

## Case Series On Caeserean Scar Ectopic Pregnancy: A Rising Trend

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### Introduction

Caeserean scar pregnancy is a rarest form of ectopic pregnancy.

It is the implantation of embryo in the myometrial defect of any previous uterine surgery mostly caeserean section, myomectomy, hysterotomy and in some minor procedure like dilatation and curettage etc. Its incidence was uncommon. But over a couple of decade its incidence has increased. The main reason behind its increased incidence is the increase in rate of caeserean section from 5% to 15% world wide. The incidence of caeserean scar ectopic is 1/2800 pregnancies. It is associated with complications such as uterine rupture, uncontrolled bleeding which may be life threatening and can result in hysterectomy. Ultrasound can be an essential tool for diagnosis of caeserean scar pregnancy which can decrease maternal mortality and morbidity. It should be always clinically suspected.

### Case Reports

CASE 1: A 26 year old second gravida para 1 living 1 with prior lower segment caeserean section 5 years back ,at 22 weeks of gestational age came to OPD for routine antenatal checkup. Her previous medical reports of one antenatal check up & blood investigations were normal done in a near by PHC.

On examination, her vitals were stable. On per abdominal examination, the height of the uterus was 16 - 18 weeks and fetal parts were not felt. Her transabdominal ultrasound report showed the size of uterus as 14 cm 8cm 7cm\* and it contains mixed echogenic tissue suggestive of missed abortion / molar pregnancy.

All her routine investigations were repeated and were normal. One pint blood requisition have been advised and donor was kept ready. She was planned for suction and evacuation under anaesthesia after priming with Tab Misoprostol.

During the procedure there was torrential bleeding with the removal of trace amount of tissues. The procedure was abandoned and bleeding was controlled by Inj. oxytocin, Inj. tranexa, Inj. methergine, uterine massage with uterine packing. The patient was counselled regarding the need of laparotomy under anaesthesia.

Next day in OT after keeping two pint of blood in hand, suction and evacuation was attempted once again which resulted in uncontrollable bleeding leading to abandonment of procedure and laparotomy was planned immediately.

On laparotomy, the fundus of the uterus and cervix was normal. There was a bulging of previous caeserean scar area with increased vascularity, thinning and

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bluish coloration suggestive of caesarean scar ectopic pregnancy. Hysterectomy was done. On cut section, endometrial lining at fundus and cervix was normal and LSCS scar area was filled with placental tissue with myometrial invasion.

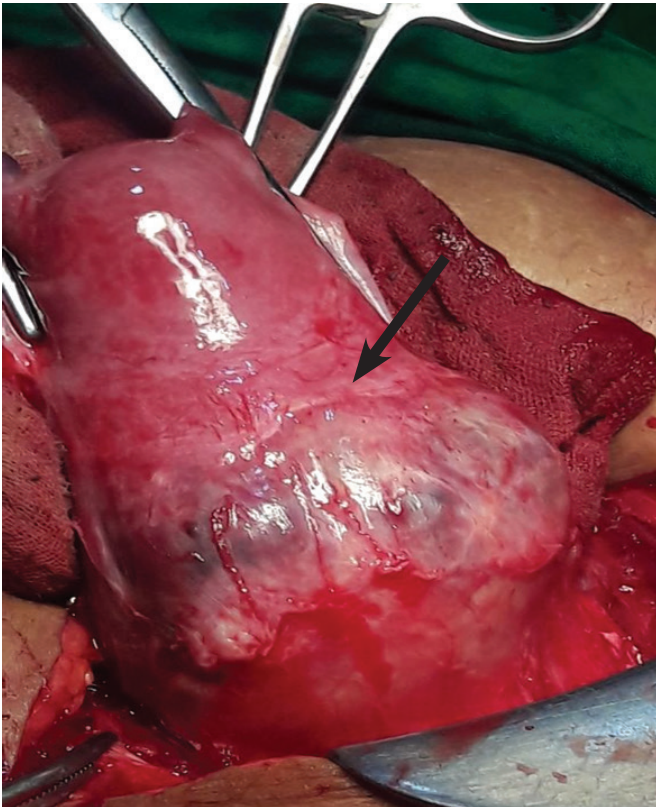


Fig 1.1: Intraoperative finding of caesarean scar ectopic at the lower uterine segment

