

A Case Report of Cervical Ectopic Pregnancy in Early Gestation

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Abstract

Cervical ectopic is a life-threatening gynaecological emergency. It is highly prone to severe hemorrhage with maternal morbidity and mortality. It has an incidence of 1% and requires prompt diagnosis. Management is usually individualized and depends on gestational age, presentation severity and the available options and expertise. It could be medical, surgical endoscopically or a combination of treatment. A cervical ectopic in a 32-year-old nullipara who had a negative exploratory laparotomy on account of missed cervical ectopic and later a failed medical management with methotrexate. She subsequently had a dilatation and curettage under spinal anesthesia followed by medical management with repeat three doses of systemic methotrexate due to persistent haemorrhage. She was monitored with a serial level of beta human chorionic gonadotrophins until normal level was attained. Cervical ectopic is a rare form of ectopic gynaecological health workers need to have a high index of suspicion in making diagnosis and prompt intervention instituted. Though there is no standard management protocol, combination therapy of available management options has proven to be effective.

Keywords: Cervical, Ectopic, pregnancy.

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INTRODUCTION

Ectopic pregnancy is the presence of a gestational sac outside the uterine cavity with an incidence of 2% [1]. It is a gynecological emergency that is highly prone to morbidity and mortality in women [1]. Ectopic pregnancy can be found in the tubes, ovaries, abdominal cavity and cervix [2]. Risk factors are pelvic inflammatory disease, infection, congenital abnormality, progesterone and pelvic tumours [1].

A cervical ectopic is a rare form of ectopic pregnancy found in less than 1% of ectopic pregnancies[3]. It is an acute emergency requiring prompt diagnosis and intervention. Over a century ago, universal criteria described by Rubin mono included the presence of cervical glands at placental attachment, the whole or a portion of the placenta must be implanted below uterine vessels, or below the broad ligament overlying surface of the uterus and the absence of fetal parts in the corpus uteri and a closed internal cervical os, like an hourglass, endometrial

decidualization, and the present product of conception in the ectopic gestational sac [3].

CASE REPORT

A 32-year-old G4P0+3 presented with 2 months history of bleeding per vaginum, with associated dizziness, and breast tenderness after a month's history of amenorrhea. At a private hospital, where she initially presented she had an exploratory laparotomy possible ectopic pregnancy. Due to the persistence of symptoms, the patient presented to another private hospital where a repeat blood PT done was positive and an Obstetrics USS done revealed a cervical ectopic pregnancy at 9 weeks EGA. She was commenced on IM methotrexate with folinic acid and she received 4 doses with the last dose received a day prior to presentation at our centre due to persistent symptoms.

At presentation, Examination findings revealed a pale woman with stable Vitals (RR 22cpm; SPO2 100% in room air; PR 78bpm; BP 110/70mmHg)

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Abdominal findings revealed a well-healed Pfannenstiel scar, with no tenderness. The uterus was not palpable per abdomen. Speculum examination revealed a bulky cervix 4x6x5 cm, with a dusky appearance, cervical external os was open 1cm, mild active bleeding noted. No vagina discharge, cervix was firm inconsistency. Medical history patient has had three previous terminations of pregnancies in the first trimester via dilatation and curettage with no post abortal sequelae. Positive vaginal discharge and history of multiple sexual partners.

Investigations are packed cell volume of 30%. A repeat USS done showed a persistent cervical ectopic at 10wks GA with cardiac activity. The beta-hCG level after curettage was done was 1768.4 mIU/mL.

An assessment of cervical ectopic pregnancy at 10 weeks with previous failed medical mgt was made. The patient had a suction dilatation and curettage under spinal anesthesia. Intra-operative findings revealed normal female external genitalia, 2cm cervical os dilatation with a bulging cervical substance, bluish cervical tissue around the cervical os, and formed fetal parts with gestational sac in piecemeal. Uterus about 12-week size. EBL 2.5L. The intracervical catheter was retained post-op to secure haemostasis.

Post-op, the patient continued bleeding PV with associated clots for which she had three doses of IM Methotrexate with folinic acid and this reduced the bleeding PV significantly. Patient beta HCG was rerepeated weekly and it reduced drastically to below 5IU/ml. She was discharged home.



Figure- 1: The success of the procedure can be shown in a decline in the level of HCG to achieves also i seen in our patient result

DISCUSSION

Cervical pregnancies result from previous cervical and uterine surgery, Ashermanns syndrome, and intrauterine contraceptive devices. Assisted reproductive technique, uterine abnormality fibroids [3, 4]. An identifiable risk factor found in our patient was previous dilatation and curettage carried out for termination of pregnancy on three occasions.

The presentation includes amenorrhea, bleeding per vagina, lower abdominal pain, and barrel-shaped cervix [2]. Cervical ectopic is the implantation of a gestational sac below the level of the internal os of the uterus or below the uterine vessels [3]. Due to its precarious location, presentation is usually within the first trimester or early presentation with associated life-threatening bleeding per vaginum [2]. Our patient first presented at 8 weeks gestational age with persistent bleeding per vagina after a missed period.

The challenge is in making a prompt diagnosis and its management. In the past, most cervical ectopics were discovered late and are most women were unfortunately hysterectomized [3]. In recent times, with the the advent of ultrasound sonography, there have been better knowledge of its true incidence, diagnosis and management 2 Sonographic features are the presence of an empty uterus, a barrel-shaped cervix, a gestational sac present below the level of the uterine arteries or internal os, absence of the sliding sign and blood flow around the gestational sac on color Doppler [5].

