

## A Catastrophic Consequence: Cervical Ectopic Pregnancy

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### Abstract

Cervical pregnancy is a rare form of ectopic pregnancy with an estimated incidence of 0.1-1% of all ectopic pregnancies. It is defined as a pregnancy that implants in the cervical canal below the internal os and within the cervical mucosa. Treatment varies from conservative management to hysterectomy depending on the clinical presentation and the time of diagnosis. Diagnosis may be missed unless the clinician and the radiologist are aware of this entity. We present a case of cervical pregnancy in a 36 years old female who was diagnosed outside as missed abortion and was referred for termination of pregnancy. During dilatation and evacuation, she had severe uncontrollable bleeding. Laparotomy revealed the presence of an ectopic cervical pregnancy for which hysterectomy had to be done. This case is presented to highlight the importance of correct diagnosis in these cases to avoid such a catastrophe.

**Keywords:** Cervical pregnancy, Ectopic pregnancy, Hysterectomy.

### Introduction

Obstetric hemorrhage is a major cause of morbidity and maternal death. Among the major obstetric hemorrhages, cervical pregnancy (CP) is a rare entity, but associated with considerable maternal morbidity and mortality if an early diagnosis and proper treatment is not done.

In an ectopic pregnancy, the fertilized ovum is implanted at a site other than the normal uterine cavity. Although the majority of the ectopic pregnancies are tubal, other rare sites described are ovary, cervix, and primary abdominal pregnancy. Cervical pregnancy has an incidence of 1:16,000-1:18,000 of all pregnancies.<sup>1</sup> The exact cause is not known but is attributed to previous cesarean section, abortion, dilatation and curettage, use of the prior intrauterine contraceptive device (IUCD), in vitro fertilization, scars, and Asherman syndrome.<sup>2,3</sup>

Clinical and histopathological criterions have been described to diagnose this rare entity. We report a rare case of cervical pregnancy in a 36 years old female who came with a history of 2 prior cesarean sections and had to be treated with an emergency hysterectomy.

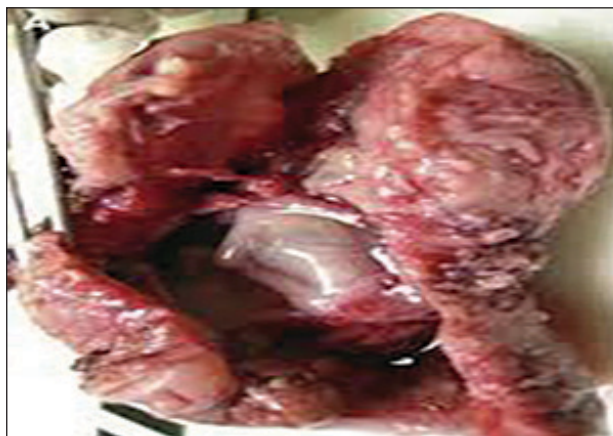
### Case History

A 36 years old female, gravida 4, para 3 with a previous history of two cesarean sections and one MR, diagnosed outside as missed abortion was referred for evacuation of the uterus. She complained of 11 weeks of amenorrhea with per vaginal bleeding for 3 days with slight lower abdominal pain. On examination, her abdomen was soft; cervical os was paraous and scanty bleeding on per speculum examination, uterus was 8 weeks on bimanual examination.

Her ultrasound reports was of missed abortion. The clinical diagnosis of missed abortion was made. She was taken up for dilatation, evacuation and curettage. During the procedure profuse uncontrollable bleeding started before complete evacuation. At this stage, a differential diagnosis of scar injury, cervical pregnancy and very rare occurrence of intra scar pregnancy was considered. Hence, decision for laparotomy was taken, and blood products were arranged.

Intraoperative findings revealed just bulky uterus, no hemoperitoneum and ballooned cervicoisthmic region, supporting a clinical diagnosis of cervical pregnancy with hemorrhage. With informed consent, obstetric hysterectomy was done conserving the ovaries.

