

CERVICAL ECTOPIC PREGNANCY - A MATERNAL NEAR MISS CASE

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ABSTRACT

Primary cervical pregnancy is a rare entity, the reported incidence being 1 in 8,600 to 12,400 and 1% of extrauterine pregnancies. A case of maternal near miss with cervical pregnancy in 29 yr old gravida three para two with previous caesarean section presented with bleeding per vagina followed by 16 weeks of amenorrhoea with severe pallor and features of hypovolaemic shock is described. Urine beta HCG test was positive. She was resuscitated and underwent laparotomy followed by total abdominal hysterectomy with bilateral ovaries preserved. Histopathological examination confirmed the diagnosis with features of endocervical trophoblastic invasion. A literature review discloses very few cases of cervical pregnancy. Early detection and prompt treatment can preserve the future fertility of the woman.

Keywords: Cervical pregnancy, Endocervical trophoblast, Intractable hemorrhage, Hypovolaemic shock.

INTRODUCTION

Cervical ectopic pregnancy is the implantation of blastocyst in the intracervical canal. The incidence of cervical pregnancy is 1 in 8,600-12,400^[1]. Cervical pregnancy are high risk cases as they may present with an unexpected life-threatening hemorrhage secondary to the erosion of cervical blood vessels, which may require hysterectomy to save the patient. Common risk factors for cervical pregnancy are prior dilatation and curettage, prior caesarean section and *in vitro* fertilization^[2]. In a typical case, the endocervix is eroded by trophoblast, and the pregnancy proceeds to develop in the fibrous cervical wall. The higher the trophoblast is implanted in the cervical canal, the greater its capacity to grow and hemorrhage as pregnancy progresses, a distended, thin walled cervix with a partially dilated external os may be evident. Identification of cervical pregnancy is based on speculum examination, palpation and Transvaginal sonography. MR imaging and 3 D sonography have been used to confirm the diagnosis. Peritrophoblastic blood flow can be demonstrated on color Doppler ultrasonography in case of cervical pregnancy. Early diagnosis and nonsurgical management with local and systemic methotrexate helps in decreasing maternal mortality and morbidity.

CASE REPORT

A 29-year-old G₃P₂L₂ with previous lower segment cesarean section, presented to Regional institute of medical sciences casualty with complaint of painless bleeding per vaginum of 1 day duration following 16 weeks of amenorrhoea. Her urine pregnancy test was detected positive 8 weeks ago following which she had undergone dilatation and evacuation at private centre. General examination revealed severe pallor (Hemoglobin- 3.6g/dl) with tachycardia (138/mt) and blood pressure of 70/30 mmHg. No abnormality was detected in system examination. Local examination revealed active bleeding from external cervical os. On gentle per vaginum

examination, there was ballooning of cervix with a patulous external os. Transvaginal scan revealed empty uterine cavity with endometrial thickness 8 mm, closed internal os with product of conception in the cervical canal. Both the ovaries and tubes were normal and there was no free fluid in pouch of Douglas. Serum beta human chorionic gonadotropin (hCG) level was 80,000 mIU/ml (normal level- 2,54,000mIU/ml) at that point of time. Provisional diagnosis of cervical pregnancy was made. She was resuscitated with intravenous fluid and massive blood transfusion (9 units PRBC+6 units FFP). The condition of the patient gradually deteriorated due to intractable bleeding. Emergency laparotomy followed by total abdominal hysterectomy was done in order to save the patient. Hysterectomy specimen shows hemorrhagic necrosed product of conception adherent in the intracervical canal [Fig 1]. Postoperatively she was kept in ICU for 2 days and shifted to ward. Histopathology report confirmed the diagnosis (Fig 2). MRI confirmation (Fig3)



Fig 1: Cut section of uterus showing product of conception adherent to cervical wall

