

Case series on scar ectopic

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Abstract

Background: **Aim:** To discuss the evolution, diagnosis, treatment modalities, and outcome of cases of caesarean scar pregnancy (CSP). **Method:** An observational case series of six patients with CSP. The data review included demographic information, ultrasound findings, primary and subsequent treatment, outcomes and complications. **Conclusion:** The incidence of CSP is increasing due to increase in caesarean section rates. Early diagnosis, treatment, anticipation and expertise are essential to prevent maternal morbidity and mortality associated with CSP.

Key Word: CSP (caesarean scar ectopic), abdominal pain, laparotomy, Laparoscopic excision, methotrexate.

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INTRODUCTION

Scar ectopic pregnancy is becoming increasingly common all over the globe. It is novel and life-threatening form of abnormal implantation of embryo within the myometrium and the fibrous tissue of the previous scar. Not much information is available on the natural history of this condition. However, the scar ectopic pregnancy is found to be the most common following caesarean section. In 1978, the first case of a caesarean scar (CS) ectopic pregnancy was reported in English medical literature.¹ With the increasing rate of caesarean section, there is a substantial increase in this condition with better understanding of this disease. The incidence of CS 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 present the case series of a caesarean scar pregnancy. Although there are varying

guidelines in place for management of a caesarean scar ectopic pregnancy, this case series describes the imaging findings associated with caesarean scar ectopic pregnancy, which are necessary to allow prompt diagnosis and management of patient.

Aim: To discuss the evolution, diagnosis, treatment modalities, and outcome of cases of caesarean scar pregnancy (CSP).

METHOD

An observational case series of five patients with CSP. The data review included demographic information, ultrasound findings, primary and subsequent treatment, outcomes and complications

CASE 1

A 25-year-old female presented to Outpatient Department of Gynecology S.M.B.T. Institute of Medical Sciences, Dhamangaon, with chief complaint of abdominal pain with bleeding per vaginum on and off for 10-12 days. Her obstetric score was G3P2I2 with previous two Caesarean deliveries. General examination done, vitals were normal. Transvaginal ultrasound (Fig 2) revealed empty uterine cavity with clearly defined endometrium, irregular small gestational sac like structure of eleven week seen in lower uterine segment anteriorly. MRI-pelvis(Fig 1) was done which showed a poorly defined heterogenous signal intensity space occupying lesion in the anterior uterine wall of the lower segment. It showed multiple internal flow

voids and tiny cystic lesion within confirming diagnosis of caesarean scar pregnancy. An Exploratory laparotomy was performed which revealed a ruptured caesarean scar ectopic pregnancy with an abundant hemoperitoneum. Careful resection of the scar with retained products and repair of the ruptured isthmic region of the uterus was carried out. Recovery after surgery was without complications and the patient was discharged on the 6th day following surgery. Tissue was sent for histopathological examination and diagnosis of Caesarean scar ectopic pregnancy was confirmed. Patient was followed up with serial serum Beta human Chorionic Gonadotropin (β -hCG) level, till B-HCG came to non-pregnant level(normal).

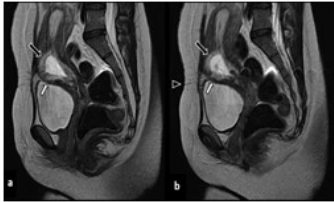


Figure 1

Figure 1: MRI Pelvis in scar pregnancy
Figure 2: TVS USG s/o Scar pregnancy



Figure 2

CASE 2

A 28yr G4P2L2A1 with 5wks amenorrhea presented with PV bleeding and USG suggestive of incomplete abortion with products of conception in cervicoisthmic region. During the procedure of D and C severe bleeding was present and procedure was abandoned, tamponade done with Foleys catheter insertion into the uterine cavity. Systemic methotrexate was given to treat it but patient continued to bleed per vaginally with lower abdominal pain. The amount of bleeding increased over a period of 3 days. Despite of medical management bleeding continued, in view of which hysterectomy was planned. During laparotomy, uterus was of 8-10 weeks size with a soft purplish black mass protruding through the lower uterine segment immediately above the internal os. (Fig 3) The mass was of 5 x 4 cm size. Cervix was normal with no growth and the uterine cavity was empty in the fundal region. (Fig 4). The diagnosis of scar pregnancy was reconfirmed by the HPE report.