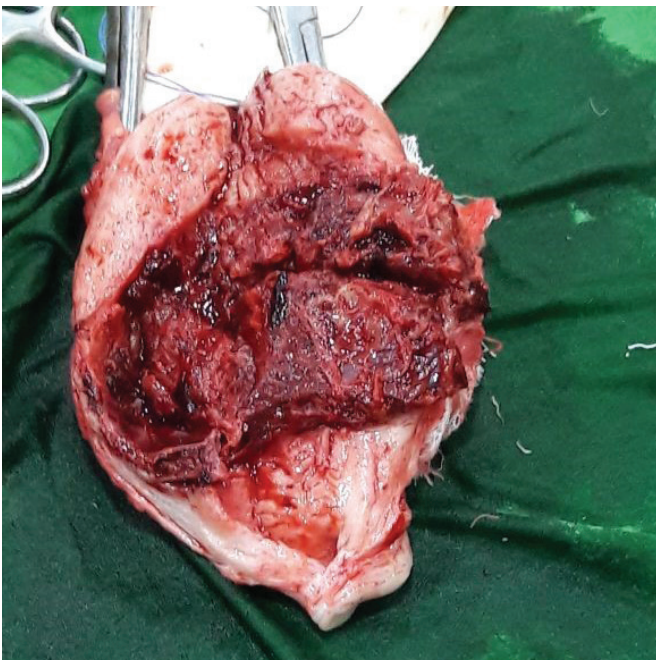


Fig 1.2: On cut section, placental tissue invasion into myometrium

CASE 2: A 28 year old 3rd gravida , para 1 living 1 abortion 1 with prior history of lower segment caesarean section done 3 year back came to OPD with complaint of on and off bleeding per vaginum. She had history of suction and evacuation at 8 weeks of amenorrhoea in private clinic for missed abortion one month back. Her ultrasound report suggested that the uterine cavity is empty and there is fibroid of 3cm \*2cm present in anterior wall of uterus behind the bladder. The value of Beta HCG was 221 IU/ml. CT scan revealed empty uterine cavity with anterior wall fibroid of size 3\*2.5 cm. She was planned for hysteroscopy under anaesthesia. On Hysteroscopy, the uterine cavity was normal and necrotic fragmented tissue were hanging from anterior wall of uterus suggestive of caesarean scar ectopic. She was planned for laparotomy. On laparotomy, uterus was normal and a bulge was present at previous scar area. After injecting vasopressin,a cut was made on the bulge site. The placental tissues were removed and the defect was sutured with vicryl.

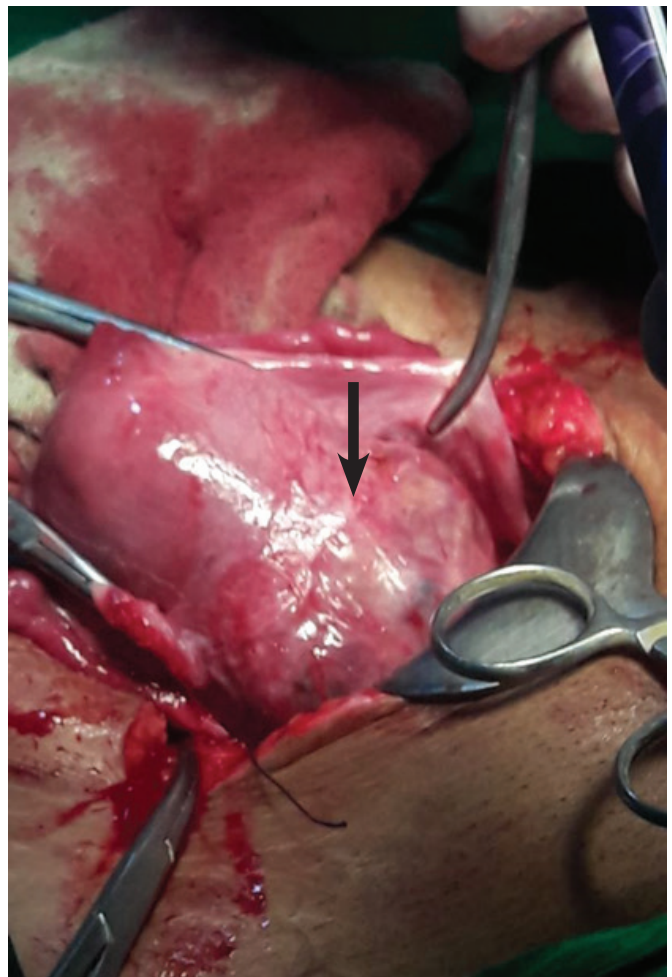


Fig 2.1: Intraoperative finding of bulge at the previous lower caesarean scar site

