



CIENCIA E INNOVACIÓN EN  
SALUD

# Cervical ectopic pregnancy with colic abdominal pain

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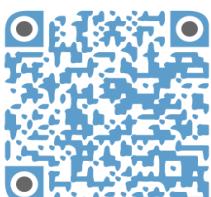
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## ABSTRACT

**Background:** Very few case reports of ectopic cervical pregnancy with clear photos are available in the scientific world literature. Is a leading cause of maternal morbidity and mortality with a pregnancy-related mortality. Cervical pregnancy is more common in pregnancies achieved after assisted reproductive technologies; it occurs in 0.1% of in vitro fertilization pregnancies. The potential morbidity demonstrates the importance of early diagnosis of a cervical ectopic so as early intervention and treatment may be employed. The most common symptom of cervical pregnancy is vaginal bleeding, which is often painless.

**Case report:** A 39 year old woman, G4 P2 C1 A0 L3, two spontaneous vaginal deliveries and last child birth by caesarean section + Pomeroy 15 years back, who underwent three embryo transfer 6.1 weeks ago; referred to the obstetric emergency department with 8 days increasing colic abdominal pain with some vaginal bleeding.

**Discussion:** This is an interesting case report with few bleeding and increasing colic abdominal pain that did not answer to methrotexate and required a hysterectomy as the most viable solution.

**Keywords** Cervical pregnancy; ectopic pregnancy; hysterectomy

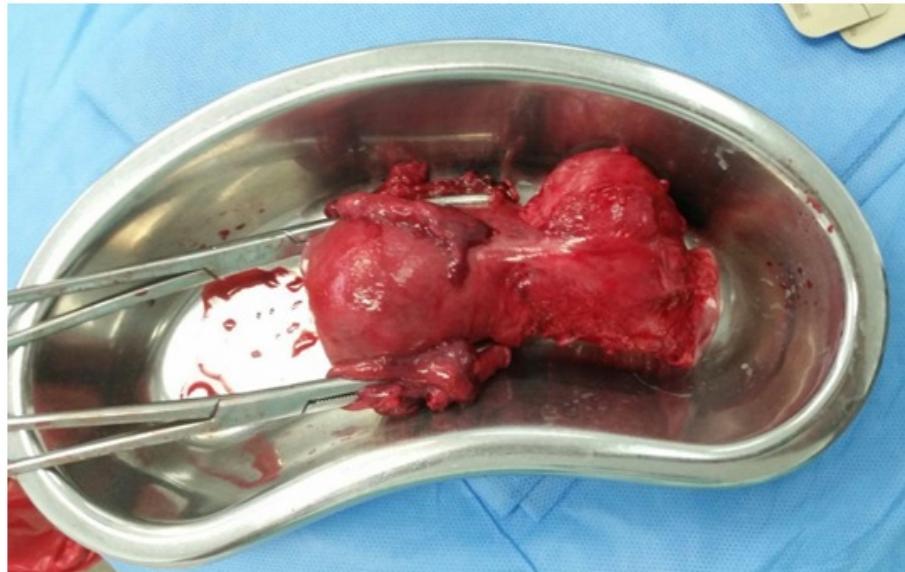
## I. INTRODUCTION

The rate of ectopic pregnancy declined from 2.0% in 2001 to 1.6% ([Perkins, Boulet, Kissin, Jameison, 2015](#)) in 2011 but is a leading cause of maternal morbidity and mortality with a pregnancy-related mortality of 31.9 deaths per 100,000 pregnancies ([Grimes, 2006](#)). Ectopic pregnancy incidence after assisted reproductive technology has decreased over time, but factors such as multiple embryo transfer increase the risk of ectopic pregnancy ([Perkins et.al, 2015](#)), representing a 2.4% ratio of ectopic pregnancies following fresh in vitro fertilization embryo transfers, while 7.6% following frozen-thawed embryo transfers ([Pyrgiotis, Sultan, Neal, Hung-Ching, Grifo, Rosenwaks, 1994](#)).

