

Intra-gestational agents for management of cesarean scar pregnancy: Is the long wait and stress worth it?

To the Editor,

Cesarean scar pregnancy (CSP) is a type of an intrauterine ectopic where the pregnancy implants at a deficient or an improperly healed area, specifically at a previous cesarean section scar. Thinning/absence of decidua at the scar site facilitates microinvasion of chorionic villi into the myometrium, bearing a great degree of similarity with placenta accreta spectrum (1). Although rare, the incidence of CSP is increasing with the increase in the number of cesarean sections worldwide (1). Incidence ranges from 1:1800 to 1:2216 of all pregnancies (2). At presentation, patients may be asymptomatic, have painless vaginal bleeding or may present with hemorrhage, which may either be external or internal (because of uterine rupture), with or without shock.

We describe a clinical series of six patients with CSP that underwent uterus sparing management by intra-gestation injection of methotrexate/potassium chloride solution (KCL) along with systemic methotrexate. Table 1 shows clinical and management details of patients with CSP.

In this series, one patient was asymptomatic, one presented with painless vaginal bleeding, three were referred to us with incomplete evacuation and one patient with bleeding for over two weeks after self-consumption of an over-the-counter pill for medical abortion. The mean period of gestation at diagnosis was 9 weeks and 3 days. Median beta-human chorionic gonadotropin (β -hCG) level at admission was 35390 IU/L. Diagnosis of CSP was made by us, using ultrasonographic criteria given by Timor-Tritsch et al. (3) in 2012. Two patients presented with live pregnancy at the scar site (Video 1, 2). In four patients, all of whom were referred due to an incomplete evacuation procedure/incomplete medical abortion, only adherent gestational tissue was visible embedded at the scar site. It appeared as a hetero-echoic mass in the lower uterine segment with increased vascularity. Interestingly, we found that

in all but one of these patients it was easier to visualise and treat using a transabdominal approach as uteri were pulled up, acutely anteverted and stuck to the anterior abdominal wall.

The dose of methotrexate was calculated as 50 mg per kilogram of body surface area. Half of the dose was administered into the lesion, under transabdominal ultrasound guidance using a 20 G spinal needle and the other half was administered intravenously. In one patient with fetal cardiac activity, intracardiac KCL was administered followed by full dose methotrexate intravenously. Patients were discharged after 48 hours and kept on fortnightly follow up. We successfully managed all patients, with the exception of patient 6, who had to undergo emergency lifesaving hysterectomy due to heavy bleeding 23 days post procedure (Table 1). Figure 1a shows a hetero-echoic mass of adherent placental tissue at a previous scar site with vascularity (patient 3). Follow-up images after surgically-assisted medical management of Patient 3 at 1 month (Figure 1c), 2 months (Figure 1d) and complete resolution at 4 months (Figure 1e). Mean time for normalization of β -hCG levels was 25 days. Mean time for disappearance of lesion on ultrasound was 96 days.

In CSP, securing a timely and a correct diagnosis is always challenging and there is also uncertainty and dilemma regarding the most suitable mode of management. The Society of Maternal and Fetal Medicine (1), recommends operative resection (laparoscopic/transvaginal approach), vacuum aspiration under ultrasound guidance or intra-gestational methotrexate. Uterine artery embolization may be considered as an adjunct to these management strategies to decrease bleeding. Expectant management of CSP is associated with a high risk of hysterectomy and hemorrhage due to morbidly adherent placenta. Hysterectomy of gravid uterus may be considered if the patient has completed her family and does not choose other management options.

It is imperative to counsel each patient in detail about the pros and cons of all management options available before choosing

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Table 1. Cesarean scar pregnancy: clinical and management details

Patient no	Age (in years)	Parity	Period of gestation at diagnosis	Diagnosis/referred with	β -hCG at diagnosis (IU/L)	Procedure	Time for normalization of β -hCG (days)	Time for disappearance of lesion on ultrasound (days)	Outcome
1	34	G3 P2L2 previous 2 LSCS	10 weeks	Live CSP (Video 1)	120000	Intracardiac KCL + i.v. methotrexate	28	180	Intermittent spotting for 3 months Complete resolution of CSP
2	26	G2 P1L1 previous 1 LSCS	9 weeks	Live CSP with painless vaginal bleeding (Video 2)	104000	Suction & evacuation followed by torrential bleeding; products adherent: bleeding controlled by tamponade by Foley tamponade Intralesional + i.v. methotrexate done next day	21	56	Uneventful
3	29	G2 P1L1 previous 1 LSCS	12 week 3 days	Referred in view of incomplete suction and evacuation procedure CSP was diagnosed by visualization of 4.9x4.9 cm adherent gestational tissue hetero-echoic mass was seen at the site of previous scar with profuse vascularity (Figure 1a, b).	55000	Intralesional + i.v. methotrexate	21	120	Figure 1c, d, e are follow up images at 1, 2 and 4 months respectively Final outcome uneventful
4	27	G3 P1L1A1 previous 1 LSCS	9 week 5 days	Referred in view of incomplete suction and evacuation procedure	4466	Intralesional + i.v. methotrexate	23	56	Uneventful
5	24	G3 P2L2 previous 2 LSCS	7 week 1 day	Referred in view of incomplete suction and evacuation procedure	15780	Intralesional + i.v. methotrexate	32	68	Uneventful

