



## CAESAREAN SCAR ECTOPIC PREGNANCY - DIVERSITY IN MANAGEMENT AT TERTIARY CARE CENTRE

### Obstetrics & Gynaecology

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### ABSTRACT

Caesarean scar pregnancy is very uncommon form of ectopic pregnancy. Incidence rates have been increasing over the past decade due to increasing number of caesarean sections. Caesarean scar ectopic possess a great challenge if not diagnosed or managed timely in early pregnancy, it may lead to substantial maternal mortality and morbidity. We present a series of five descriptive cases diagnosed by transvaginal sonography with range of clinical scenarios. Each were managed differently depending upon the patient's clinical condition. There are various treatment modalities – Expectant management, Medical management, Surgical intervention, Uterine artery embolization or a combined approach. Each method has its own success rates depending upon the surgeon's skill and patient presentation. Early timely diagnosis can offer better treatment modalities, avoiding uterine rupture, thus, preserving future fertility.

### KEYWORDS

Caesarean scar ectopic, caesarean section, transvaginal- sonography, uterine artery embolization.

### INTRODUCTION

Caesarean scar pregnancy (CSP) is a unusual form of ectopic pregnancy which defined as an ectopic pregnancy embedded in the myometrium of a previous caesarean scar [1]. It is a rare and life-threatening condition [2]. Scar pregnancy has been increasingly diagnosed all over the world. However, its incidence is increasing over the years due to the rise in caesarean section rate worldwide [3,4]. An incidence of 1:2226 of all pregnancies with a rate of 0.15% in women with a previous caesarean section and a rate of 6.1% of all ectopic pregnancies in women who had at least one case caesarean delivery.

The first case was reported in 1978. Till 2001, only 19 cases of CSP were reported, which increased to 161 by 2007 which increased to more than 1000 by 2015.<sup>[5,6]</sup> The prevalence is yet expected to increase partly because of increasing number of CS, increasing awareness and better ultrasound diagnosis.<sup>[7]</sup>

The most probable explanation of scar ectopic implantation is that there is invasion of the myometrium through a microtubular tract between the caesarean section scar and the endometrial canal; damage to the decidua basalis during uterine surgery like caesarean section, dilatation and curettage, myomectomy, metroplasty, operative hysteroscopy [8]. Undiagnosed CSP may be associated with more complications like uterine rupture, placenta accrete, haemorrhage, loss of future fertility and possibly maternal mortality.

In this paper, our objectives is to present a case series of clinical cases in which the early and accurate diagnosis made it possible to individualize management and achieve a successful treatment and outcome.

### Case 1

A 28-year-old woman (G5P3L2A1 with previous 3 C-section) came 3 months amenorrhoea followed by bleeding per vaginum since 10 days. Bleeding was heavy with clots and not associated with pain. Ultrasonography was suggestive of single live pregnancy of 12week 02days in lower part of uterus, heterogenous area adjacent to G sac seen in fundal part? large Subchorionic hematoma. Patient planned for Medical termination of pregnancy. During MTP - POC removed with suction and evacuation in usual way. During the procedure there was excessive bleeding per vaginum, not controlled with uterotonic drugs. Intraoperative sonography done in view of excessive bleeding. On sonography a heterogenous area seen in lower uterine segment of 42\*45 mm with peripheral vascularity? Hematoma. Decision for Laparotomy taken. On laparotomy-There was a bluish bulge seen on lower uterine segment with overlying peritoneum having distended vessels S/O scar ectopic During procedure excessive Bleeding present

from uterus which could not be controlled by hemostatic sutures. As repair was not possible due to thin myometrium of uterus, decision for hysterectomy taken after taking consent from attendants. Postoperative period was uneventful except blood transfusion.



### Case 2

A 29 year old women G3P2L2 with previous 2 LSCS came with 2 months amenorrhoea followed by bleeding per vagina on and off since 3 days. Bleeding was scanty and associated with pain. Urine pregnancy test was positive. Ultrasonography suggestive of large irregular G.sac with embryo off 22.7cm CRL corresponding 9+2 weeks gestation, no fetal heart, Yolk sac large 7.9mm. Missed abortion with RPOC possibility of gestational trophoblastic Disease. Suction and evacuation was done in usual way. During the procedure patient was bleed profusely per vaginum which not controlled with uterotonics (~1.5L blood loss with clots were there). Decision was taken for laparotomy due to deteriorating of general condition of patient. There was bulge seen over lower uterine segment. Bladder was densely adherent to lower uterine segment was dissected by sharp and blunt dissection. Placental tissue removed as much as possible and profuse bleeding was present from placental bed. Decision of hysterectomy was taken with consent from relatives.



