A Case Report

CAESAREAN SCAR PREGNANCY

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Introduction

A caesarean scar pregnancy is a rare form of ectopic pregnancy in which the gestational sac is implanted inside the previous caesarean scar. The reported incidence ranges widely from 1/800 to 1/2500. Emerging evidence suggests that the primary cause of CSP is the damage to the endometrium and myometrium by previous caesarean section. If left untreated, CSP may progress into an abnormally invasive placenta, which can result in uterine rupture and life-threatening haemorrhage. Therefore, early recognition and timely management are essential for the optimisation of therapy and improved patient outcome.

Case Report

A 28-year old, 3rd gravida presented with history of amenorrhoea of 2 months followed by bleeding per vagina since last 3-4 days. She had 2 previous sections, the first section being done for breech presentation and a second done electively at term 16 months back. Her LMP was 27.04.2020. She confirmed her pregnancy by doing a urinary pregnancy test at home and took abortifacient from a local pharmacy from 3.06.2020. She started bleeding from 7.06.2020 for 4-5 days. She again had vaginal bleeding from 4.07.2020 which she considered as menstrual flow. But the bleeding was profuse on the next day following which she fainted and was taken to a local PHC, where, after a few haemostatic injections and IV fluids, the bleeding stopped. She regained consciousness and was sent home. The patient came to IHR on 06.07.2020 for further evaluation and management.

On examination, she had a normal blood pressure of 100/60 mm Hg and a pulse rate of 96/min. Her body temperature was 37.5°C. Her cardiorespiratory and neurological systems were normal. Her abdomen was soft with mild lower abdominal tenderness. On pelvic examination, the uterus was slightly bulky and tender. Speculum examination showed minimal bleeding through cervix. TVS showed an intrauterine gestation corresponding to 8 weeks 4 days with no cardiac activity. There was gestational wall detachment and endocavity clots. Her routine blood and other tests were normal. She was planned for a diagnostic hysteroscopy and evacuation of products of conception under general anaesthesia. During hysteroscopy the products were seen to block the cervical canal and so dilation and evacuation was attempted. During the procedure torrential bleeding started. A transvaginal scan was repeated in the OT which showed a scar pregnancy. All measures to stop bleeding were immediately adopted and requisition sent for 2 units of blood. Ultrasound guided D&E was tried to evacuate as much trophoblastic tissue as possible followed by continuous bimanual massage for almost half an hour. The bleeding gradually stopped and patient was shifted to her cabin. Vitals closely monitored for next 24 hours. She received 2 units of blood transfusion. She also received injectable iron. Injectable methotrexate(1mg/kg body weight) IM stat was given on the day of discharge. She was discharged after 48 hours with the advice to come for regular follow up. On 15.07.2020 her b-hcg dropped to 2128mIU/ml, TVS showed a scar haematoma measuring 44 x 47 mm without any evidence of trophoblastic flow. Rest of the blood parameters were normal. She had complaints of

occasional bleeding per vagina for which she was given necessary medicines. She again came for check up on 23.09. 2020. She now had no bleeding since almost 2 weeks. TVS showed complete resolution of the scar haematoma. The b-hcg was now 0.77.

Discussion:

CSP is one of the rarest types of ectopic pregnancy. It occurs when the blastocyst implants on the caesarean scar. Various risk factors have been identified as increasing the chances of a woman developing a CSP. The number of previous CS does not correlate with the risk for a CSP. However, women who have had an elective CS for breech presentation in a previous pregnancy are the ones mostly at risk due to poor formation of the lower uterine segment. This patient's first CS was on account of a breech presentation at term and put her at a higher risk. This history should raise a higher suspicion of a CSP. Women with CSP often present with slight vaginal bleeding with mild abdominal discomfort as was the case in this presentation.

The diagnosis is usually made by a high resolution pelvic ultrasound, a transvaginal ultrasound or a magnetic resonance imaging technique. CSP diagnosis with an ultrasound may pose some diagnostic challenges and a high index of suspicion is required to make an accurate diagnosis of CSP. A combination of the transabdominal and transvaginal ultrasound scanning procedures have been shown to have a higher accuracy than the transabdominal or transvaginal ultrasound used alone.

The sonographic criteria for CSP include an empty uterine cavity and closed and empty cervical canal, a gestational sac that is implanted in the previous CS scar, a gestational sac that fills the niche of the scar, a thin or absent myometrial layer between the gestational sac and the bladder, yolk sac, embryo and cardiac activity may or may not be present, evidence of functional trophoblastic circulation on colour flow Doppler and the negative 'sliding organs' sign. Absence of myometrium between the gestational sac and the bladder and an empty uterine cavity as well as an empty cervical canal clinches the diagnosis of CSP.

