HJOG An Obstetrics and Gynecology International Journal

Case Report

Cesarean scar pregnancy: A diagnostic dilemma and management with suction curettage

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Abstract

A case of a cesarean section scar pregnancy with a diagnostic dilemma is presented. Due to a decrease in β - hCG after 48 hours, the patient was diagnosed with a failing pregnancy and was given misoprostol. However, β - HCG was still high and the patient had a severe vaginal bleeding after a month of medical management. Evacuation curettage under laparoscopic guidance was performed and the bleeding was successfully stopped using a Bakri balloon.

Key words:

cesarean section; misoprostol; ultrasonography; laparoscopy; evacuation curettage; Bakri balloon

Incidence of cesarean scar pregnancy (CSP) is 11.1/1,000 pregnancies in the United Kingdom, however incidence of cesarean section ectopic pregnancy is rising about 1/2,000 in normal pregnancies[1]. Implantation of a pregnancy within a cesarean section scar is the rarest type of ectopic pregnancy and is a life - threatening condition[2]. Early diagnosis helps in preserving the uterus, subsequent fertility and reducing mortality rate. Diagnosis depends on combination of ultrasound scanning and serial serum β - human chorionic gonadotropin (β - hCG) measurement[3]. Magnetic resonance imaging (MRI) can be used to confirm the diagnosis. Management options may be medical or the surgical. Medical management is by administration of methotrexate (MTX) either systematically, locally or combined[4]. To prevent complications, bilateral uterine artery embolization may be combined with medical management[5]. Surgical management includes hysteroscopic or laparoscopic visualizing of uterine cavity and aspiration of the ectopic mass, elective laparotomy and excision of gestational sac, hysterotomy and repair of uterine scar dehiscence and hysterectomy[6-8].

Case Report

A 37 - year old woman (gravida 2, para 1) with a confirmed pregnancy of 12 weeks gestation attended hospital with a history of bleeding per vaginam from 9 days. Her obstetric history was noted for one cesarean delivery two years back. Patient was systematically well with all normal observations. Ultrasound scaning showed anteverted uterus with endometrial thickness of 38mm surrounded by hemorrhage. The cavity contained anechoic fluid

Table 1. Longitudinal measurements of β - hCG

Date	β - hCG (IU/ml)	Hemoglobin (mg/dl)
17/10/14	12,623	13.8
19/10/14	7,885	13.5
18/11/14	175	11.5
23/11/14	156	10.6
24/11/14	120	10.6
01/12/14	107	9.8

or an irregular shaped sac like structure measuring 19 x 37 x 15mm, and no obvious contents were confirmed. Cervix appeared closed. There was mild bulge of the anterior uterine contour close to the cervix. A highly vascular mass measuring 23 x 21 x 17mm noted at the lower segment cesarean section (LSCS) scar site. Both ovaries were poorly visualised, no obvious adnexal mass or free fluid was seen, β - hCG was 12,623IU/ml and hemoglobin 13.8mg/dl, and patient was booked for rescan and repeat β - hCG after 48 hours. Rescan showed previously seen sac like structure measuring 20 x 19 x 14mm reduced in size. Again there were areas of high vascularity at the LSCS scar site. Cervix appeared closed. Both ovaries were normal and no obvious adnexal mass or free fluid was seen. Patient had increased vaginal bleeding and β - hCG was 7,885IU/ml decreasing. Repeat hemoglobin was 13.5mg/dl.

Management options were discussed and patient opted for medical management. Two days later patient attended for medical management and misoprostol 800 micrograms was given. After 26 days patient again attended hospital with a history of continuous vaginal bleeding since medical management. Patient's observations were stable and had mild suprapubic tenderness. Hemoglobin was 11.5mg/dl and β - hCG was 175IU/ml. Transvaginal scan showed blood clot in the uterus and specifically around the scar, going into the anterior surface of the uterus and appearance of placental detachment of scar. Cervix was closed. Rescan was done 2 days later and showed blood clots and some fluid in the endometrial cavity. Scar was very thin and β - hCG was 156IU/ml. Options about surgical management and MTX were discussed with the patient. Three days later rescan was done and showed irregular endometrium measuring 47mm in thickness containing irregular cystic and solid area throughout the endometrium and myometrium, difficult to differentiate between the two. The cavity contained a collapsing gestational sac measuring 51 x 9 x 18mm. There was fluid filled area seen in close proximity to the LSCS scar. Cervix was closed and both ovaries were normal. No obvious adnexal mass or free fluid was seen. Repeat β - hCG was 120IU/ml and hemoglobin was 10.6mg/dl. Patient did not want to go for any surgical management and did not want to receive MTX.

