

Case Report

Heterotopic Cervical Pregnancy: A Rare Case Treated by Transvaginal Aspiration

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ABSTRACT

Cervical pregnancy is a rare form of ectopic pregnancy. Heterotopic cervical pregnancy is much more rare scenario. This is a case of Heterotopic cervical pregnancy treated successfully by transvaginal ultrasound guided aspiration.

KEYWORDS: Cervical pregnancy, heterotopic pregnancy, transvaginal aspiration

INTRODUCTION

Cervical pregnancy is a rare form of ectopic pregnancy. The incidence of cervical pregnancy varies from 1/1000 to 1/18,000 pregnancies.^[1] The application of high-resolution ultrasound as well as color Doppler has enabled diagnosis of early cervical pregnancy. Heterotopic pregnancy is, in fact, a multiple pregnancy, in which one or more intrauterine pregnancies coexist with one ectopic pregnancy. The incidence of heterotopic pregnancies has risen with increasing application of assisted reproduction methods such as *in vitro* fertilization (IVF) – embryo transfer and ranges from 1% to 3%, in relation to the percentage of clinical pregnancies that occur as a result of this procedure.^[2] In literature, there have been reports on medical treatment of heterotopic cervical pregnancy. The following medical therapeutic procedures have been performed: ultrasound-guided potassium chloride or methotrexate injections, hypogastric iliac artery ligation and arterial embolization, cervical cerclage, and hysteroscopic resection.^[3,4]

This is a case report of an early heterotopic cervical pregnancy that was treated successfully by ultrasound-guided aspiration.

CASE REPORT

A 31-year-old woman was admitted in Srishti Hospital, Puducherry in mid-December 2015 as a result of hemorrhage in the 6th gestational week of a desired pregnancy. The patient's pregnancy occurred in the IVF – embryo transfer program. Controlled ovarian

hyperstimulation was performed using short protocol, applying follitropin- α (Gonal-F; Newmon), human menopausal gonadotropin, and gonadotropin-releasing hormone antagonist (Vestova Intercontinental). Embryo transfer was performed with three embryos. IVF – embryo transfer – was used because bilateral salpingectomy had been performed for previous two tubal ectopic pregnancies.

Gynecological findings on admission were as follows: there was a big vaginal blood clot; fresh uterine hemorrhage; livid cervix; and external cervical ostium open with clots [Figure 1]. The established diagnosis was threatened abortion. Ultrasound examination was performed immediately, revealing two gestation sacs. One gestational sac was seen in the uterine cavity with fetal pole seen corresponding to 6 weeks of gestation. Embryonic cardiac activity was 124 beats/min. The second gestation sac was located in the cervical canal. It was 19 mm in diameter, with a visible yolk sac and vital embryo with cardiac activity of 129 beats/min. Ultrasound showed normal adnexa. The ultrasound picture is depicted in Figure 2.

Blood pressure was 110/60 mmHg, and the patient had no anemia. Laboratory investigations were within the normal limits. The patient was immediately subjected to therapy, as follows: intramuscular progesterone 100 mg daily, with vaginal progesterone (1200 mg daily) plus antibiotic therapy. The following day (the day after

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admission), the intervention was performed on the patient under intravenous anesthesia. It was aimed at cessation of the cervical pregnancy but maintenance of the intrauterine pregnancy. The gestation sac located in the cervical canal was punctured through the anterior cervical lip with the 17-G single lumen oocyte aspiration needle under ultrasound guidance and approximately 1.5 mL of liquor amnii and trophoblastic tissue [Figure 3] was aspirated. The histopathological examination confirmed the presence of products of conception.

On completion of the intervention, it was ultrasonographically confirmed that the intrauterine pregnancy in the uterine cavity was intact and there was no embryonic cardiac action registered in the cervical canal. Three days after the intervention, the patient stopped bleeding. Her general condition was good. A cervical swab was taken every 5 days and was sterile. The pregnancy was monitored biweekly by transvaginal ultrasound up to 12 weeks and thereafter by transabdominal ultrasound. The pregnancy had a normal course. She had an uneventful antenatal period and delivered a alive term male baby weighing 3.2 kg at 37 weeks delivered by elective cesarean section.