Grossly, the uterus and cervix measured 10 cm × 3.5 cm × 2 cm. The fundus and the body were relatively of normal size, but the cervix was greatly dilated with eroded and irregular walls. On cut section, the products were seen infiltrating the entire cervical wall and extending into the ectocervix. Later, tissue was sent for histopathological examination showed the presence of chorionic villi and the trophoblastic tissue infiltrating into the cervical wall.



**Figure 1:** Cut section of uterus

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## Discussion

Cervical pregnancy was first described in 1817 and first named as such in 1860.<sup>4</sup> In 1911, Rubin defined the anatomical and histological criteria for the diagnosis of cervical pregnancy.<sup>5</sup> The cervical glands must be opposite the attachment of the trophoblast/placenta, attachment of trophoblast must be below the level of entrance of uterine vessels to the uterus or anterior peritoneal reflection and fetal elements (products of conception) must be absent from the corpus uteri. However, these criteria can be applied only on a hysterectomy specimen as done in our case. Palma and McElin had proposed clinical criteria for diagnosing this condition as:

- a. Uterine bleeding without cramping pain following a period of amenorrhea.
- b. Hourglass-shaped uterus.
- c. Partly open external os.
- d. Closed internal os and
- e. Products of conception entirely confined within the cervix and firmly attached to the endocervix.<sup>6</sup>

The exact cause of cervical pregnancy is not known. The accelerated migration of the fertilized ovum through the uterus and the change in the ability of the endometrial lining to accept implantation and damage to the endometrial canal may all be the contributing factors. Studies have shown a history of dilatation and curettage, IUCD use, pelvic inflammatory disease, and previous cesarean sections as predisposing factors in cases of cervical pregnancy as seen in this particular case<sup>2</sup>. The patients with cervical pregnancy present with painless first trimester vaginal bleeding, although in some cases have presented with cramping pain and are often misdiagnosed as abortion. On examination, there is soft distended cervix which is disproportionately enlarged compared to the uterus, a partially opened external cervical os. and profuse hemorrhage on manipulation of the cervix. However, these classical signs were not seen in our case.<sup>5</sup>

High index of suspicion, sonography can suggest this rare diagnosis. On ultrasound if the gestational sac is present in the cervix with trophoblastic invasion of the cervical wall and an intact part of the cervical canal exists between the gestational sac and the uterine endometrium. However, this was missed in the initial report, and retrospective review of the plates did suggest some of these sonologic features<sup>6</sup>. A mere presence of gestational sac in the cervix could also indicate the cervical stage of abortion, which can be ascertained by demonstration of sliding sign on ultrasound<sup>7</sup>. Management of the cervical ectopic pregnancy is dependent on several factors such as patient's gestational age, fetal cardiac activity, stability of the patient, patient's interest in retaining future fertility, and the availability of resources and expertise of the practicing gynecologist. Several treatment choices are available. Conservative management is ideal for patients with <9 weeks of gestational age and the absence of fetal cardiac

activity. It includes systemic methotrexate therapy in single dose or multiple dose regimens.<sup>7</sup>

Advanced gestational age, presence of fetal cardiac activity, failure of conservative management, and active profuse bleeding necessitate surgical interventions which includes curettage with Foley catheter tamponade, local prostaglandin injections, angiographic uterine artery embolization, bilateral uterine or iliac artery ligation, Shirodkar type cervical cerclage, cervicotomy, and hysterectomy for patients who are no longer interested in retaining their fertility.<sup>7,8</sup> Our patient was ideal for conservative management, but as the diagnosis was missed preoperatively and picked up intra operatively when the patient started bleeding profusely, the decision of obstetric hysterectomy was taken. The majority of Obstetricians will never be in front of a cervical pregnancy; those who had the need to treat one will want to never see another again. To conclude, it should be understood that the cervical ectopic pregnancies though rare, do occur, and their incidence is increasing. A high index of suspicion, clinic-sonological correlation, especially in cases with previous uterine scars can pick up this rare entity preoperatively. If diagnosed early conservative management can be offered; however, missed diagnosis can lead to high morbidity and mortality.

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