After 8 days, the patient visited the hospital with heavy vaginal bleeding and an estimated blood loss of 1.5L and her hemoglobin was 8.7mg/dl. Vaginal examination showed open os and clots were removed from canal. Evacuation of retained products of conception (ERPC) under laparoscopic guidance was performed. Patient lost 2,000ml of blood, an intrauterine Bakri balloon was used and 4 units of blood were transfused. Three days later, the patient was discharged home and repeat haemoglobin was 9.6mg/dl.

Histology showed chorionic villi, decidua and blood clots with no evidence of gestational trophoblastic disease or malignancy.

Discussion

Cesarean scar pregnancy is an iatrogenic complication that was first reported by Larsen and Solomon[9].

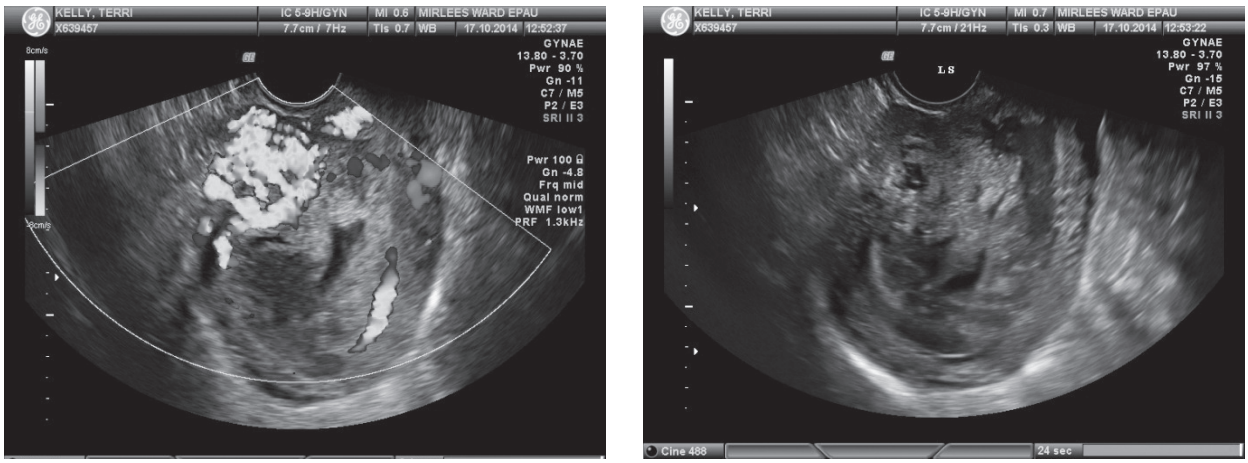

Figure 1. Ultrasound scanning of cesarian scar pregnancy (17/10/2014)

