

## A Rare Case of Scar Ectopic Pregnancy

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### Abstract

### Case Report

Scar ectopic pregnancy is the rarest form of ectopic pregnancy. Incidence is 1:1800 of all pregnancies and 1.2% of all ectopic pregnancies. It is the abnormal implantation of embryo within the myometrium and fibrous tissue in previous scar of the uterus, following caesarean section. Accurate early diagnosis and effective management are important in reducing the maternal mortality. Early diagnosis is done with the help of TVS and serum beta HCG levels. MRI can be used for confirmation of the findings of ultrasound. Effective treatment in the form of termination of pregnancy before rupture and resection of pregnancy mass followed by proper suturing, which will preserve future fertility, should be carried out. We are reporting a rare case of G3P2L2 with previous two caesarean deliveries, diagnosed as caesarean scar ectopic pregnancy with the help of ultrasound and MRI. Patient underwent laparotomy and the recovery was uneventful.

**Keywords:** Scar ectopic pregnancy.

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## INTRODUCTION

Scar ectopic pregnancy is the rarest form of ectopic pregnancy. Incidence is 1:1800 of all pregnancies and 1.2% of all ectopic pregnancies. We are reporting a rare case of G3P2L2 with previous two caesarean deliveries, diagnosed as caesarean scar ectopic pregnancy with the help of ultrasound and MRI.

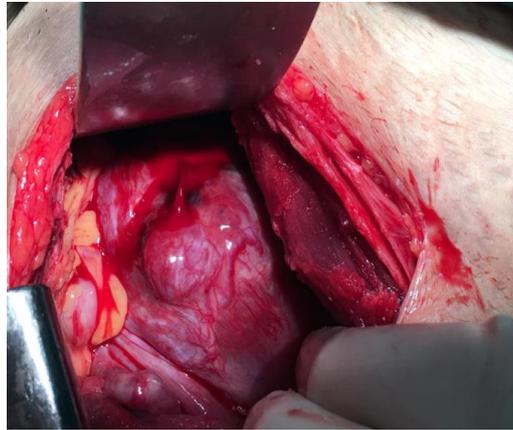
## CASE REPORT

A 29 years old patient with two and a half months of amenorrhoea, resident of Ahmednagar, educated up to 10<sup>th</sup> standard, presented to the outpatient department with complaints of pain in the lower abdomen, since one week, intermittent PV spotting, since one month and generalised weakness, since one month. Her obstetric score was G3P2L2 with previous two caesarean sections. Her first C-section was done in view of cephalopelvic disproportion and second one was due to previous LSCS. Her general examination revealed pallor and tachycardia. There was tenderness present in the hypogastric region. Per speculum examination revealed that the cervix was taken up with bluish discoloration present. On bimanual examination, it was found that the uterus was bulky with firm consistency. There was boggy present in the anterior fornix with anterior forniceal tenderness. The cervix was posterior and soft. The internal os was closed. Cervical motion tenderness was absent. On

routine blood investigations, it was found that her Hb was 7.1 gm %. The urine pregnancy test was positive and her serum beta hCG was >5000 mIU/ml and the value after 48 hours was 5200 mIU/ml. On trans vaginal ultrasound it was seen that the gestational sac was present in the lower segment showing fetal pole, yolk sac and cardiac activity, surrounded by hypoechoic area s/o scar pregnancy. A thin layer of myometrium was seen surrounding the G-sac which suggested that the bladder was intact. The CRL was 23mm, corresponding to 9 weeks of gestation. MRI pelvis confirmed the findings of TVS. Empty uterine and cervical cavities were noted and a gestational sac of 6 x 5 cm and fetus was seen embedded within the site of previous caesarean scar, left antero-laterally, with 2-3 mm thin myometrium adjacent to the sac. Bulging of the sac through the myometrium was noted, without invasion of the urinary bladder. Findings were suggestive of unruptured caesarean scar ectopic pregnancy of approximate 9-10 weeks of gestation. In view of scar ectopic pregnancy of 9 weeks gestation, as fetal cardiac activity was present with serum beta HCG value > 5000 mIU/mL, decision of laparotomy was taken. Risk of need of intraoperative obstetric hysterectomy was well-informed to the patient the relatives. Preoperatively one packed cell transfusion was given and keeping the adequate blood ready the patient was shifted to O.T. Under spinal anaesthesia, Pfannensteil incision was taken over the lower abdomen and the abdomen was