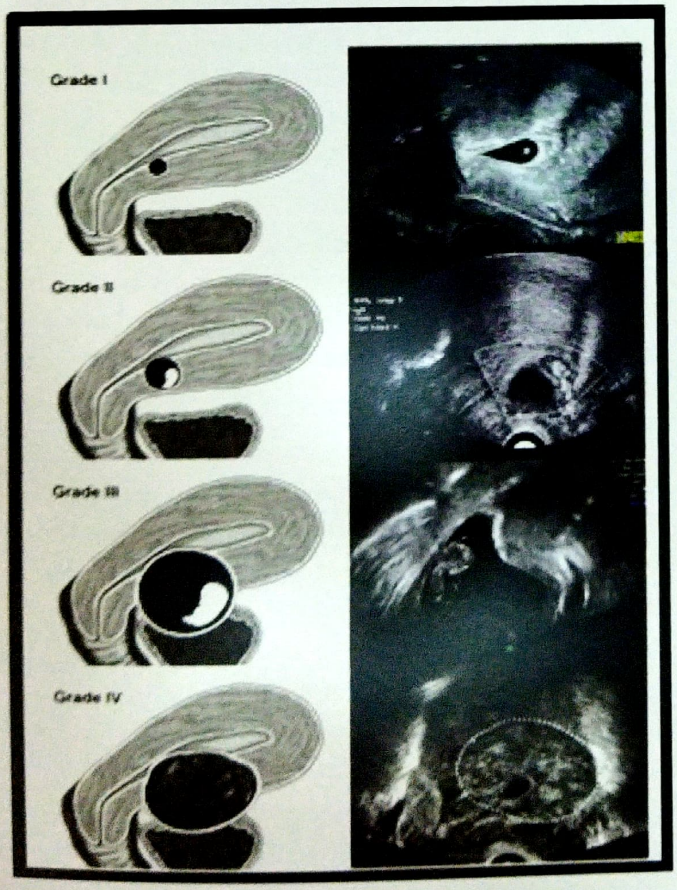

Fig: USG grading of CSP mass

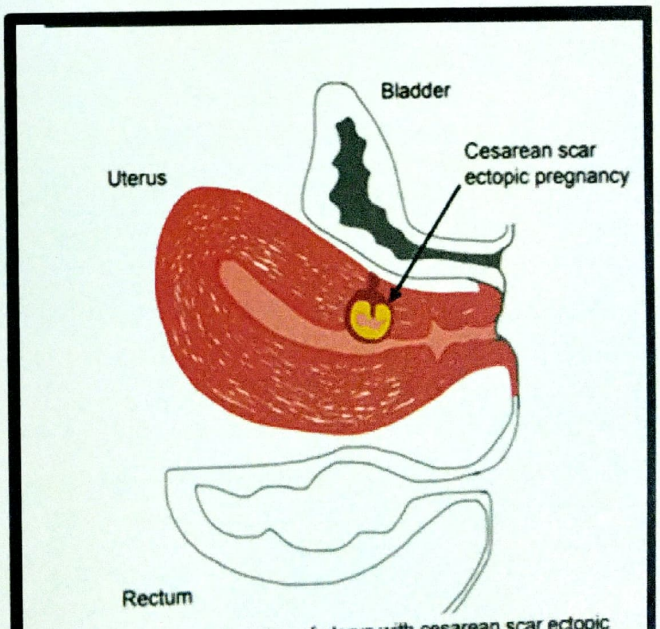

Figure. Anatomic depiction of uterus with cesarean scar ectopic pregnancy. Features of cesarean scar ectopic pregnancy seen here include an empty uterus, gestational sac implanted in lower anterior segment of uterus with thin myometrium and empty cervical canal.[10]

CSP was not diagnosed in this patient with the earlier ultrasound scans mainly because of the low index of suspicion in the patient. The challenge with diagnosis of CSP could also be because of the fact that because it is rare, most of the Obstetricians and Gynaecologists and sonographers may not have encountered it previously in their ultrasound experience.

There are various modalities for the management of CSP. These include expectant management, intramuscular or intralesional injection of methotrexate and surgical treatment. Expectant management of CSP has a high risk of uterine rupture and maternal death. Medical management can be considered for haemodynamically stable women with minimal or no symptoms, Methotrexate is the drug of choice for medical management. Intralesional injection of Mtx has a higher success rate and can be considered as an option for stable women. Surgical interventions such as USG guided D&E and hysteroscopic resection of CSP mass may be employed either as primary treatment or sequential treatment following an interval after Methotrexate or Uterine artery embolisation. Surgical excision of the CSP mass either by laparoscopy or laparotomy approach have been advised for patients who either present late or those who show no response to medical treatment. Hysterectomy is only the last resort to previously failed procedures or any life threatening complications of the procedures.

Surgical treatment is associated with reduced risk of uterine rupture but may result in torrential bleeding from the CSP. With the thinned out myometrial tissue at the site of the previous CS scar, an attempt at dilatation and curettage or manual vacuum aspiration can result in incomplete evacuation, bladder injury or uterine rupture along the previous CS scar and increase the morbidity and mortality. In our case, because of incorrect diagnosis, attempt at dilatation and curettage resulted in torrential bleeding. But timely diagnosis and prompt intervention along with other resuscitative measures saved the patient from the untoward consequences. Laparoscopic and endoscopic management of CSP have been described. In future pregnancies, the risk of recurrence of CSP is higher. There is also an increased risk of morbidly adherent placenta. There is the need to educate women at risk about the need to report early when pregnant. There is therefore the need for early ultrasound scan in the subsequent pregnancies to rule out recurrence. This was communicated to the patient before she was discharged. Most reports have advocated a CS in the next pregnancy to reduce the risk of uterine rupture and to also enhance adequate closure of the incision in the lower uterine segment.

Conclusion:

CSP is a rare form of ectopic pregnancy but a misdiagnosis or a late diagnosis of CSP can result in early uterine rupture with life-threatening maternal haemorrhage leading to hysterectomy and loss of reproductive potential. Incidence of CSP is rising. It usually manifests with painless vaginal bleeding and often misdiagnosed as spontaneous miscarriage or cervical ectopic pregnancy. Ultrasonography with colour flow Doppler is the primary diagnostic tool in the workup of CSP. An early diagnosis can offer conservative treatment options that enable the preservation of the uterus. ***Early TVS for every post CS pregnancy should be the rule.***

Treatment should be individualized according to clinical presentation, availability of treatment options and expertise as well as the wish of the woman for future fertility.