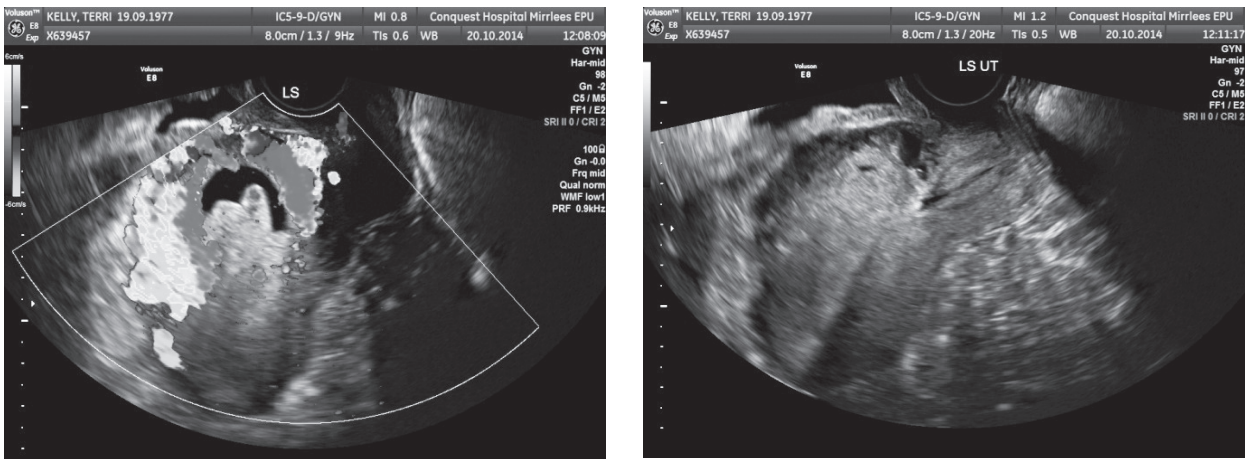

Figure 2. Ultrasound scanning of cesarian scan pregnancy (20/10/2014)

The most important factor in treating cesarian scan pregnancy is early diagnosis and transvaginal sonography should be used in all previous cesarean section cases. It has a sensitivity of 84.6% for diagnosis of cesarian scan pregnancy[10]. Diagnostic criteria include an empty cavity and cervical canal with trophoblastic activity on Doppler examination at the anterior part of the isthmic level. There are two different types of cesarean scar pregnancy. The first type (endogenic) shows implantation of the gestational sac on the scar and grows towards either the cervicoisthmic space or the uterine cavity. The second type (exogenic) shows deep implantation into a post - cesarean delivery myometrial defect with the sac remaining outside the uterine cavity, which may rupture and bleed during an early stage of pregnancy[11]. Sinha and Mishra[12] hypothesized that cesarian scar pregnancy and morbidly adherent placenta have common pathogenisis[12], and Timor - Tritsch and Monteagudo suggested that if a cesarean scar pregnancy is unrecognised in the first trimester it can lead to placenta previa with accreta[10].

In the recent literature a wide variety of treatment approaches were considered, including systemic and local use of MTX, dilation and curettage, suction curettage, uterine artery embolization and hysteroscopy. Arslan et al reported a case of cervical scar pregnancy at 7 weeks gestation with a gestational sac 3.5mm away from the bladder and the patient was treated uneventfully with suction curet-

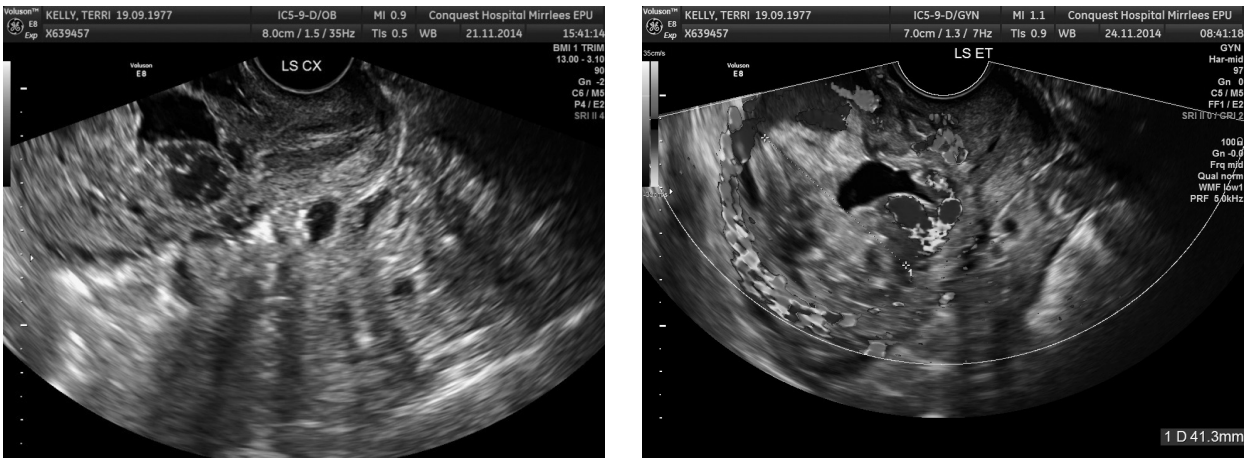

Figure 3. Ultrasound scanning of cesarian scanning pregnancy (21/11/2014)

tage[13]. Polat et al performed dilation and curettage on four of the six patients and only one patient had abundant vaginal bleeding and underwent laparotomy[14]. In another study, Wang et al performed evacuation for three cases of cesarian scar pregnancy and one had perforation and was laparoscopically repaired[15]. Ash et al performed evacuation on eight patients and three of them had a Foley catheter inserted into the cervix to achieve hemostasis[16]. Seow et al suggested that MTX therapy is the most preferred method of management for preserving fertility[17].