Figure 3



Figure 4

Figure 3: mass protruding through internal os
Figure 4: Uterine cavity empty with dent

CASE 3

A 25-year-old female presented with chief complaints of abdominal pain, two-months amenorrhea with bleeding per vaginum on and off for 10-12 days. Her obstetric score was G2P1L1 with previous one Caesarean section, gestational age of 6.8 weeks on TVS (Fig 6) which showed vascularity on Doppler (fig 5). Laparoscopic excision of caesarean scar ectopic along with curettage of gestational products was done. Intra-operatively, there was a soft, vascular mass of seen at the site of previous scar extending into left side of broad ligament. Decision of laparotomy taken and performed.

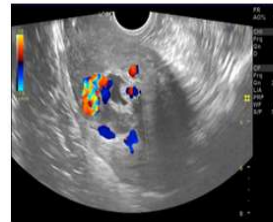


Figure 5



Figure 6

Figure 5: showing vascularity at scar on Doppler
Figure 6: showing scar ectopic on TVS USG

CASE 4

A 39-year-old female presented to OPD with chief complaints of abdominal pain, two-months amenorrhea and bleeding per vaginum on and off for 30 days. In obstetric history, she was G3P2I2 with previous two Caesarean deliveries. Trans vaginal ultrasound revealed empty uterine cavity with clearly defined endometrium, irregular small gestational sac like structure of 8 week seen in lower uterine segment anteriorly with no cardiac activity. MRI further confirmed the findings. An Exploratory laparotomy revealed a caesarean scar ectopic pregnancy. Recovery after surgery was without complications and the patient was discharged on the 4th day following surgery.

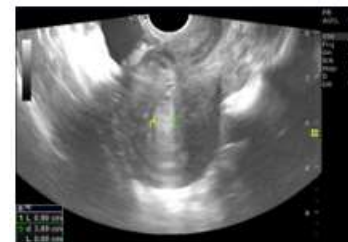


Figure 7: TVS USG s/o scar pregnancy

CASE 5

A 35-year-old gravida 2 para 1 (G2P1L1) female was presented to the casualty with intermittent vaginal bleeding. Surgical history of prior c-section and beta-HCG levels was positive. Transabdominal and endovaginal ultrasound scanning demonstrated a small 8.5-mm complex cystic structure in the lower uterine wall (Fig 8). Decidual reaction in the endometrial canal was observed. Findings were felt suggestive of an early c-section scar ectopic implantation. The patient underwent medical management. Two cycles of intramuscular (IM) methotrexate were given and beta-HCG follow up was performed until normalization.



Figure 8: TVS USG with cystic structure in lower uterine wall.

DISCUSSION

The most common clinical presentation of Caesarean ectopic pregnancy is painless vaginal bleeding without any specific clinical signs. For its diagnosis endovaginal ultrasonography and color flow Doppler are very helpful.^{5,6} MRI has an important role when sonography is equivocal or inconclusive before any therapy or intervention. The pregnancies with previous caesarean section have increased the risk of placenta previa, placental abruption, placenta accreta, percreta as well as ectopic pregnancies in future. With the use of transvaginal sonography and saline infusion sonography, even in nonpregnant female it is possible to assess post caesarean section uterine wall integrity. Caesarean section scar defect is identified by the presence of fluid within the incision site or filling defect at the presumed site of the scar² After diagnosis is confirmed, a strategy plan for management is to be planned. The aim of the management is to prevent the massive haemorrhage and conserve the uterus for further fertility and health and quality of life of woman. The treatment approach depends on various factors like gestational age, haemodynamic stability, further fertility and feasibility of serial follow-up. Medical line of management can be undertaken in unruptured scar ectopic of a small size and vital parameters and beta HCG levels are monitored simultaneously.^{4,5} Methotrexate is the most commonly used drug for medical management.[6] In case of failure or any complication, surgical management is undertaken Various case reports of patients with Caesarean

scar ectopic pregnancy even in the absence of bleeding, supports our management as the surgical option.¹ This includes elective laparotomy and excision of the gestational mass. The benefit of surgery is less recurrence because of the resection of the old scar, with a new uterine closure. Other is a shorter follow-up period [3,6]. In another study with Caesarean scar pregnancy cases, surgical excision of scar is considered as a key management and helpful to prevent recurrence.⁷ The availability of Uterine Artery Embolization (UAE) in cases of Caesarean ectopic pregnancies treated has contributed to successful management without any hemorrhage.⁸ So far, various interventions have been proposed, but there is no consensus on the optimal therapeutic protocol for scar ectopic pregnancy and the management varies with the varied clinical presentation of the scar pregnancy.

CONCLUSION

Caesarean scar ectopic pregnancies can have very fatal and poor outcomes, including uterine rupture, massive hemorrhage 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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