Journal of Reproduction & Contraception doi: 10.7669/j.issn.1001-7844.2014.03.0187
2014 Sep.; 25(3):187-191 E-mail: randc_journal@163.com

• CASE REPORT •

Successful Pregnancy by *In Vitro* Fertilization after Bilateral Uterine Arterial Embolization for Cesarean Scar Pregnancy: A Case Report

Qiong-fang WU, Zhi-hui HUANG, Yuan ZHU, Nie NING
Jiangxi Hospital for Women and Children, Nanchang 330006, China

A 35-year-old woman who had one delivery by cesarean section got pregnant again. Color Doppler flow imaging and Magnetic resonance imaging (MRI) showed a cesarean scar pregnancy (CSP). Uterine arterial embolization (UAE) and curettage was performed successfully to terminate the pregnancy. Six months after the curettage, the patient's menstrual flow was reduced to one non-drenched sanitary pad per day for only 1−2 d, every 30 d. The patient underwent hysterosalpingography (HSG), which suggested the presence of a filling-defect of the left uterine cavity, with obstructed bilateral Fallopian tubes. The patient subsequently underwent lysis of adhesions by hysteroscopy plus an exploratory laparoscopy, under general anesthesia. Her menstruation gradually increased to 5−7 d every 30 d. As the patient did not become pregnant during the first year after surgery, she underwent in vitro fertilization (IVF) treatment and a repeat ultrasound showed a somewhat thin endometrial line. At last, the patient got pregnant and gave birth to a live baby by IVF.

Key words: cesarean scar pregnancy (CSP); *in vitro* fertilization (IVF)

The incidence of cesarean scar pregnancy (CSP) has increased substantially in recent years because of the rising number and percentage of cesarean sections[1]. CSP is a type of ectopic pregnancy and an example of a long-term complication of cesarean section. Without treatment, uncontrollable massive hemorrhage may occur because of uterine rupture, potentially resulting in hysterectomy or even death[2]. Selective uterine artery infusion with methotrexate (MTX) plus embolization is an effective way to increase the concentration of MTX within the gestation sac, which permits direct action of the drug on the fetus[3].

Corresponding author: Qiong-fang WU; E-mail: wuqiongfang898@sina.com

Embolization with gelatin sponge granules in the uterine artery can block most of the blood supply to the gestation sac, which will lead to necrosis of the villi attached to the uterine incision and eventual death of the fetus. After effective bilateral uterine arterial embolization (UAE), complete curettage of the uterine cavity may be performed under ultrasound guidance, which will reduce the difficulty and risks of the procedure and prevent the occurrence of massive hemorrhage due to CSP, residual pregnancy tissue, or complications such as uterine perforation or rupture. Overall, this approach should minimize injury to the patient, while preserving uterine function and fertility. Serious complications caused by UAE, including aberrant embolization, necrosis, sepsis, hysterectomy vesicovaginal fistula and endometrial atrophy or menopause, have been reported rarely[4].

Herein, we report a case of successful pregnancy by *in vitro* fertilization and embryo transfer (IVF-ET) after two procedures involving the hysteroscopic lysis of intrauterine adhesions, which were due to UAE, and complete curettage of the uterinecavity for management of a CSP.

Case report

A 35-year-old woman had five previous pregnancies: four artificial (therapeutic) abortions and one delivery by cesarean section. She was admitted 3 years after the cesarean section with a history of amenorrhea for 42 d and a bloody vaginal discharge with lower abdominal pain for 12 d. The following day, hematological results showed a human chorionic gonadotrophin (hCG) level of 16 288.3 IU/L, and pelvic ultrasound showed an anteposition uterus and a 13 mm × 7 mm × 10 mm pregnancy sac (which included the presence of a yolk sac) on the incision in the lower uterine segment. Color Doppler flow imaging showed a CSP, but with no abnormal bleeding and no abnormal mass in either adnexae. Magnetic resonance imaging (MRI) showed abnormal signals at the middle segment of the uterus body, which were consistent with the findings of a CSP.

After explaining the results to the patient, the following treatment options were discussed with her: 1) selective complete curettage of the uterine cavity after multiple doses of MTX chemotherapy; or 2) selective complete curettage of uterine cavity after UAE. The disadvantages of the first option included its long duration and the side effects of chemotherapy. The drawbacks of the second option included the risks of embolization failure, lower limb venous thrombosis, infection secondary to ischemia or necrosis, massive hemorrhage even after complete curettage of the uterine cavity, and hysterectomy if required to control the bleeding. The patient chose the second option. UAE was performed with injection of 50 mg MTX (Jiang Su Heng Rui Medicine Co. LTD) and anhydrous cefazolin following the success of puncture, uterine arteriography was performed. Once the target-vessel was confirmed, 100 mg MTX and 1 g anhydrous Cefazolin (Haikou Qili) was injected slowly,