CASE 3: A 26 year old gravida 2 para 1 living 1 with previous LSCS with last child birth 1 year back at 8 weeks of gestational age complained of bleeding per vaginum. Earlier she had taken Tab MTP kit and had underwent suction and evacuation for incomplete abortion. On examination, she was vitally stable. On per abdominal examination, abdomen was soft and non tender. On per vaginal examination, uterus was found bulky, mild tenderness present and bilateral fornices were free. On USG, uterine cavity was empty with presence of a gestational sac like structure with a tiny fetal pole without any cardiac activity on the anterior wall of uterus. Serum Beta HCG reported as 325IU/ml. She was planned for medical management. Single dose of inj methotrexate of dose 50mg/m<sup>2</sup> was given. The serum beta hcg level declined but there was persistence of sonographic findings and she again complained of bleeding per vaginum. She was planned for laparotomy. There was a bluish colored bulging on the anterior wall of uterus suggestive of caesarean scar ectopic. After injecting vasopressin, excision of ectopic tissue with repair of the uterus was done.

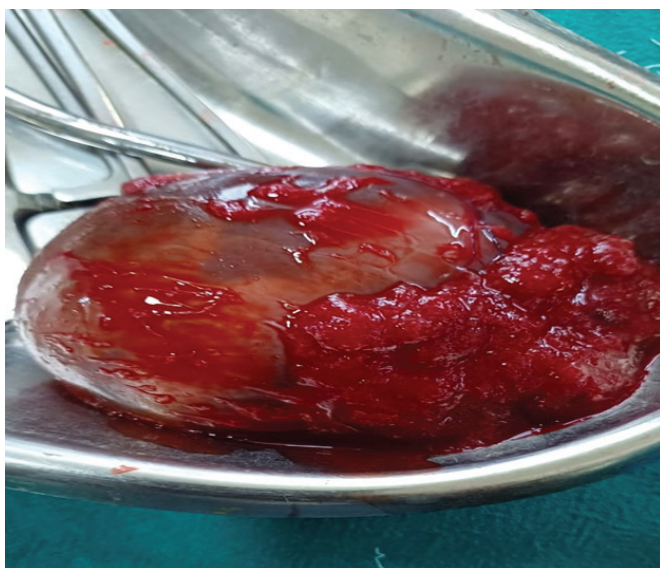


Fig 4.1: During hysterotomy, product of conception and placenta and its membranes were removed in toto.

CASE 4: A 25 year old 2nd gravida, para 1 living 1 with previous LSCS 4 year back with amenorrhoea of 13week had been referred to tertiary care hospital with a ultrasound report suggestive of caesarean scar pregnancy. She had no complaints at the time of admission. On examination, her vitals were stable. On per abdominal examination, abdomen was soft and uterus was just palpable. On per vaginal examination, uterus size was 12 week, mobile, soft, non tender,

b/l fornix free. She had been electively planned for hysterotomy. During the procedure, the product of conception along with placenta and all its membranes were removed. Placental bed bleeding sites were secured with interrupted absorbable sutures.

CASE 5: A 28 year aged 4th gravida, para 1 living 1 abortion 1 with Rh negative pregnancy at 12 weeks of gestational age attended routine opd for antenatal check up. Her routine antenatal ultrasound reported showed missed abortion for which she underwent suction and evacuation 1 month back and had received injection Rhoclone. She complained of continuous bleeding per vaginum following suction and evacuation and ultrasound suggested retained product of conception. She was again planned for suction and evacuation under anesthesia the next day. She had been infused with one pint packed red blood cells following the procedure. After the completion of the procedure, she complained about serosanguinous discharge for about one month but did not complain about abdominal pain. After a month, she again complained about bleeding per vaginum. She was advised for beta-Hcg test and repeat ultrasound. Her beta-hcg report was 16.2IU/ml.