DISCUSSION

In reported literature, the incidence of heterotopic cervical pregnancies with IVF – embryo transfer – ranges from 1% to 3%, in relation to the percentage of clinical pregnancies that occur as a result of this procedure.^[2] Before routine ultrasound was introduced in obstetrics, cervical pregnancy was rarely diagnosed in its early stage. It used to be diagnosed during dilatation of the cervical canal and curettage usually resulting in life-threatening hemorrhage. As a result of this, most pregnancies of this kind ended in hysterectomy to save the patient's life. The introduction of routine high-resolution ultrasound as well as color Doppler in obstetrics enabled diagnosis of early cervical pregnancy. Thus, various medical therapeutic methods could be successfully applied in treating cervical pregnancy. In the past two decades, cervical pregnancies most commonly have been treated by the application of transvaginal ultrasound-guided injection of methotrexate and potassium chloride.^[4] Recently, ligation of the hypogastric artery and embolization of the uterine arteries, as well as cerclage of the cervix, have been performed to treat cervical pregnancy. In 2003, Jozwiak *et al.*^[3] reported a successful hysteroscopic resection of heterotopic cervical pregnancy. In our case, we did not decide to apply local methotrexate because of its systemic toxicity. We did not decide to apply uterine artery embolization

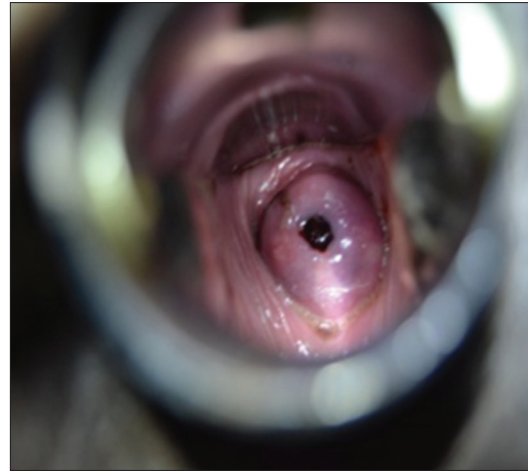


Figure 1: Per speculum examination

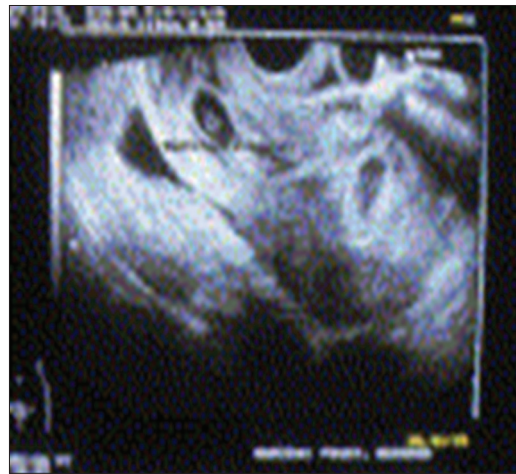


Figure 2: Ultrasonogram

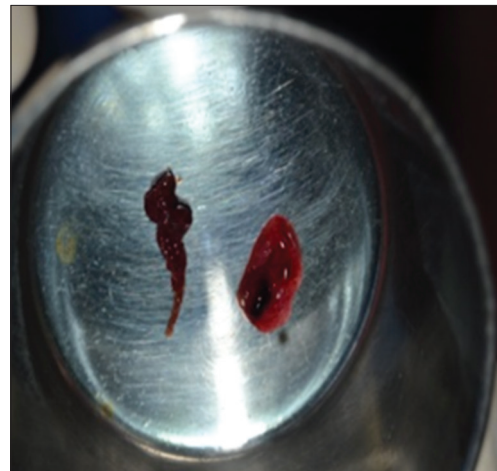


Figure 3: Aspirated content

either, because the patient would be exposed to X-rays during the procedure. Ultrasound-guided aspiration of the cervical gestation sac has proven to be very successful, and there have been no side effects on the vital intrauterine pregnancy.

The technique applied has been shown to be one possible treatment of heterotopic cervical pregnancy, without disturbing the viable pregnancy.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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