

Case Report: Cervical Ectopic Pregnancy

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ABSTRACT:

Cervical Ectopic pregnancy is the rare implantation of a pregnancy in the endocervical canal. It accounts for less than 1 % of all ectopic pregnancies. The patients usually present with vaginal bleeding. Transvaginal ultrasound is an important component of the diagnosis. The sonographic criteria include an empty uterus, an enlarged barrel shaped cervix, a gestational sac completely within the cervical canal with or without cardiac activity. Early diagnosis and treatment is critical to avoid serious complications such as severe haemorrhage and the need for hysterectomy. The most appropriate treatment depends upon the clinical presentation. We present a case report of a cervical ectopic pregnancy in a young lady of 31 years at early gestation of 5+ weeks. She presented to EPAU with history of mild bleeding per vagina. Our case report highlights the successful diagnosis, management and difficulties of this rare condition.

Keywords: Cervical Ectopic pregnancy

Case Discussion:

31 years old, P0+2, presented in her second pregnancy early at 5 weeks and 6 days. She has had a previous missed miscarriage in her first pregnancy and biochemical second pregnancy one year ago. She had a previous history of laparoscopy and ovarian drilling due to PCOs. She underwent LLETZ procedure due to CIN 2 and HPV positive smear. Her current pregnancy was

achieved through ovulation induction. She presented at 5+ weeks gestation with lower abdominal cramps and mild vaginal bleeding. The initial transvaginal ultrasound showed a ballooned out cervical canal with a an intracervical gestational sac containing viable cervical ectopic pregnancy, gestation sac measured 7 mm, with a fetal pole measuring 4.3 mm and positive fetal heart. She was explained about the ultrasound



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findings and diagnosis. The initial Bhcg level was 5446 IU. At consultant review, a further discussion about options of management undertook including expectant, medical and surgical management with their detailed pros and cons. After joint discussion, the decision was taken to proceed with medical management of ectopic pregnancy. She received intramuscular injection of Methotrexate one the same day after performing her full blood count, liver and kidney function tests.. The plan was to follow her through repeat Bhcg on day 4 and day 7 post Methotrexate and further follow up with weekly transvaginal scans till resolution of ectopic pregnancy. The repeated TVS on day 4 showed CRL of 4.6 mm and gestational sac of 9 mm, fetal heart still present, Bhcg level increased to 9090 IU. After an informed discussion and written consent, a second dose of methotrexate injection was given on day 4. She presented on the same day in the evening with moderate bleeding per vagina. She was admitted for observation & remained stable after admission. Her TVS was repeated on the next day that showed persistent pregnancy with absent fetal heart beat.

The follow up on day 7, Bhcg dropped to 5754 IU and she remained clinically stable. Her TVS one week after the second dose of methotrexate showed resolving ectopic, with CRL of 4.3 mm. The weekly Bhcg and TVS were continued. One week later, Bhcg dropped to 2484 IU and TVS showed CRL of 3.6 mm with resolving ectopic gestation. On successive weeks, her Bhcg dropped to 841 IU, and on TVS , there was an inhomogeneous conglomerate measuring 14mm x 17mm x 25 mm. The repeated Bhcg next week was 214 IU. She gave history of bleeding per vagina during this week and there was trophoblastic tissue extruded into the cervical canal. The plan was to repeat TVS a week later. If the trophoblastic tissue persists then surgical evacuation was the next step as discussed with the patient. She understood well and agreed with the plan. At next week TVS, there was still small area of persistent products of conception. Further management was planned with patient for surgical evacuation of retained

products. After informed consent, she underwent surgical evacuation of the uterus under general anaesthesia in theatre. Her postoperative recovery was unremarkable. She was given injection Anti-D as she was Rh negative. She was discharged home the next day in a stable condition with follow arranged in the gynea clinic after 6 weeks.

Discussion:

Cervical ectopic pregnancies are a rare entity, and given their infrequent and varying presentation, optimal standard of care for these patients has not been well defined. There exist many different modalities for management, but depending on the patient's clinical presentation, one might be inclined to select certain treatment protocols over others. Other factors that can play a role in the management decision include health care professional experience, access of health care facility to various interventions, and the timing of diagnosis.[8]

The cervical ectopic pregnancies account for less than 1% of all pregnancies. The estimated incidence is one in 2500 to 18,000 pregnancies. [1,2] It results due to implantation of a fertilized ovum in the endocervical canal below the level of internal os. Many years ago, cervical ectopic was found to be associated with profuse haemorrhage and was managed with proactively with hysterectomy. In present era, with improved ultrasound resolution and earlier detection of these pregnancies, more conservative management is adopted that results in less morbidity and preservation of future fertility. Due to the rare nature of this condition, the most effective management is still investigated today. Even with advanced diagnostic modalities, it remains a life threatening condition. [3] The predisposing factors include endometrial damage after curettage or chronic endometritis, leiomyoma, intrauterine devices, assisted reproductive techniques and primary embryo anomalies. The rarity of this condition has prevented any retrospective studies and association with all these factors remains weak. [4,5]

The different treatment options for cervical ectopic pregnancy include five modalities: [1]

- Tamponade with Foley catheter: The use of a Foley catheter placed gently passed the

internal os, followed by inflation of the bulb with 30 ml of saline has been used mostly after other techniques like curettage that results in haemorrhage. Tamponade with packing is not very useful.