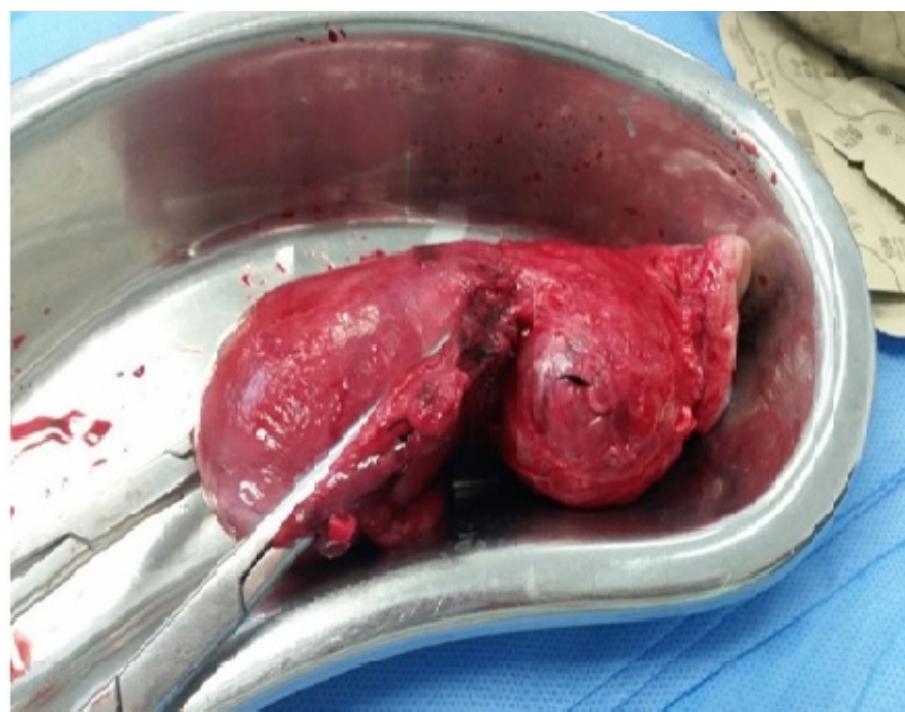
Cervical pregnancy is an extremely rare of non-tubal ectopic pregnancy in which the pregnancy products are implanted the lining of the endocervical canal, accounting for less than 1% of all ectopic gestations, with an estimated incidence of one in 2500 to one in 18,000 ([Singh, 2013](#)). Cervical pregnancy is more common in pregnancies achieved after assisted reproductive technologies; it occurs in 0.1% of in vitro fertilization pregnancies ([Stratoudakis, Zygouris, Kastrinakis, Daskalakis, Panagopoulos, 2015](#)). In some cases obesity is a risk factor for early pregnancy loss ([Fedorcsák, Storeng, Dale, Tanbo, Abyholm T, 2000](#)) and regularity of menstrual cycles does not affect an obesity treatment ([Kuzmar, Cortés, Rizo, 2014](#)). The potential morbidity demonstrates the importance of early diagnosis of a cervical ectopic so as early intervention and treatment may be employed.