Ultrasound reported as bulky uterus of size 127\*58\*67 mm with heterogenous lesion in anterior myometrial wall of mid and lower uterine body showing focal bulge, loss of endomyometrial interphase with evidence of myometrial invasion suggestive of invasive mole? Caesarean scar ectopic pregnancy?. Her hemoglobin level was 8.5 mg/dl. She was immediately planned for laparotomy with 2 pint blood in hand. She had been explained about the need for immediate laparotomy. On opening the abdomen, there was a bulging of the size 4cm\*3cm\*3cm on the anterior wall of uterus from the site of previous scar site upto the internal os. Intra operatively it was diagnosed as a case of caesarean scar ectopic pregnancy. After injecting vasopressin, incision was made on the uterus for hysterotomy but there was torrential bleeding from the uterine arteries. Despite all conservative efforts, the bleeding did not stop. Hysterectomy was done with a blood loss amounting of 2 L. 2 pint intraoperative blood transfusion was done and abdominal drain was given. On cut section of the uterus, there were chorionic tissue along with dead necrotic tissue extending from previous scar site to internal os. The fundus and cervix of the uterus was normal and healthy. Abdominal drain

was removed after 24 hour with a total collection of 30 ml. She had another one pint blood transfusion in post operative period and was discharged on post op day 7.

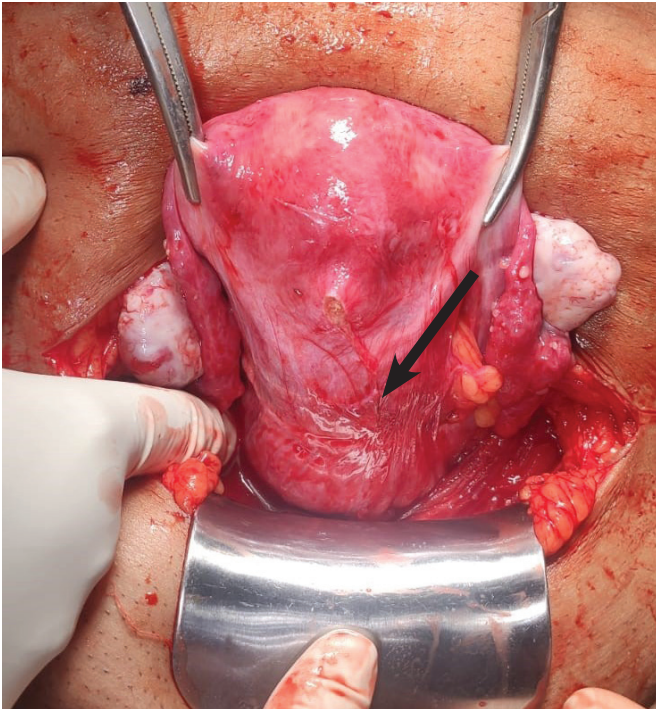


Fig 5.1: Intra operative finding of caesarean scar ectopic pregnancy



Fig 5.2: Gross view of uterus of post hysterectomy done in caesarean scar ectopic pregnancy

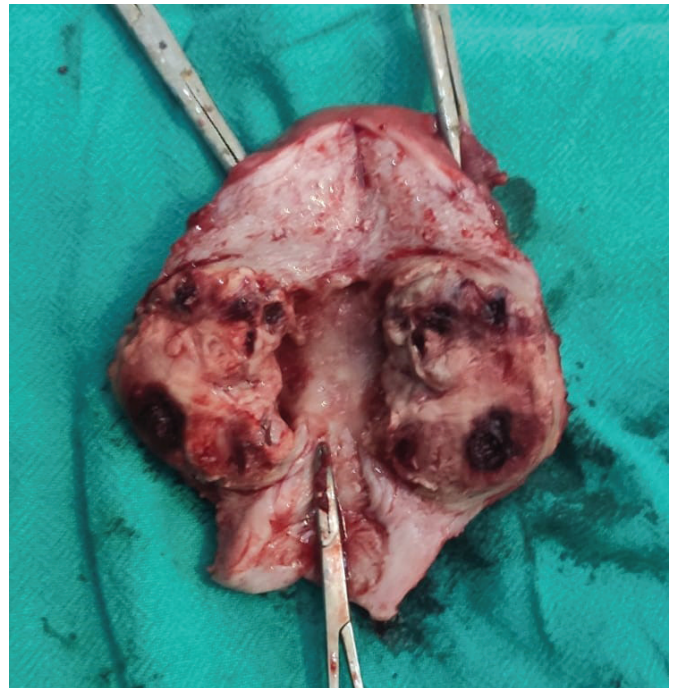


Fig 5.3: cut section view of uterus showing presence of chorionic villi and dead necrotic tissue over the previous scar region

