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LAPAROSCOPIC MANAGEMENT OF A CESAREAN SCAR PREGNANCY

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ABSTRACT
Implantation within the scar from a previous caesarean section is one of the rarest forms of ectopic pregnancy. However, with the rising number of caesarean sections performed, it is perhaps not so rare nowadays and the incidence nowadays is 1/2000 normal pregnancies. Uterine rupture and haemorrhage, even in the first trimester, seem likely if the pregnancy is allowed to continue. Such a complication is very dangerous and may require hysterectomy with consequent loss of fertility. There are currently no guidelines for the management of such pregnancies .We present a case of caesarean scar pregnancy managed laparoscopically, in our hospital. We also try to explore the indications for the various treatment modalities for caesarean scar pregnancy.

CASE REPORT

A 34year-old woman at 9 weeks of gestation came with complains of mild lower abdominal pain and 2 episodes of mild vaginal bleeding in past 1 week. She had delivered a baby by lower segment caesarean section, 4 years previously. Per vaginal examination was a bulky uterus with no fornicial or cervical motion tenderness. Pelvic ultrasonography revealed findings compatible with an intramyometrial pregnancy where a 1.8 x 1.17 cm gestational sac containing a secondary yolk sac was seen inside the myometrium of the anterior uterine wall at the level of isthmus. A diagnosis of caesarean scar pregnancy was made in view of the history of caesarean section and the location of the gestational sac. No fluid was found in the pelvic cavity. Clinically, the patient was stable. The patient consented for a laparoscopic surgery.

Laparoscopy was performed under general anaesthesia with the woman in the 15Trendelenburg position. A Verres needle was inserted through a small incision just inferior to the umbilicus and a pneumoperitoneum created by insufflating carbon dioxide to a maximal pressure of 20 mmHg. Although intending to manage the condition laparoscopically, we were prepared to to convert to open laparotomy if serious bleeding developed. The serosa was incised and the bladder pushed down to give access to the lower uterine segment. In each case, a mass with a thin wall of myometrium was seen. Dilute vasopressin (1 unit/ml) was used for haemostasis. We injected 5–10 ml of vasopressin solution into the myometrium at one or more sites with an 18-gauge spinal needle placed directly through the abdominal wall and waited until blanching occurred. A transverse incision was then made over the most prominent area of the mass, revealing in each case a dark red gestational sac which was removed using grasping forceps. The resulting space in the myometrium was cleaned using suction irrigation, and haemostasis was achieved using bipolar forceps at 20 W. One layer of interrupted 2-0 polyglactin sutures was placed in the uterine wall using the intracorporeal method. The gestational tissue was removed. The patient was discharged the next day.

DISCUSSION

Although caesarean section is a very common procedure, caesarean scar pregnancy is very rare. The incidence seems to be increasing, however, possibly

because of the increased performance of caesarean section and more widespread use of transvaginal ultrasound scan as a diagnostic method. Sonography is a first-line diagnostic tool for caesarean scar pregnancy. However, it can be difficult to differentiate a scar pregnancy from a miscarriage in progress or a cervicoisthmic pregnancy.

The diagnosis is usually made on ultrasonography revealing (1) an empty uterine cavity and an empty cervical canal, (2) a gestational sac in the anterior part of the uterine isthmus and (3) an absence of healthy myometrium between the bladder and sac [1].

Because of the rarity of this particular ectopic implantation, there are no universal treatment guidelines. Medical treatment options, including systemic and ultrasound-guided local methotrexate, potassium chloride and hyperosmolar glucose, have been used successfully, but they do have disadvantages [2], Methotrexate, for example, has reportedly been successful in 29 of 40 cases. However, a subsequent caesarean scar pregnancy has occurred after methotrexate [3].

Kochhar has reported a case of cesarean scar pregnancy treated by selective embolization of the uterine artery followed by weekly intramuscular injections of methotrexate [4]. The recovery of the patient was uneventful. However, one drawback, of medical treatment is that it leaves the original scar in place. For a scar which has already shown a predisposition to ectopic implantation, surgery would still be necessary if conservative treatment fails. Besides, only surgery offers the opportunity to remove the pregnancy and simultaneously repair the defect. According to Fylstra's review, termination of the pregnancy by either laparotomy or hysterotomy with repair of the accompanying uterine scar dehiscence is probably the best treatment for caesarean scar pregnancy [5]. Vial et al. have also suggested surgical resection of the old scar and a new closure is offered even if recurrence is thought to be unlikely [6]. The effectiveness and safety of laparoscopy in the treatment of reproductive and gynaecologic lesions is well established. In our Department, total laparoscopic hysterectomy is the most common procedure for removal of the uterus. Given our experience with this procedure, we felt it was safe to attempt to manage scar pregnancies laparoscopically, knowing that if intractable bleeding intervened, we could immediately perform a laparoscopicl hysterectomy. Conversion to open laparotomy would have been the procedure of last resort.

Hence we demonstrated the value of laparoscopy in treatment of caesarean scar pregnancy. This procedure avoids open laparotomy and preserves the woman's reproductive capacity. Although more invasive than conservative medical treatment with methotrexate, laparoscopy allows revision of the scar, which will reduce the risk of a recurrent ectopic pregnancy in the same location. In the hands of an experienced operator, laparoscopy appears to be a reasonable approach.

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