opened in layers. Intra operatively, bulging of the anterior wall of uterus at the level of isthmus was seen with impending rupture. A transverse incision was taken over the uterus and gestational sac was seen bulging. The sac was ruptured and fetus with placenta was delivered out. Uterine cavity was explored with the help of fingers, confirming the implantation at the

previous scar site. Hemostasis was achieved. Uterine incision was sutured with the vicryl 1-0, in single layer continuous interlocking manner, followed by tubectomy. The postoperative recovery of the patient was uneventful. The patient was followed up with serum beta hCG values till the values became equal to the non-pregnant levels.



**Fig-1: Intraoperative picture**



**Fig-2: Specimen**



**Fig-3: MRI pelvis**



**Fig-4: USG pelvis**

## DISCUSSION

Ectopic pregnancy is abnormal implantation and development of embryo outside the normal endometrial cavity. Scar pregnancy is the rarest form of ectopic pregnancy. Incidence is 1:1800 of all pregnancies and 1.2% of all ectopic pregnancies [1]. It is the abnormal implantation of embryo within the myometrium and fibrous tissue in previous scar of the uterus, following caesarean section, hysterotomy, D and C, myomectomy, hysteroscopy or manual removal of placenta. It is seen most commonly after LSCS [2]. The pathophysiology of scar ectopic pregnancy is that it occurs due to a defect in the scar in the form of microtubular tracts, which develops due to poor healing of the previous trauma caused by the operative procedure. As per another theory in absence of previous uterine surgery caesarean ectopic pregnancy can occur due to trauma done in assisted reproduction techniques [3]. The mean gestational age is 7.5 +/- 2.5 weeks. Scar ectopic pregnancy can lead to rupture, leading to even death. At the time of diagnosis during the first trimester, approximately 30% of women may have no symptoms at all [4]. Bleeding and pain, as in our case, are the most common signs at presentation. Recognition of scar ectopic appearances on ultrasound is essential, since any delay in diagnosis may result in uterine rupture, haemorrhage and subsequent hysterectomy with loss of future fertility. Evidence also suggests that scar ectopic pregnancies, if untreated, may evolve into morbidly adherent placenta [5].

Sonographic criteria during evaluation of cases of suspected scar ectopic must include the following:

- Diagnosis of an empty uterine cavity
- Diagnosis of an empty cervical canal
- Development of the sac in the anterior isthmic segment
- Circumferential flow using colour Doppler
- Absent or diminished myometrial thickness between the sac and maternal bladder [6,7].

Colour Doppler can be a useful tool for diagnosing a Caesarean scar ectopic pregnancy. A live pregnancy would show marked circumferential peritrophoblastic vascularity surrounding the GS<sup>8</sup>. Additionally, a normal waveform in early pregnancy demonstrates prominent high velocity with low impedance flow. Conversely, a missed miscarriage will show no peritrophoblastic flow. The 'sliding sign' is also helpful when trying to differentiate between incomplete miscarriage and cervical ectopic pregnancy [3]. By using gentle pressure with the transducer, the GS of an incomplete miscarriage will move whereas cervical and scar ectopic gestations will be fixed. Accurate early diagnosis and effective management are important in reducing the maternal mortality. Early diagnosis is done with the help of TVS and serum beta HCG levels. Effective treatment in the form of termination of pregnancy before rupture and resection of pregnancy mass followed by proper suturing, which will preserve future fertility, should be carried out [9]. The availability of Uterine Artery Embolization (UAE) in cases of Caesarean ectopic pregnancies treated has contributed to successful management without any haemorrhage [10].

## CONCLUSION

Caesarean scar ectopic pregnancies can have very fatal and poor outcomes, including uterine rupture, massive haemorrhage and maternal death. Thus, it is important that early and accurate diagnosis of Caesarean scar pregnancy is obtained in order to avoid complications and preserve fertility.

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