### Case 3

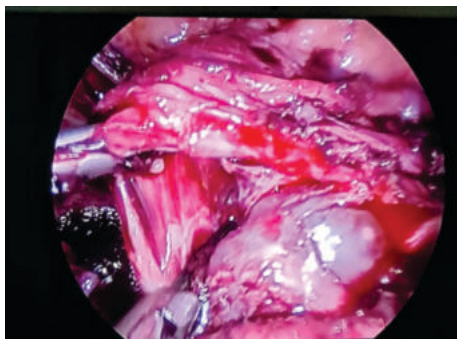
A 23 year old female, G2P1L1 with 8+5wks POG with complains of amenorrhoea 2 months 4 days with Spotting per vaginum off and on. Her Urine Pregnancy Test was positive. She had one full term uncomplicated caesarean section 2 years back. On sonography-there was single live fetus of 8+5 weeks at Uterocervical junction, which could be Intra uterine, Intra cervical pregnancy, or Ectopic scar

pregnancy. Beta-HCG was >1,50,000 mIU/ml. Looking at the doubtful nature of the pregnancy and possibility of life threatening complications, diagnostic laparoscopy was planned. During laparoscopy there was bulge in lower segment on previous scar. Product of conception was removed and scar sutured laparoscopically. Post operative beta-HCG monitoring was done which was <2mIU after 60 days.



#### Case 4

A 34 year old female G2P1L1 with 9+1 week POG came with the complain of 2 months of amenorrhea f/b slight lower abdomen pain on and off since 6 days. She had one full term LSCS 4 years back. On sonography- scar ectopic along lower uterine segment at uterocervical junction- 26.9\*16.6 cm with fetal pole with no cardiac activity seen. Patient was posted for Laparoscopic removal of scar ectopic pregnancy. On laparoscopy after removing products of conception previous scar was sutured. Postoperative period was uneventful.



#### Case 5

A 27 yrs female G3P3L3 with 10 week 3 day POG ,came with complain of 2 month amenorrhea with lower abdomen pain on and off since 5 days. She had two full term LSCS 3 years back. On sonography-single pregnancy with gestational sac 10 week with no cardiac activity located at previous scar, >3mm myometrial thickness, upper uterine cavity empty. Patient was posted for hysteroscopic guided evacuation. On hysteroscopy gestation sac present at uterocervical junction which was evacuate completely. There was some bleeding during procedure managed medically(inj carboprost with inj tranexamic acid) with intracervical catheter put for 24 hrs. There was slight bleeding after 24 hrs. Postoperative period was uneventful.



#### DISCUSSION

Caesarean scar pregnancy (CSP) is a rare form of ectopic pregnancy defined as an ectopic pregnancy embedded in the myometrium of a previous caesarean scar and it is one of the rarest form of pregnancy.

Transvaginal Doppler ultrasound and MRI diagnosis of caesarean scar disease (CSP) [9]. Ultrasonographic criteria for CSP include uterine evacuation, uterine evacuation, and emptying. Isthmus. gestational sac

and bladder, because the gestational sac grows anterior to the isthmus [10].

A variety of treatments are used, including dilation and curettage, trophoblastic tissue resection (laparotomy or laparoscopy), bilateral hypogastric artery ligation with local and/or systemic methotrexate and trophoblast evacuation, selective uterine artery embolization, and/or MTX administration. Laparotomy followed by wedge resection of the lesion (hysterotomy) should be considered in women who do not respond to medical and/or surgical treatment or who present too late. Immediate complications of caesarean scar pregnancy include uterine rupture, heavy bleeding, need for hysterectomy, and maternal morbidity.

Lisovaja et al in their retrospective case series on CSP had 2 patients who were misdiagnosed as miscarriage and were referred to tertiary centre for profuse vaginal bleeding during and after a legal abortion. Later they were diagnosed as CSP and were managed surgically. [11].

Timor-Tritsch et al in their retrospective case series had one patient with CSP who was misdiagnosed as intrauterine pregnancy and underwent MTP at 7 weeks of gestation but after 67 days of the procedure she presented with vaginal bleeding. USG was suggestive of an empty uterine cavity, hysterotomy scar with high vascularity of the anterior uterine wall. Intramuscular methotrexate was given. However, patient developed severe vaginal bleeding a few days later and imaging studies were suggestive of AV malformation. Patient was later managed by bilateral uterine artery embolization followed by hysterectomy. [12]

This clinical case series of 5 patients who were diagnosed as scar pregnancy and managed according to presentation of symptoms, severity of symptoms and period of gestation. Detailed clinical history, general examination, obstetrics examination and radiological imaging were used for diagnosis of scar pregnancy.

In this all patients age was between 23 to 34 years. All patients commonly present with some period of amenorrhea following bleeding per vaginum with pain abdomen. All 5 patient was diagnosed with ultrasonography (transvaginal).

#### CONCLUSION

Herein, we presented the rare pathology of Caesarean Scar Ectopic pregnancy that is becoming more and more frequent, for which transvaginal ultrasound and flow Doppler provide high diagnostic accuracy. Early diagnosis offers treatment options that can help avoid uterine rupture and bleeding, thus preserving the uterus and future fertility. Although there are no clear guidelines for treatment, we recommend individualized treatments for each patient with this pathology, depending on their personal characteristics. Total hysterectomy is likely the most appropriate treatment for those patients who do not desire future fertility.

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