A close differential to this scenario is the miscarried gestational sac in the cervical canal which can be distinguished with a sliding sign, pressure on the cervix using the probe causes the gestational sac to slide against the endocervical canal but not seen in an implanted cervical pregnancy [2, 5]. Other differential are ovarian cyst or a cesarean scar pregnancy [3, 4]. The latter is usually found when a gestation sac embeds within a lower uterine segment scar but can also be separated as it is usually above the internal os [4]. These features were similar to Rubin criteria for cervical ectopic made over a century ago.

Our patient was initially managed as a case of ruptured tubal ectopic following an exploratory laparotomy. This though has a similar presentation that could have been adverted if an initial ultrasound scan was done. The operation yielded a negative lap and the patient's symptoms did not abate.

Transvaginal ultrasound is the most sensitive modality of choice in making a diagnosis [6]. Its role cannot be over-emphasized in making an accurate diagnosis, treatment and as a monitoring tool. MRI can be used to know the depth of invasion when it is not evident on ultrasound [7].

Invariably, diagnosis is both clinically and with radiological studies such as ultrasound scan including a doppler study and MRI [5, 6, 7]. A transvaginal uss revealed a gestation sac and a fetus with cardiac activity within the cervical canal at presentation.

A positive beta-human Chorionic gonadotrophin (HCG) is both quantitative and qualitative and rarely distinguishes the site of the ectopic pregnancies [7]. It is usually positive and within the discriminatory zone [6]. Although, it serves as a good monitoring tool after definitive treatment. The patient had a positive HCG and initial level of 17668IU/ML. The management depends on patient age, parity, gestational age, complaints of the patient, history of previous surgeries, beta-HCG value, presence of cardiac activity and importantly desire for fertility [2, 4, 7].

Medical management involves the use of methotrexate, misoprostol prostaglandin analogue mifepristone, super-concentrated glucose, and normal saline, potassium chloride actinomycin D [1, 2, 7, 8]. They can be used directly locally through intra-amniotic injection or into the fetus heart under ultrasound guidance or used indirectly systematically [1, 2, 7].

Medical management is a favored fertility-preserving method in early cervical ectopic and it also reduces the risk of haemorrhage considering the fact that most surgical interventions are prone to haemorrhagic episodes [2, 7, 9]. However, it stands the risk of failure or persistent trophoblastic tissue [10].

Methotrexate is the commonest and most effective choice of drug both ways or as single or multiple doses [2]. Methotrexate on either viable or nonviable cervical pregnancy has a success rate of 91% for the preservation of the uterus [9]. Studies have shown that systemic methotrexate treatment has a high failure rate in the presence of serum hCG level is >10.000 mIU/mL, the crown-rump length is >10 mm, or fetal heartbeat is present [2, 9, 11].

She has four doses of systemic methotrexate at a private hospital but this had little effect on her condition as the ultrasound scan done afterward revealed a viable fetus with cardiac activity and hemorrhage continued. In the presence of fetal cardiac activity, an intraamniotic methotrexate or intraamniotic potassium chloride has been proposed with or without curettage as a better approach to treatment [2].

Surgical management is used in failed medical management, advanced gestational age or the presence of uncontrolled hemorrhage [2]. Definitive surgical management includes dilatation and curettage, surgical hysteroscopy, uterine artery ligation, uterine artery embolization and hysterectomy [9]. Cervical ectopic

can present with life-threatening hemorrhage at presentation or during surgical procedure catheter [2].

Haemorrhage at presentation or during the procedure could be life-threatening [2]. This could result from the absence of smooth muscle in the stroma of the cervix, nearness of gestational sac to the uterine blood vessels and the trophoblastic cells releases proteolytic enzymes which erode on the vessel around the implantation site [6, 9].

This can be controlled using several measures include are tamponade with a Foley balloon catheter or vasopressor/prostaglandin cervical injections, cervical cerclage, surgical ligation of cervical/uterine/internal iliac arteries, and arterial embolization [2, 9].

Our patient failed medical management due to the presence of the level of HCG, the presence of a fetus with cardiac activity. She therefore had a dilatation and gentle curettage carried out under spinal anesthesia, severe haemorrhage was encountered during the procedure which necessitated the passage of foley catheter.

The adjuvant therapy with methotrexate was given as a result of persistent bleeding per vaginum despite evacuation from persistent trophoblastic tissue.

Combination therapy of both medical and surgical may sometimes be necessary when there is persistent bleeding, insignificant reduction or persistence of HCG level. This had been advocated in several other studies [2, 9, 12].

In studies in India, methotrexate was given followed by uterine artery embolization was instituted because of persistent beta HCG above 10000IU/mL [12, 13, 14]. Uterine artery embolization is a novel minimal invasive interventional radiological management with fertility-preserving advantage, the limitation is the lack of availability and expertise which is not easily available in most centres like ours [12, 13, 14]. In a review of 15 cervical ectopic pregnancies, of which 11 had fetal cardiac activity, have shown successful conservative management with local methotrexate injection followed with curettage [13, 14].

CONCLUSION

Extrauterine pregnancy is associated with life-threatening complications, thus requiring early detection and prompt and adequate intervention are essential in its management.

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