## II. CASE REPORT

A 39 year old woman, G4 P2 C1 A0 L3, two spontaneous vaginal deliveries and last child birth by caesarean section + Pomeroy 15 years back, who underwent three embryo transfer 6.1 weeks ago; referred to the obstetric emergency department with 8 days increasing colic abdominal pain with some vaginal bleeding. When the patient admitted, negative Blumberg sign, gynecological examination revealed a uterus in AVF with mild bimanual palpation pain, cervix of a multipara, closed orifice and no active bleeding, 2 days before β-HCG serum level was 23193 Mlu/ML, transvaginal ultrasonography revealed a large hypoechoic lesion at the level of the segment outside the endometrial cavity suggestive of 30mm gestational sac with 12mm doubtful of embryo with no heart rate. Her vital signs were: BP=110/70 mm Hg, PR=76 per minute, Temp: 36°C, New β-HCG: 31277 Mlu/ML. The medical and obstetric history of the patient was clear and the patient was hemodynamically stable. The use of chemotherapeutic agents (methotrexate) was decided. After the third dose of methotrexate the patient had a marked decrease in abdominal pain. New transvaginal ultrasound showed a gestational sac in the cervical segment with 6.4w asystolic embryo. Medical management failed with methotrexate because the new levels of BhGC were almost the same (32677 Mlu/ML) and no transvaginal ultrasonography changes, so after 6 days it is decided to do a total abdominal hysterectomy as the only surgical treatment alternative ([Figure 1](#) and [Figure 2](#)) with secondary sterility authorized by the patient. Post-surgery without complications, patient in good clinical condition to be discharged.



**Figure 1.** A specimen of uterus cut open in cervical region showing gestational sac attached to the wall of the cervix.



**Figure 2.** A specimen of uterus cut open in cervical region showing gestational sac attached to the wall of the cervix.

### III. DISCUSSION

The most common symptom of cervical pregnancy is vaginal bleeding, which is often painless. On gynecological examination, the external OS may be open, with fetal membranes or pregnancy tissue. The diagnosis of cervical pregnancy is based on transvaginal ultrasound findings.

empty uterus and the presence of gestational sac below the level of uterine arteries are the most important findings, whereas a barrel-shaped cervix and blood flow around the gestation sac may also be found (*Hofmann, Urdl, Höfler, Höniogl, Tamussino, 1987*).

Common pre-disposing risk factors for this rare ectopic pregnancy are a prior dilatation and curettage, most commonly done for termination of pregnancy, prior caesarean section and in vitro fertilisation (*Sharma, Ojha, Mondal, Chattopadhyay, Sengupta, 2013*).

Clinical diagnosis is difficult, but the application of first-trimester transvaginal ultrasonography has led to improvements in the early diagnosis of cervical pregnancy, thereby assisting in conservative and fertility-preserving treatment (*Raskin, 1978*).

The treatment options for a cervical pregnancy depend on the hemodynamic condition of the patient. For haemodynamically stable patient, conservative treatment like; a systemic or local methotrexate chemotherapy alone or combined with adjuvant methods such as subsequent cervical curettage or cervical tamponade, or intracervical potassium chloride injection, appears to be a convenient and effective method for the treatment of the majority of cervical pregnancies before 12 weeks gestation, and has not been shown to have detrimental effects on subsequent reproductive capacities, obstetric outcomes and progeny health for those cases with successful preservation of the uterus (*Kung, Fu-Tsai, et al., 1997*). When uncontrolled haemorrhage occurs, uterine artery ligation, bilateral hypogastric artery ligation, intracervical tamponade has to be performed, but sometimes because the bleeding a hysterectomy is needed. However, diagnosis of cervical pregnancy is commonly delayed and is often made intra operatively in the presence of massive blood loss, necessitating an emergency hysterectomy in ~50% of cases (*Palazzetti, Cipriano, Spera, Aboullkilair, Pachi, 1997*).

The most common symptom described in the literature is excessive first trimester vaginal bleeding, but in our case the main symptom was an increasing colic abdominal pain with some vaginal bleeding following a painless short period of amenorrhea with no blood tests and ultrasound changes to methotrexate that required hysterectomy as the unique surgical alternative supported on her multiparous condition.

#### IV. CONCLUSION

Although Cervical Ectopic Pregnancy is a rare condition that can be life-threatening if not diagnosed and treated early, increased number of cases are being reported because of risk factors like high cesarean section rate and increased use of assisted reproductive technique for the management of infertility. The successful treatment depends on the prompt diagnosis by early physical exploration, ultrasound and  $\beta$ -HCG test, which can reduce the chances of severe hemorrhage necessitating hysterectomy surgery; but in cases of multiparity and previous cesarean section, hysterectomy is the most viable solution.

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