Table 1. Continued

Patient no	Age (in years)	Parity	Period of gestation at diagnosis	Diagnosis/referred with	β-hCG at diagnosis (IU/L)	Procedure	Time for normalization of β-hCG (days)	Time for disappearance of lesion on ultrasound (days)	Outcome
6	32	G3 P2L2 previous 2 LSCS	8 weeks	Self-intake of MTP pill with bleeding per vaginum	15000	Intralesional + i.v methotrexate	Admitted in emergency, 23 days after with hemorrhagic shock. USG showed hypervascular ectopic mass at CSP site. Managed with resuscitation and immediate laparotomy. Attempt at conservative surgery failed despite preemptive bilateral uterine artery ligation, bed of scar pregnancy continued to bleed despite removal of all products and lifesaving hysterectomy had to be done. Patient subsequently developed sepsis and was in intensive care for 3 days. She recovered and was discharged in stable condition after 10 days of surgery		

i.v: Intravenous, G: Gravida, P: Parity, LSCS: Lower segment caesarean section, MTP: Medical termination of pregnancy, CSP: Cesarean scar pregnancy, USG: Ultrasonography, β-hCG: Beta-human chorionic gonadotropin

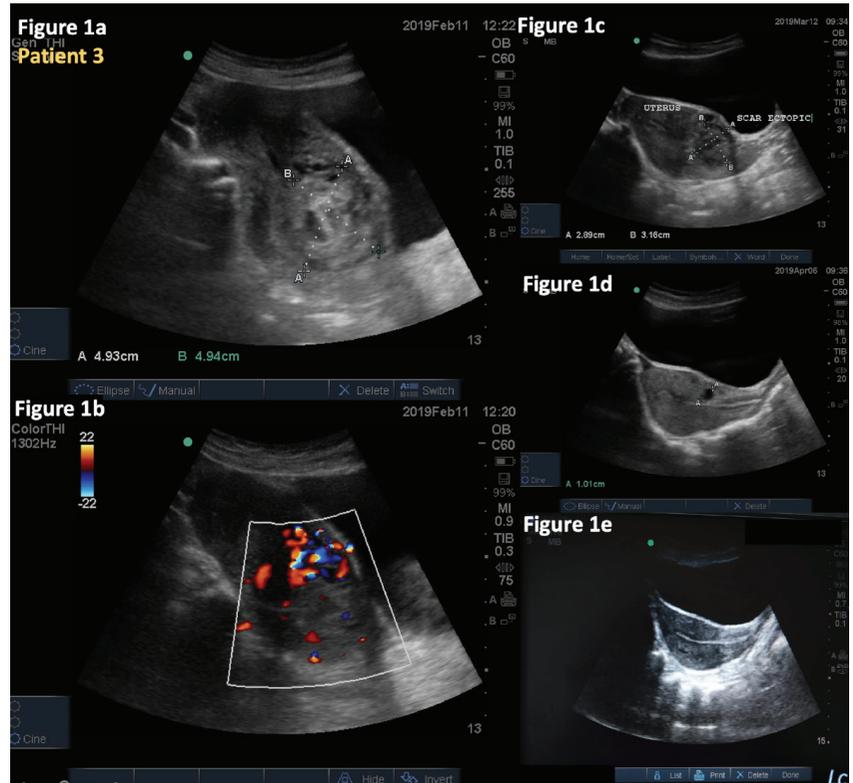


Figure 1. (a, b) Hetero-echoic mass of adherent placental tissue at previous scar site with vascularity [patient 3], (c-e) follow-up images after surgically assisted medical management of patient 3 at 1 month (c), 2 months (d)

this form of treatment. Torrential bleeding may also occur as a complication. However the stress and anxiety associated with this long term follow-up, which may last for weeks to months, may be acceptable if this minimally invasive method can preserve the uterus while avoiding a major surgical intervention.

Video 1. Live caesarean scar ectopic at 10 weeks period of gestation [patient 1]



<https://www.doi.org/10.4274/jtgga.galenos.2022.2022-1-3.video1>

Video 2. Live caesarean scar ectopic at 9 weeks period of gestation [patient 2]



<https://www.doi.org/10.4274/jtgga.galenos.2022.2022-1-3.video2>

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