

A case of a heterotopic cervical pregnancy managed by ultrasonographic-guided laser ablation

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Objective

To report a heterotopic cervical pregnancy with a coexistent viable intrauterine pregnancy.

Methods

Patient with epidural anesthesia and lithotomy position, using a vaginal speculum the cervix with the ectopic pregnancy was visualized, assisted with ultrasound abdominal visualization (GE Voluson Expert 730 BTO5) a 18 g CVS needle (COOK Chiba needle 18g) is inserted to the amniotic sac and the fetus, the stylet is removed and a 500 microns laser fiber is introduced and using a diode laser (Photomedex Inc, Pennsylvania) 30 watts power, the cervical pregnancy is coagulated. Good hemostasis is acquired and no complications were reported during the procedure (Figure 3). The rest of the prenatal care was reported with no complications and at 36 weeks pregnancy the patient was seen at labor unit with regular uterine contractions and a non complicated cesarean section was done.

Results

With the advent of assisted reproduction techniques (ART) the overall incidence of heterotopic pregnancy has risen to approximately 1 in 3900 pregnancies (1, 8). The increased incidence in these pregnancies may be related to the high proportion of patients with tubal disease, high levels of estradiol and progesterone, or high numbers of transferred embryos or ovulated oocytes in this population. Cervical pregnancy is the least common type of ectopic pregnancy, comprising less than 1% of all ectopic pregnancies. It represents a significant threat to the health, fertility and life of the woman. Most patients present with massive vaginal bleeding. The risk factors are: a history of uterine curettage or cesarean section, use of the intrauterine device and as mentioned previously assisted reproductive techniques. The success of conservative treatment depends on the timely and prompt diagnosis by early ultrasound, which can reduce the chances of severe life threatening hemorrhage necessitating hysterectomy, blood transfusion and death of the viable embryo. According to the literature, in 81% of cases transvaginal therapy does not produce complications, in 5% bleeding occurs requiring additional interventions and only in 1% of cases is it necessary to remove the uterus (2). Clinical practice guidelines are not available and treatment of heterotopic cervical pregnancy should be tailored to the needs of the patient. There are various therapeutic options and the majority of case reports are about cervical pregnancies and not heterotopic cervical pregnancies with a viable intrauterine embryo. Systemic medical therapy such as methotrexate is contraindicated in the presence of a viable intrauterine gestation (9). Treatment options reported in the literature are: Local injection under ultrasound guidance, aspiration and hysteroscopic resection (3). Local injection into the sac under sonographic guidance could be an effective treatment in selected reports. Substances for injection should have high therapeutic effectiveness with low toxicity to the concurrent intrauterine pregnancy, and produce no lasting damage to the fallopian tube. Two options are potassium chloride (KCL) and hyperosmolar glucose. A literature review of 11 cases of heterotopic pregnancy treated with KCL injection noted six cases (55 percent) failed this therapy and required surgical intervention (4, 7). A report of a cervical pregnancy treated with KCL injection was complicated by delayed bleeding, which was controlled by placement of cervical stay sutures (5). There are case reports of successful surgical treatment of cervical pregnancy with hysteroscopy but massive operative blood loss is a main concern with this type of procedures. Thus, laparoscopic management is not suitable for an inexperienced laparoscopic surgeon (6). To our literature review, this new technique is the first case report of a successful conservative treatment of heterotopic cervical pregnancy after IVF—embryo transfer using laser under ultrasonographic guidance. With this approach cervical manipulation is minimized while direct visualization of cervical pregnancy is obtained avoiding aggression of the intrauterine pregnancy. Other advantages of this approach is a lower cost compared with hysteroscopy and the absence of substances that may be toxic as potassium chloride. Rapid response and early recovery make this a feasible option approach in expert hands.

Conclusion

Laser management of a cervical heterotopic pregnancy is another minimally invasive procedure that seems to lead to successful obstetric outcomes in cases of heterotopic pregnancies with a normal intrauterine embryo. To our literature review, this new technique is the first case report of a successful conservative treatment of heterotopic cervical pregnancy after IVF—embryo transfer using laser under ultrasonographic guidance. More cases need to be recruited in order to get real conclusions about the success of it.