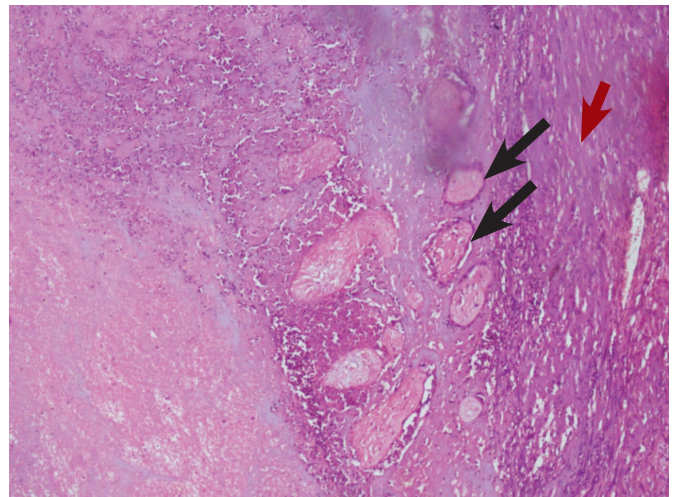


Fig 5.4: Histology image of the specimen .  
The black arrow suggests the chorionic villi  
The red arrow demonstrates the uterine muscle layer.

## Discussion

Caesrean scar ectopic , though a rarest type of ectopic pregnancy, but still it has shown a rising trend over years. Larsen and Solomon reported the first case of caesrean scar pregnancy in 1978. Caesrean scar ectopic pregnancy is the implantation of embryo in the myometrial defect of any previous scar in the uterus . The location of embryo is outside the normal uterine cavity. The pregnancy is completely surrounded by myometrium and fibrous tissue of the scar. The scar

may be due to previous caesarean section or any gynecological procedure like myomectomy, suction and evacuation, dilatation and curettage etc. The most probable explanation of occurrence of caesarean scar ectopic is the invasion of myometrial tissue into the microtubular tract i.e. present between endometrial canal and previous scar. Intraoperative damage to the decidua basalis can apparently, microscopically persist within the endometrial layer as a residual minuscule defect or as small yawning tracts.<sup>1</sup>

There are two types of caesarean scar ectopic pregnancy. In Type I or the endophytic type, the gestational sac grows towards the uterine cavity whereas in type II or exophytic type is where the gestational sac grows towards the bladder. In both the scenario, the caesarean scar pregnancy is a life threatening condition. It may present in a similar way as in placenta increta and may present more dangerously than placenta accreta. The patient will present as profuse vaginal bleeding in first trimester as the pregnancy advances and ultimately as uterine rupture if delayed in diagnosis and treatment.

Ultrasound is the initial tool of diagnosis. In usg there may be (I) gestational sac located at the level of the previous scar i.e between the bladder and anterior uterine wall (ii) no fetal parts in the uterine cavity (iii) surrounding doppler flow with minimal separation from bladder i.e sac is well perfused in contrast to the avascular appearance of an aborting gestational sac (iv) outward bulging of the gestational sac within the scar and no myometrium is seen between the gestational sac and urinary bladder. (v) negative 'sliding organ sign' i.e non displacement of the gestational sac from its position at the level of internal os with the application gentle pressure from transvaginal ultrasound.

Early diagnosis and prompt treatment is the main stay of diagnosis. If left untreated, it can progress to placental accreta or even uterine rupture and bladder rupture. Both medical and surgical management can be followed for the management with respect to the stability of the patient, gestational age at the time of diagnosis and desire of future fertility. Injection methotrexate could be administered for the successful management of caesarean scar ectopic only in vitally stable patient. Beta hcg values is reviewed after the administration of methotrexate to know the

effectiveness of the treatment or to know the need for change in plan of management. In some cases, injection potassium chloride is administered.

Surgery is the ultimate and definitive treatment in case of failure of medical management and in a vitally unstable patient. It provide an opportunity for future fertility in case of repair of uterine dehiscence. The various surgical approaches are laparotomy, laparoscopy, hysteroscopy or even vacuum aspiration, depending on the location of the gestation and surgeon's expertise.<sup>2</sup> Laparotomy provide better intra operative view, access to the site of bleeders and control of hemorrhage especially in type II scar ectopic pregnancy.

## Conclusion

The risk of recurrence of a scar ectopic pregnancy is about 3.2– 5%.<sup>2</sup>

Ultrasound is usually the screening modality for diagnosis and MRI can be done for equivocal cases.<sup>3</sup> The mainstay of management is early diagnosis and prompt management in order to avoid life threatening complications like torrential hemorrhage, uterine rupture.<sup>4</sup> The clinician should be ectopic minded as the incidence of caesarean scar ectopic pregnancies is on rising trend.

**Conflicts of interest:** NIL

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