CASE REPORT

Minimally invasive surgery to manage a complicated case of a caesarean scar ectopic pregnancy

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SUMMARY

A 30-year-old woman, gravida 3 para 1, presented at 5 weeks of amenorrhoea with vaginal spotting and mild abdominal pain. A transvaginal scan confirmed a caesarean scar pregnancy (CSP). Serum hCG level at presentation was 4357. She declined treatment initially, but eventually underwent laparoscopic-guided suction curettage and excision of CSP. hCG was undetectable at 5 weeks postoperatively. She had an uneventful recovery and was advised to take oral contraceptives.

BACKGROUND

Caesarean scar pregnancy (CSP) is a rare condition but its incidence is likely increasing due to the increasing number of caesarean sections being performed. Current literature does not seem to show any general consensus for treatment of CSPs. However, early recognition, diagnosis and treatment are clearly important to prevent possible catastrophic consequences such as uterine rupture and hysterectomy, resulting in possible loss of fertility and maternal mortality.

CASE PRESENTATION

A 30-year-old Chinese woman, gravida 3 para 1 (1 previous first trimester abortion, 1 previous lower segment caesarean section for failure to progress 13 months earlier) presented at 5 weeks of amenorrhoea, with vaginal spotting for a week. She developed mild abdominal pain. She was referred from her private obstetrician who noted no intrauterine gestational sac despite serum hCG levels rising from 1574 to 4357 in 48 h. Clinical examination was unremarkable.

INVESTIGATIONS

A transvaginal scan showed a 6×5×5 mm CSP. There was no yolk sac or fetal pole. Serum hCG was 4357 at presentation.

DIFFERENTIAL DIAGNOSIS

When performing a transvaginal scan for a woman in the early pregnancy unit, on seeing an empty uterus, apart from considering the more common differential diagnosis of a tubal ectopic pregnancy, it is important to consider ectopic pregnancies in less common sites, as well as CSP in a patient with one or more previous caesarean sections.

TREATMENT

The patient was offered intramuscular methotrexate but the patient initially declined treatment and wanted to seek a second opinion at another centre.

She returned 3 days later, asymptomatic. A transvaginal scan was repeated which revealed a larger sac in the same area—measuring 16×7×5 mm. A yolk sac and fetal pole were now visualised (see figure 1). No cardiac activity was noted. Serum hCG had risen to 31 153.

She decided to proceed with intramuscular methotrexate initially, but eventually underwent laparoscopic-guided suction curettage and excision of CSP 2 days later.

Intraoperative findings (refer to figure 2) were that of an 8-week-sized uterus, which was acutely anteverted and adherent to the anterior abdominal wall. Tubes and ovaries appeared normal. There was a small amount of haemoperitoneum, estimated to be 50 mL. There was an area of deficiency, 3×2 cm, noted at the anterior lower segment with products of conception seen protruding out of the previous caesarean scar. Hysteroscopy was also performed—some products of conception were visualised.

Adhesiolysis was performed to free up the anterior wall of the uterus. The products of conception were then removed from the area of perforation over the previous caesarean scar. The uterine defect was sutured in multiple layers with Vicryl 0 and 2–0 sutures. Suction curettage was completed under laparoscopic guidance.

OUTCOME AND FOLLOW-UP

Histology confirmed products of conception. The patient made an uneventful recovery. She was seen 2 weeks later and repeated serum hCG had fallen to 1262. hCG continued to fall to 194 a week later. hCG was undetectable at 5-week postoperation and she had resumed menstruation by then. She was counselled extensively with regard to the risk of recurrence of CSP, uterine rupture and

Figure 1 Transvaginal scan image of the caesarean scar pregnancy.

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Figure 2 Laparoscopic images of the caesarean scar pregnancy. Laparoscopic suturing of the defect was performed. Bilateral tubes and ovaries appeared grossly normal.

dehiscence and placenta accreta for future pregnancies. Contraceptive advice was also given.

haemorrhage or haemodynamic instability, conversion to laparotomy must be considered.

DISCUSSION

Current literature^{1–8} shows a wide extent of treatment modalities of CSPs, ranging from ultrasound-guided methotrexate and potassium chloride intralesional injections, systemic intramuscular methotrexate injections, hysteroscopic, laparoscopic, laparotomy techniques, dilation and curettage, uterine artery embolisation as well as varied combinations of the above techniques. Uterine artery embolisation as a primary treatment should be used sparingly only for selected cases. Transvaginal or transabdominal ultrasound-directed methotrexate injection, with or without additional intramuscular methotrexate, as well as surgical excision by hysteroscopic guidance seemed to carry the lowest complication rate. There appears to be, however, no consensus on choosing which mode of therapy for the management of CSP and is highly centre dependent and based on individual experience. Expectant management seems to have little or no role in the management of CSPs already diagnosed on ultrasound.⁴

As Ash *et al*⁴ stated in their review article, an experienced endoscopist should make the choice between a laparoscopy and hysteroscopy; an operative hysteroscopic approach should be chosen for the CSP that grows inwards towards the uterine cavity, while a laparoscopy is more justified for a deeply implanted CSP growing towards the abdominal cavity and bladder. Several reports^{4–6} have shown that laparoscopic excision is safe, with limited blood loss and is associated with fast recovery. Similarly, hysteroscopy has short operative time⁴ and direct visualisation allows for safe removal of products of conception. The main advantage of these surgical methods is that fertility is conserved. However, in the event of severe

Learning points

- ▶ Caesarean scar pregnancy is a rare but emerging phenomenon due to the increasing number of caesarean sections being performed worldwide.
- ▶ Awareness of this condition, early diagnosis and treatment are essential to reduce maternal morbidity and mortality from this rare condition.
- ▶ Current literature shows that there is no general consensus on the best treatment option for caesarean scar pregnancies, but early involvement of senior experienced gynaecologists will help to improve care of these women.
- ▶ Various treatment options have been described in case reports and series; however, minimally invasive techniques involving laparoscopy and hysteroscopy, intrasac or systemic methotrexate seem to be efficacious and fertility sparing treatment modalities when an early diagnosis has been made.
- ▶ In the event of haemodynamic instability, conversion to laparotomy must still be considered.

Contributors XO and MM managed the patient and cowrote the manuscript for submission.

Competing interests None.

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