



CESAREAN SCAR PREGNANCY - A RARE ENTITY BECOMING MORE COMMON - CASE SERIES.

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ABSTRACT Cesarean scar pregnancy is a rare and life threatening complication. As there is an increase in incidence of cesarean deliveries, there is also an increase in incidence of cesarean scar pregnancy. The complications of cesarean scar pregnancy are uterine rupture, massive haemorrhage, need for hysterectomy and risk of severe maternal morbidity and mortality. Here we present 7 cases of cesarean scar pregnancy illustrating the different diagnostic and therapeutic modalities. High suspicion of scar pregnancy in first trimester bleeding with previous caesarean delivery, timely diagnosis and prompt management can prevent catastrophic complications.

KEYWORDS : Cesarean Scar Pregnancy, Uterine Artery Embolisation, Hysterectomy, Methotrexate

INTRODUCTION :

Cesarean scar pregnancy is a rare and life threatening complication[1]. Incidence is increasing in parallel with increase in caesarean deliveries[2,3]. Incidence is 1 in 2000 pregnancies with a rate of 0.15% in cases with previous caesarean deliveries and a rate of 6.1% of all ectopic gestation in women with previous caesarean deliveries[4].

CASE PRESENTATION :

CASE 1 :

32 year old Gravida 3 Para 2002 presented at 8 weeks period of gestation with MTP pill intake and excessive bleeding per vaginum. She had two previous caesarean deliveries, one for placenta previa and the other was a elective caesarean delivery. She had undergone hysterolaparoscopy for unilateral tubal block. Ultrasonography showed retained products of conception with increased vascular channels and thinning of myometrium.(FIGURE-1)

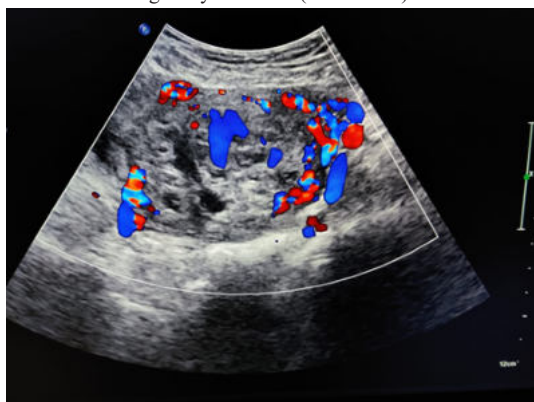


FIGURE-1 : Ultrasonography showing retained products of conception with increased vascular channels and thinning of anterior myometrium.

CT angiography showed high flow arteriovenous malformation with arterial feeder arising from the left uterine artery. The trend of Beta HCG in this case was 5348,218,31,9. Patient was transfused with 4 blood transfusions. Uterine artery embolisation and curettage was done. Patient discharged in stable condition.

CASE 2 :

32 year old Gravida 3 Para 1011 presented at 7 weeks period of gestation with a history of MTP pill intake and excessive bleeding per vaginum. She had one missed abortion for which curettage was done, followed by caesarean delivery for fetal macrosomia. Ultrasonography

showed heterogeneous content in lower part of uterus with increased vascularity and anterior wall of the myometrium was thinned out. MRI showed ill defined lesion with cystic spaces showing increased vascularity, thinning of anterior myometrium and abutting dome of bladder. Beta HCG trend in this case was 25000, 13919, 10226, 4139, 3088, 1676, 1107, 303, 7. She was transfused with 1 unit of blood. Uterine artery embolisation and curettage was done.

CASE 3 :

26 Year old Para 1012 presented on day 1 post expulsion of abortus at 16 weeks period of gestation with retained placenta with excessive bleeding per vaginum and hypovolemic shock. She had previous two caesarean section. Ultrasonography showed retained products of conception in the lower uterine segment with increased vascularity and thinning of anterior myometrium. Beta HCG was 45. Discussed with the patient regarding options of uterine artery embolisation and hysterectomy. Due to financial constraints, Patient opted for hysterectomy. Hysterectomy was done. (FIGURE -2)

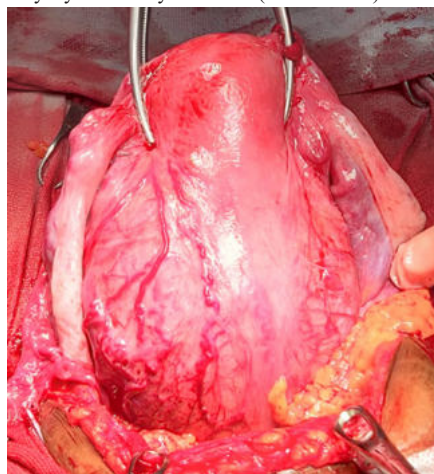


FIGURE :2 - Intra operatively the lower uterine segment was enlarged, bulged with increased vascularity.

CASE 4 :

29 year old para 1012 presented at 7 weeks period of gestation with excessive bleeding per vaginum following curettage. She had 2 previous caesarean deliveries. Ultrasonography showed heterogeneous content with increased vascularity in the lower uterine segment.

Beta HCG trend was 98, 31, 4.5 units packed red cells transfused.

Uterine artery embolisation and curettage was done.