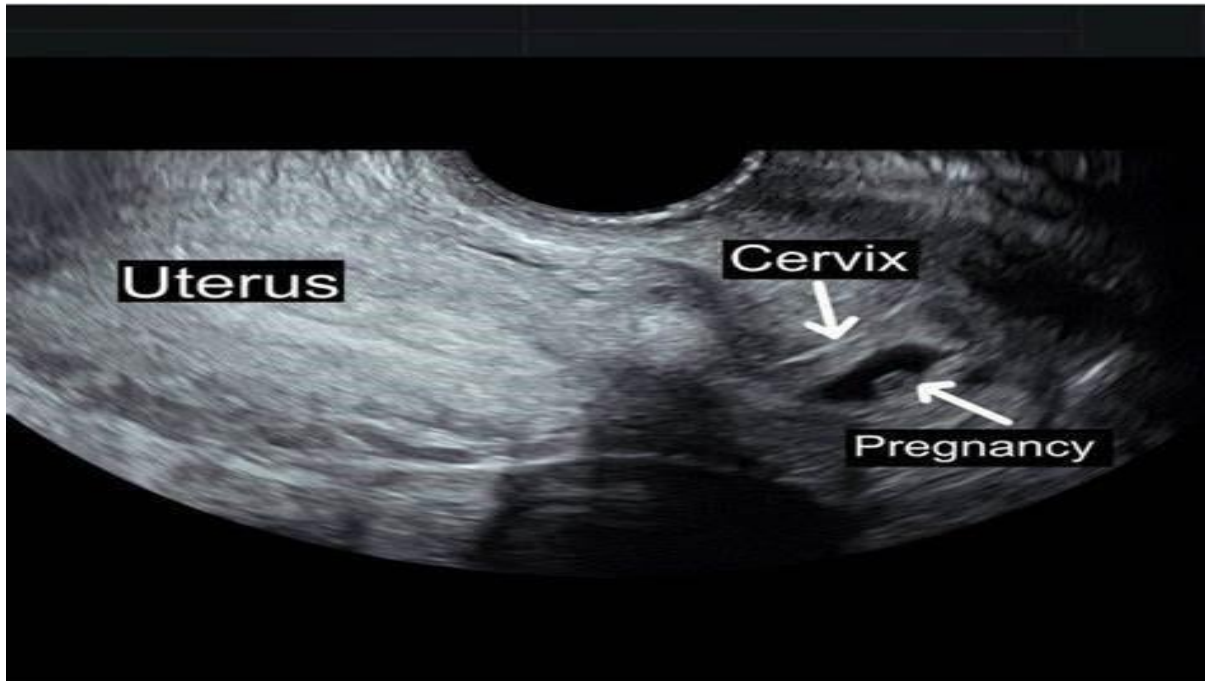


Figure-1

The different treatment options for cervical ectopic pregnancy include five modalities: [1]

- Tamponade with Foley catheter: The use of a Foley catheter placed gently passed the internal os, followed by inflation of the bulb with 30 ml of saline has been used mostly after other techniques like curettage that results in haemorrhage. Tamponade with packing is not very useful.
- Occlusion of blood supply: This can be undertaken by cervical cerclage, vaginal ligation of cervical arteries, uterine artery ligation, internal iliac artery ligation and angiographic embolization of the cervical, uterine or internal iliac arteries. This is usually done in preparation of surgical treatment like curettage or along with chemotherapy. Embolization is usually done as a rescue method when profuse

bleeding results with conservative treatments like chemotherapy.

- Surgical excision of cervical ectopic: The curettage and hysterectomy are the classical methods for surgical excision of the trophoblast tissue. Curettage is the fertility preserving method but it may result in catastrophic haemorrhage. Therefore, it must be used in conjunction with other mechanical methods like tamponade and cervical artery ligation. Primary decision for hysterectomy can be considered as the preferred method of treatment in intractable haemorrhage, second or third trimester diagnosis of cervical ectopic pregnancy or in a woman who does not wish to retain the uterus for future fertility. It would possibly avoid the emergency surgery and blood

transfusion . In a review, 100 % of women with a cervical ectopic of more than 12 weeks gestation required hysterectomy ultimately.

- Intra-amniotic feticide: Ultrasound guided intra-amniotic instillation of potassium chloride or methotrexate has been used as a conservative method for management of cervical ectopic pregnancy. These procedures require high expertise and skill.
- Systemic chemotherapy: The most commonly used agent is Methotrexate, used in a single dose or multiple doses. It can be used with or without folinic acid. However, Methotrexate can be associated with bone marrow suppression, gastrointestinal disturbances and elevation of hepatic transaminases.