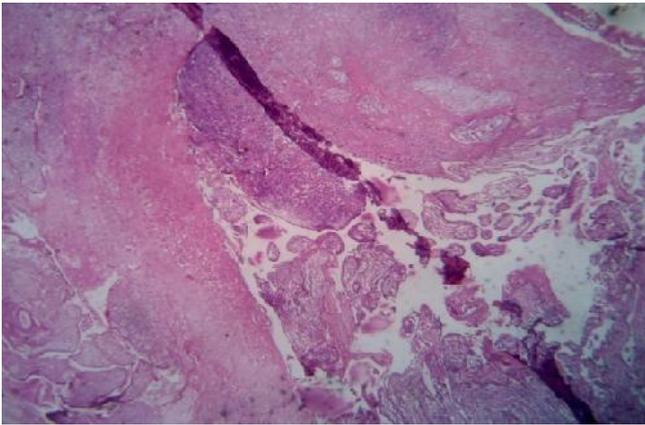


Fig 2: Histopathological specimen showing endocervical trophoblastic invasion

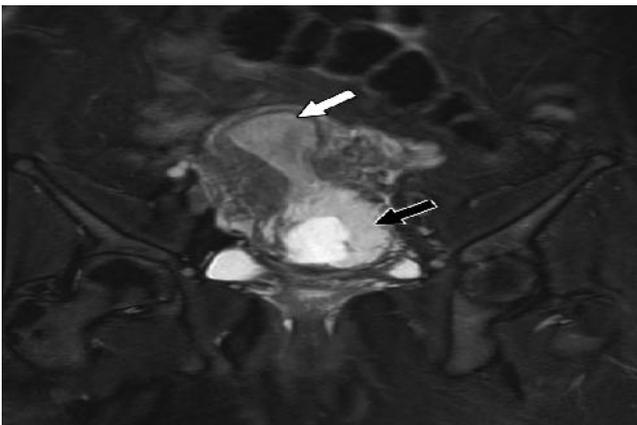


Fig 3: Magnetic resonance imaging of the cervical ectopic pregnancy

DISCUSSION

Common risk factors for cervical pregnancy are prior dilatation and curettage, prior caesarean section and *in vitro* fertilization^[2]. In our case, the patient had history of previous caesarean section and presented at 16 weeks of gestation, hence the trophoblastic invasion was severe enough to cause torrential hemorrhage. The most common symptom is vaginal bleeding following a period of amenorrhea which is often painless and at times massive bleeding can occur which may even require hysterectomy to save the patient as observed in our case. In 1911, Rubin^[3] proposed three anatomical and histological criteria for the diagnosis of cervical pregnancy, which can be established in a hysterectomy specimen. Paalman and McElin^[4] in 1959 proposed five more clinically practical criteria which includes:

- a. Uterine bleeding without cramping pain following a period of amenorrhea
- b. A soft, enlarged cervix equal to or larger than the fundus
- c. Products of conception entirely confined within and firmly attached to the endocervix
- d. A closed internal cervical os and
- e. A partially opened external cervical os. Most of the criteria were seen fulfilled in our cases.

Differential diagnosis include an aborting intrauterine pregnancy residing in cervix which can be differentiated by detecting 'Sliding sign' on transvaginal ultrasound as reported by Jurkovic *et al.* in 1996^[5]. When gentle pressure was applied on the cervix with the probe, the gestational sac of an abortus slides against the endocervical canal unlike an implanted cervical pregnancy. Furthermore, peritrophoblastic blood flow can be demonstrated on color Doppler ultrasonography in case of cervical pregnancy.^[6]

Before 1980, cervical pregnancy was diagnosed when dilation and curettage for presumed incomplete abortion resulted in unexpected hemorrhage.^[7] However, now it can be easily diagnosed by a first trimester ultrasound examination. Introduction of methotrexate with or without intra-amniotic potassium chloride represents a major advance in terminating cervical ectopic pregnancy especially when fetal heart is present.^[8] Among the various routes for methotrexate administration, intramuscular route is usually preferred. The patient should be hemodynamically stable and must comply with posttreatment monitoring^[9].

In recent times, *in vitro* fertilization and other assisted reproductive technique have been reported to be associated with increased risk of cervical pregnancy and the etiology is attributed to the rapid transport of fertilized ovum in to the endocervical canal because of an unreceptive endometrium. According to one review, the incidence of cervical pregnancy is 0.1% among *in vitro* fertilization pregnancies.^[9] Arrest of bleeding can be achieved by tamponade of the uterine cervix with a Foleys' catheter or vaginal packing, ligation of descending branches of the uterine arteries, bilateral hypogastric artery ligation or uterine artery embolization^[2] where conservation of uterus is required for future fertility.

CONCLUSION

Although cervical pregnancy are rare, increased number of cases being reported because of risk factors like high cesarean section rate and increased use of assisted reproductive technique for management of infertility. The success of treatment depends on the timely and prompt diagnosis by early ultrasound, which can reduce the chances of severe life threatening hemorrhage necessitating hysterectomy or blood transfusion. Early detection of cervical pregnancy can be managed with medical treatment in terms of injectable methotrexate, which can reduce maternal morbidity and helps in preserving fertility.

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Conflict of interest: None

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