Conclusion

Cases of healthy pregnancies after cesarean scar pregnancy have been reported in the literature, however early transvaginal sonography should be performed. Due to lack of data there is no standard treatment for cesarean scar pregnancy. Early suction curettage may be an effective conservative treatment in selected cases. Clinicians should decide the method of therapy on individualised bases and parameters, like gestational age, β - hCG levels, myometrial thickness and clinical presentation.

Conflict of interest

All authors declare no conflict of interest.

References

1. Rotas MA, Haberman S, Levgur M. Cesarean scar ectopic pregnancies: etiology, diagnosis, and management. Obstet Gynecol 2006;107:1373-81.
2. Fylstra DL, Pound - Chang T, Miller MG, Cooper A, Miller KM. Ectopic pregnancy within a cesarean delivery scar: a case report. Am J Obstet Gynecol 2002;187:302-4.
3. Horne AW, Duncan WC, Critchley HO. The need for serum biomarker development for diagnosing and excluding tubal ectopic pregnancy. Acta Obstet Gynecol Scand 2010;89:299-301.
4. Ravhon A, Ben - Chetrit A, Rabinowitz R, Neuman M, Beller U. Successful methotrexate treatment of a viable pregnancy within a thin uterine scar. Br J Obstet Gynaecol 1997;104:628-9.
5. Shufaro Y, Nadjari M. Implantation of a gestational sac in a cesarean section scar. Fertil Steril 2001;75:1217.
6. Lam PM, Lo KW. Multiple - dose methotrexate for pregnancy in a cesarean section scar. A case report. J Reprod Med 2002;47:332-4.
7. Ghezzi F, Laganà D, Franchi M, Fugazzola C, Bolis P. Conservative treatment by chemotherapy and uterine arteries embolization of a cesarean scar pregnancy. Eur J Obstet Gynecol Reprod Biol 2002;103:88-91.
8. Fylstra DL, Pound - Chang T, Miller MG, Cooper A, Miller KM. Ectopic pregnancy within a cesarean delivery scar: a case report. Am J Obstet Gynecol 2002;187:302-4.

9. Larsen JV, Solomon MH. Pregnancy in a uterine scar sacculus - an unusual cause of postabortal haemorrhage. A case report. S Afr Med J 1978;53 142-3.
10. Timor - Tritsch IE, Monteagudo A. Unforeseen consequences of the increasing rate of cesarean deliveries: early placenta accreta and cesarean scar pregnancy. A review. Am J Obstet Gynecol 2012;207:14-29.
11. Vial Y, Petignat P, Hohlfeld P. Pregnancy in a cesarean scar. Ultrasound Obstet Gynecol 2000;16:592-3.
12. Sinha P, Mishra M. Caesarean scar pregnancy: a precursor of placenta percreta/accreta. J Obstet Gynaecol 2012;32:621-3.
13. Arslan M, Pata O, Dilek TU, Aktas A, Aban M, Dilek S. Treatment of viable cesarean scar ectopic pregnancy with suction curettage. Int J Gynaecol Obstet 2005;89:163-6.
14. Polat I, Alkis I, Sahbaz A, et al. Diagnosis and management of cesarean scar pregnancy. Clin Exp Obstet Gynecol 2012;39:365-8.
15. Wang CB, Tseng CJ. Primary evacuation therapy for Cesarean scar pregnancy: three new cases and review. Ultrasound Obstet Gynecol 2006;27:222-6.
16. Ash A, Smith A, Maxwell D. Caesarean scar pregnancy. BJOG 2007;114:253-63.
17. Seow KM, Huang LW, Lin YH, Lin MY, Tsai YL, Hwang JL. Cesarean scar pregnancy: issues in management. Ultrasound Obstet Gynecol 2004;23:247-53.