Rarely, a combination of laparoscopic assisted uterine artery ligation followed by hysteroscopy and local endo-cervical resection of cervical ectopic pregnancy has been described as a fertility preserving alternative therapy.[6]

The treatment with Methotrexate chemotherapy of patients with either viable or nonviable cervical pregnancy of less than 12 weeks gestation carries a high success rate of > 91% for preservation of uterus.[7]

Although, intra-amniotic instillation of potassium chloride has been described in the presence of cardiac activity, it requires a high level of skill and expertise and can be associated with the risk of major haemorrhage. Therefore, in our case, after discussion of all the risks and benefits with the patient, the joint decision was taken to manage the patient with systemic Methotrexate and other modalities were kept as a backup plan in case of emergency. The specificity of 3-D ultrasound is better than 2-D scans as the 3-D image incorporates an additional coronal section that is not possible with 2-D image.[8] MRI can be used an adjunct to confirm the diagnosis that can show the presence of a mass with heterogeneous signal intensity and partial or complete rim on T2-weighted images.

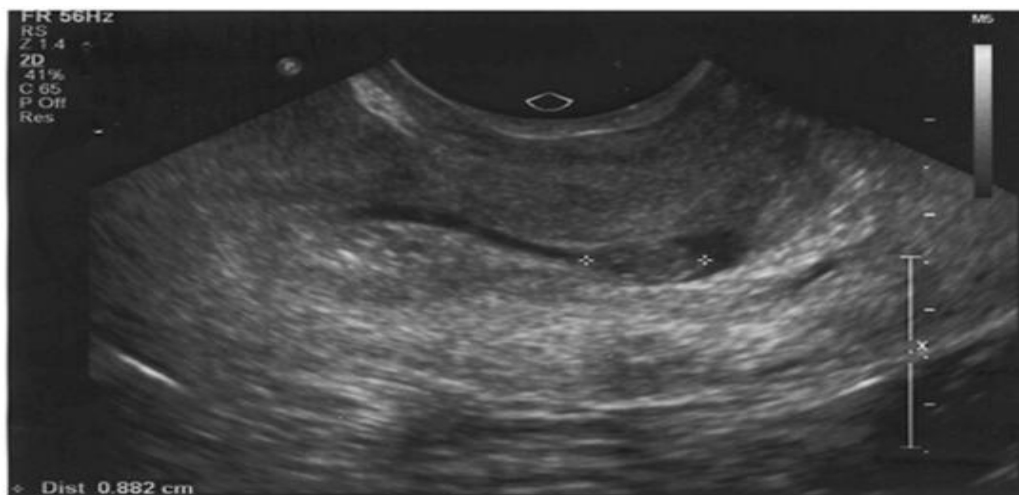


Figure-2

When looking at success rates of the treatments, uterine artery embolization is significantly more likely to result in a successful outcome compared with the other treatment methods. However, it is important to consider future fertility implications that the use of uterine artery embolization may have, because there is concern for ischemia leading to endometrial damage [9] as well as compromised

ovarian function and premature ovarian failure.[10] Although the American College of Obstetricians and Gynecologists and the Society of Interventional Radiology identify the goal of future fertility as a relative contraindication to uterine artery embolization.[11,12] several researchers found that its use did not adversely affect fertility or ovarian reserve.[13,14]

One study by Tumenjargal et al [15] demonstrated a pregnancy rate of 44% with preservation of fertility without severe complications after uterine artery embolization. In a separate study by Toguchi et al [16] that looked at uterine artery embolization for postpartum and post abortion haemorrhage, the authors found that approximately 61% of patients who underwent uterine artery embolization and desired future fertility achieved pregnancy; however, only 71% of those achieved live births. The combination of D&C and uterine artery embolization also demonstrated a high success rate. More than half of all patients underwent multiple interventions (planned or unplanned), with 228 patients receiving at least two treatment methods. This correlates with data from Leeman et al, where more than one method is commonly used in the treatment of cervical pregnancy.[17]

Conclusion:

In clinically stable patient with cervical ectopic pregnancy, if ultrasound shows no cardiac activity and the gestational age is less than 9 weeks, systemic Methotrexate can be tried. In case of gestational period of more than 9 weeks with the presence of positive cardiac activity in a clinically stable patient, intra-amniotic potassium chloride may be required in addition to systemic methotrexate.[1] Second or third trimester diagnosis may warrant hysterectomy. In a patient with haemorrhage, the treatment options are tamponade with Foley catheter, large vessel ligation or angiographic embolization with hysterectomy reserved for intractable major haemorrhage.[1] Often, more than one method is usually tried in the termination of cervical ectopic pregnancy.[1]

Conflict of interest: None

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