



“FROM SCAR TO STRENGTH : OVERCOMING CESAREAN SCAR ECTOPIC PREGNANCY”

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ABSTRACT

A 27-year-old G3P2L2 with a history of two previous LSCS, presented with spotting per vagina and abdominal pain for 2 days. Ultrasound showed a scar ectopic pregnancy at 10.1 weeks gestation. She had no significant medical history. Clinical examination revealed a soft abdomen and a uterus consistent with 10-12 weeks of gestation. Laboratory results were within normal limits. An emergency exploratory laparotomy was performed, revealing a 4 x 4 cm gestational sac in the lower uterine segment. The sac was excised, and the patient underwent bilateral tubal ligation. The postoperative course was uneventful, and the patient was discharged on day 5.

KEYWORDS

Scar ectopic pregnancy, Cesarean section, Ultrasonography

INTRODUCTION

Scar ectopic pregnancy is a rare but life-threatening condition characterized by abnormal implantation of embryo within the myometrium and fibrous tissues in a previous scar on the uterus, especially following caesarean section. In 1978, the first case of a caesarean scar ectopic pregnancy was reported in English medical literature [1]. The incidence of scar ectopic pregnancy has increased due to the rising rate of caesarean sections. The incidence of scar ectopic pregnancy varies from 1:1800 to 2216 pregnancies with rate of 0.15 % in women with previous caesarean section and 6.1 % of all ectopic pregnancies [2, 3]. Here we discuss a case of scar ectopic pregnancy which was managed promptly due to early diagnosis of Ultrasonography, thus improving patient outcome.

Case Study

A 27-year-old G3P2L2 with a history of two previous lower segment caesarean sections (LSCS), presented to tertiary care hospital in emergency with abdominal pain and spotting per vagina of 2 days duration.. She had no significant medical or surgical illness or any other operative history. On examination, she was afebrile, with a pulse rate of 90/min and blood pressure of 120/80 mmHg. Abdominal examination revealed soft abdomen with no guarding or rigidity. On vaginal examination, uterus consistent with 10-12 weeks of gestation, with bilateral fornices free and non-tender. Ultrasound scan done which revealed a scar ectopic pregnancy at 10.1 weeks of gestation, located in the lower anterior uterine segment with marked thinning of overlying myometrium. The residual myometrial thickness (RMT) is 2.5mm

All investigations were within normal limits. Emergency exploratory laparotomy was done .Intraoperatively dense adhesions are seen between the uterovesical fold and the site of uterine scar. The uterovesical fold dissected by sharp and blunt dissection and bladder pushed down following which the uterine scar with thinned out serosa and a gestational sac 4x4 cm is visualized .

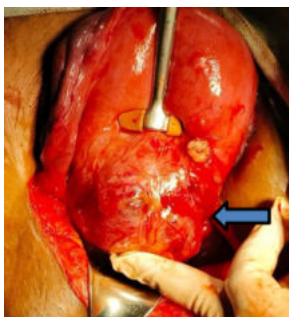


Fig 1. Gestational sac measuring 4 x 4 cm was found on the lower uterine segment with a thin layer of serosa over it

An Incision is made over lower uterine segment ,fetus with Gestational sac (Gsac) with placenta removed out completely, uterine reconstruction done by suturing uterine incision in two layers by vicryl no . 1 and catgut no 2-0. Bilateral tubal ligation done by modified pomoroy's method . Hemostasis is checked and achieved in systolic blood pressure (SBP) of 110 mmHg. Abdomen closed in layers .

The patient remained hemodynamically stable with adequate urine output and no active bleeding. Dressing done on 4th day post operatively showed healthy sutures The patient was discharged on day 5, and wound healing was satisfactory. Suture removal done on day 8 ,wound was healthy and no discharge from wound seen.



Fig 2 Fetus delivering out through incision



Fig 3. Repair of uterus in 3 layers.

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operatively showed healthy sutures The patient was discharged on day 5, and wound healing was satisfactory. Suture removal done on day 8 ,wound was healthy and no discharge from wound seen.

DISCUSSION-

Scar ectopic pregnancy is a life threatening but treatable condition if early diagnosed.

There are two types of scar ectopic pregnancy depending on the growth of Gsac

1. Type 1 or endogenic scar ectopic pregnancy : implantation occurs on the scar and the gestational sac grows towards the cervico-isthmic or uterine cavity
2. Type 2 or exogenic scar ectopic pregnancy : occurs when the gestational sac is deeply embedded in the scar and the surrounding myometrium and grows towards the bladder

The most probable mechanism is that there is invasion of the myometrium through a microtubular tract which develops due to poor healing of the previous trauma between the caesarean section scar and the endometrial canal [4]. As per current literature, no clear correlation between the risk of scar ectopic pregnancy and the number of previous caesarean section is seen. Elective cesareans section for breech presentation is most frequently associated. Such a tract can also develop from the trauma because of other uterine surgeries including curettage, myomectomy, metroplasty, hysteroscopy and manual removal of placenta. In this case, USG showed exophytic growth of Gsac with RMT of 2.5mm.

Most commonly the patient will present with painless vaginal bleeding or is asymptomatic with an incidental finding on USG. The first trimester USG has pivotal role in diagnosis of abnormal implantation of Gsac in previous scar [5]. With easy accessibility of USG and increasing patient awareness the diagnosis has become easier. Diagnosis in later trimesters would cause a substantial risk of uterine rupture with hemorrhage leading to hysterectomy causing significant morbidity. With increasing gestational age, the risk of placenta accreta increases in such cases. In this case, patient presented with spotting per vaginum and early USG showing caesarean scar ectopic pregnancy, the early USG prompting the diagnosis and enabling immediate management of the case and deferring life threatening complications.

The options for management includes Medical and surgical management. Management of scar ectopic pregnancy depends on hemodynamic stability of the patient, the gestational age at presentation and the RMT, β -hCG value. Medical management can be done when patient is asymptomatic , Gsac <8 weeks or ≤ 3 cm ,Serum β -hCG levels <5000 IU and RMT >3mm. Medical treatments include Local injection of embryocide agents like KCL or methotrexate, with the later being preferred agent and Systemic methotrexate therapy [3]. When criteria for medical management is not fulfilled ,Surgical management is recommended. Surgical options include Hysteroscopic evacuation, Laparoscopic removal or exploratory laparotomy.

In USG ,thinning of overlying myometrium is assessed. If overlying thickness is more than 2.5mm and patient is vitally stable , patient is managed by elective laparoscopic evacuation. If patient is vitally unstable and RMT ≤ 2.5 mm, emergency management is done.

Successful laparoscopic resection of scar pregnancy was first performed by Lee et al. [6,7] Principles of laparoscopic surgery are: scar pregnancy is excised and removed in end bag, bleeding is minimized by local injection of vasopressin, haemostasis is achieved by bipolar diathermy, and the uterine defect is closed by endoscopic suturing. Laparoscopic approach is more justifiable when scar pregnancy is deeply implanted and grows towards abdominal cavity and bladder

Hysterectomy reserved for cases of hemodynamic instability with uterine rupture secondary to severe hemorrhage.

CONCLUSIONS

Early detection and management of scar ectopic pregnancy is pivotal for optimizing patient outcomes and reducing morbidity as well as mortality. First-trimester ultrasound is the investigation of choice for the diagnosis and locating the implantation of Gsac. A multidisciplinary approach is recommended for effective management.

To prevent incidence of scar ectopic pregnancy audit of caesarean sections is essential. Timely detection and management lead to better patient outcomes.

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