CASE 5:

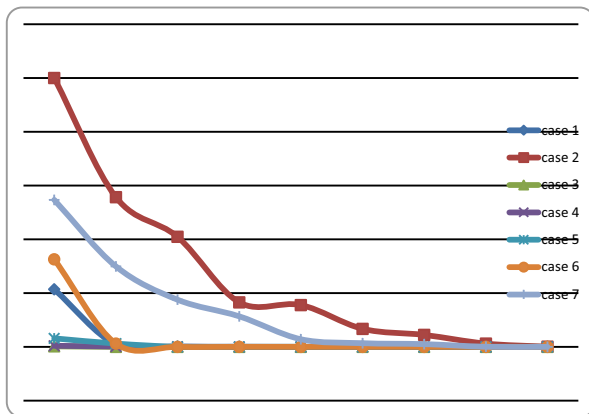
30 year old Gravida 3 Para 2002 presented at 10 weeks period of gestation with excessive bleeding per vaginum. She had previous two cesarean deliveries. Ultrasonography showed gestational sac in the lower uterine segment near the scar site. Beta HCG was 789. Emergency laparotomy was done. Evacuation of pregnancy and repair of the implantation site was done. 2 units of packed red blood cells transfused.

CASE 6:

23 year old Gravida 3 Para 1011 presented at 8 weeks period of gestation with excessive bleeding per vaginum. She had a previous one lower segment cesarean section. Ultrasonography showed a large ill defined mass in the lower uterine segment. MRI showed heterogeneous lesions arising from the left lateral wall of the uterus indenting the cavity. She bled profusely, uterine tamponade with foley's catheter was done followed by uterine artery embolisation. 3 units packed red blood cells transfused. Beta HCG trend in this case was 8132,303,1,52,0,39.

CASE 7:

30 year old Gravida 3 Para 1011 presented at 7 weeks period of gestation with spotting per vaginum. She had one previous term lower uterine segment cesarean section. Ultrasonography showed a gestational sac in the lower uterine segment near the scar site, cavity at the level of the fundus and cervical canal were empty. Beta HCG trend in this case was 13666,4380,7450,2836,706,340,212,8 (GRAPH - 1). Single dose of methotrexate given.



GRAPH-1 : Beta HCG trend in all 7 cases.

DISCUSSION:

The mechanism for implantation in the scar site is believed to be migration of the embryo through either the wedge defect in the lower uterine segment or a microscopic fistula within the scar. [5]

TYPES:

TYPE-1: develops in the myometrium and grows towards the uterine cavity.

TYPE-2: develops in the myometrium and grows towards the uterine serosa. [6]

In our case series age at the time of presentation ranged from 23 to 32 and gestational age at the time of presentation varied from 7 weeks to 16 weeks period of gestation (TABLE-1)

TABLE-1 : Age of the patient and gestational age at the time of presentation.

Cases	Age Of The Patient(Years)	Gestational Age (Weeks)
1	32	8
2	32	7
3	26	16
4	29	7
5	30	10
6	23	8
7	30	7

RISK FACTORS: Previous caesarean section, previous hysterectomy,

myomectomy, uterine evacuation, previous abnormally adherent placentation, manual removal of placenta, metroplasty, hysteroscopy and in vitro fertilisation are risk factors for cesarean scar pregnancy [7].

In this series, case 1 had 2 cesarean deliveries, placenta previa and hysterolaparoscopy. Case 2 had one cesarean delivery and one curettage for missed miscarriage. Case 3, 4 and 5 had 2 previous cesarean deliveries. Case 6 and 7 had one previous cesarean delivery. (TABLE-2)

TABLE - 2 : Associated risk factor.

Risk Factors	No. Of Cases
Previous 2 LSCS	3
Previous 1 LSCS	2
Previous 1 LSCS and previous 1 curettage	1
Previous 2 LSCS and previous 1 hysterolaparoscopy	1

PRESENTATION:

The clinical presentation varies from vaginal bleeding with or without pain to uterine rupture and hypovolemic shock. [8] In our case series, presentation varied from spotting per vaginum as in case 7 to hypovolemic shock in case 3.

DIAGNOSTIC MODALITIES:

The suggested criteria in transvaginal ultrasound are (a) gestational sac embedded eccentrically in the lower uterine segment (b) implantation in the location of a prior caesarean delivery scar, (c) empty uterine cavity and cervical canal, (d) attenuated myometrium over the scar, extensive doppler vascular flow in the area of the caesarean delivery scar [9]

Though ultrasound is the primary imaging modality, MRI can be done in equivocal cases which may aid in detection of possible placental implantation or bladder wall invasion.

TREATMENT MODALITIES:

1. Radical management :- Hysterectomy
2. Conservative management :-
 - a. Uterine wedge dissection [10]
 - b. Systemic methotrexate and intra sac methotrexate in patients with gestational age less than 8 weeks period of gestation without fetal cardiac activity [11]
 - c. Uterine artery embolisation with curettage and/or methotrexate injection [12]
 - d. Laparoscopic coagulation or ligation of uterine artery [13]
 - e. Evacuation of the pregnancy and repair of uterine defect by laparoscopy or laparotomy [14]

In our case series, Cases 1, 2, 4 and 6 had uterine artery embolisation and curettage. Case 3 had hysterectomy. Case 5 had evacuation of pregnancy and repair of implantation site. Case 7 had single dose of methotrexate. (TABLE-3)

TABLE-3 : Therapeutic Intervention

Treatment Modalities	No. Of Cases
Uterine artery embolisation and curettage	4
Hysterectomy	1
Evacuation of pregnancy and repair of implantation site.	1
Single dose of Methotrexate	1

COMPLICATIONS:

The complications of cesarean scar pregnancy are uterine rupture, massive hemorrhage, need for hysterectomy and severe maternal morbidity and mortality.

CONCLUSION:

Cesarean scar pregnancy can lead to uterine rupture and life threatening intraperitoneal haemorrhage. High suspicion of scar pregnancy in first trimester bleeding with previous caesarean delivery, timely diagnosis and prompt management can prevent catastrophic complications.

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