successful treatment of an unruptured ectopic pregnancy in a previous Caesarean scar, making it possible to avoid unnecessary exploratory laparotomy and preserve the patient's reproductive capability.

CONCLUSIONS

The ectopic pregnancy within the scar of a previous cesarean delivery can lead to uterine rupture and life-threatening intraperitoneal hemorrhage during the first trimester of pregnancy.

Though a rare event, the incidence of cesarean scar pregnancy seems to be on the rise. An obstetrician is likely to encounter this entity in his or her lifetime.

In this case, laparoscopy proved to be a reliable method for diagnosing and managing ectopic pregnancy in a previous Caesarean section scar and it enabled uterine preservation.

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