

# Cervical Ectopic Pregnancy

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## Abstract

Ectopic pregnancy is abnormal implantation site of ovum. Incidence of ectopic pregnancy is 1.5–2%. It is mostly commonly related with rise of age. Cervical ectopic pregnancy is one case in 2500 or one case in 1000 pregnancy. Cervix is uncommon site for pregnancy. Treatment of ectopic pregnancy is dividing to conservative and surgical. Conservative treatments are Methotrexate or inject KCL in fetus heart. Surgical treatment is D&C or tympnad in cervix or balloon in it or uterine artery embolization and finally hysterectomy. Here we present the cervical ectopic pregnancy that present with retard of menstruation. She is a 37 years old woman Gravidia2, live child1, Gestational age was 4weeks,  $\beta$ -HCG level was 800IU, transvaginal sonography showed no fetal pole and no fetal heart rate and no yolk sac in gestational age6weeks. She had done multiple sonography and in the last sonography, the yolk sac in cervix was seen and  $\beta$ -HCG rise from 58850 to 83332. Her past surgical history had shown myomectomy several years ago. At first we decided to inject Methotrexate in gestational sac but  $\beta$ -HCG titter raised, then she undergone D&C and cervical artery ligation to prevent vaginal bleeding was done. Dilatation and curettage successfully had done and  $\beta$ -HCG decrease to 12800.

## Keywords

Ectopic Pregnancy-Cervical Pregnancy-Dilatation, Curettage

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## 1. Introduction

Cervical ectopic pregnancy is uncommon, with no universally accepted protocol for conservative management of acute haemorrhage due to residual cervical ectopic pregnancy (1).

The incidence of cervical ectopic pregnancy is very low ranging from 0.005% to 0.1%. With current widespread use of ultrasound diagnosis, the appearance of a gestational sac in the cervical canal can be identified early (2).

Cervical ectopic pregnancy is extremely rare (0.1 of all ectopic pregnancies) but etiology of this is unclear although there are reports of association with chromosomal

abnormalities as well as a prior history of procedure that damage the endometrial lining such as Caesarean section and intra uterine devices(IUD) and in vitro fertilization (IVF)(3).

## 2. Case Report

The patient was a 37 year old woman gravida2, live child1, gestational age(GA)=4weeks which have been measured by Last menstrual period(LMP), when the patient admitted,  $\beta$ -HCG serum level was 800, transvaginal sonography showed no fetal pole and no fetal heart rate and no yolk sac in GA=6W. The patient had spotting and a few pain at hypogastric zone. Her vital signs were: Bp=110/60 and PR=90. The patient had done multiple sonography every 48

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hours, and in the last one sonography, the yolk sac was seen in cervix and  $\beta$ -hCG rise from 58850 to 83332. Her past surgical history had myomectomy and one time caesarean section several years ago. At first we decided to administrated multiple dose of Methotrexate but B-hCG had raised then we decided to inject Methotrexate in gestational sac under guide of sonography but,  $\beta$ -HCG titter raising, from 83332 to 95000 then she undergone Dilatation and curettage (D&C) and before that, cervical artery ligation at 3 and 9 clock to prevent vaginal bleeding was done. D&C successfully had done and  $\beta$ -HCG decrease to 12800 and reduced by weekly checking.

### 3. Discussion

Cervical ectopic pregnancy is a rare form of ectopic pregnancy. Previously, hysterectomy was the mainstay of treatment, but in the recent past various conservative management approaches have been applied to preserve fertility (4).

Cervical pregnancy it accounts for 0.1 -1% of all ectopic pregnancies (5). However, unlike tubal ectopic pregnancy, the treatment of cervical pregnancy has not been well established. For patients who desire fertility preservation, treatment with methotrexate chemotherapy carries a high success rate for preservation of the uterus. When methotrexate is injected intra venous or intra muscle, expulsion of pregnant tissue occasionally takes up to 1 month (6).

Sometimes Cervical ectopic pregnancy mimicking missed abortion (7).

In our patient, the fetus was implanted below the previous caesarean section scar. The uterus was empty and the gestational sac showed evidences of fetal heart rate at 6-7 weeks in two several ultrasounds. Colour Doppler also confirmed blood flow around the gestational sac.

Treatment choices maybe divided into five categories: tamponade, reduction of blood supply, excision of trophoblast tissue, intra amniotic feticide and systemic chemotherapy (8,9).

Medical treatment with methotrexate, which is a folic acid antagonist, was introduced in 1982 as a novel therapy in ectopic pregnancies (10).

MTX in viable and nonviable cervical pregnancy less than 12 weeks carries a high success, rate of preservative uterus although maybe if the  $\beta$  HCG titter more than 10,000 IU/L have shown unsatisfactory. Conservative management also can be done when fertility should be considered by MTX or UAE (11,12).

Uterine artery embolization with methotrexate is effective in reducing the ectopic cervical mass. However, there is always

a risk of haemorrhage, which can be treated by either repeat uterine artery embolization alone or uterine artery embolization followed by curettage. Hysterectomy should be the last resort if all conservative methods fail (4).

Most of the unusual EP underwent surgery, except some early cervical and corneal pregnancies. Surgery is still the most effective approach for treatment of unusual EP, while conservative treatment of mifepristone combined with methotrexate or curettage could be used for early diagnosis and treatment of cervical pregnancy (13).

Sometimes we should be done aggressive method for treatment. D&C is one of this method that we also done this procedure for treatment (14). Surgery is still the most effective approach for treatment of unusual EP, while conservative treatment of mifepristone combined with methotrexate or curettage could be used for early diagnosis and treatment of cervical pregnancy (13). Sometimes hysterectomy is should be done if conservative management don't effective (15, 16 and 17).

### 4. Conclusion

In conclusion, due to the fact that cervical ectopic pregnancy is rare and there are no randomized controlled trials on treatment options, methotrexate therapy remains the gold standard in initial treatment. The sooner the condition is recognised, the better the expected outcome, since chemotherapy alone can be adequate for treatment at early stages (2).

Cervical pregnancy maybe life threatening if was not diagnosed and treated early during the course of pregnancy (18). Also cervical pregnancy due to trend of caesarean section and using the invasive method such as IUD and IVF (19). In one case that similar to our case cervical artery ligation had been done before D&C (20).

### References

- [1] Pereira N, Grias I, Foster SE, Della Badia CR. Acute hemorrhage related to a residual cervical pregnancy: management with curettage, tamponade, and cerclage. *J Minim Invasive Gynecol.* 2013;20(6):907-11.
- [2] A Pantelis, ADaniilidis, and K Dinas. Conservative treatment of a 7 week cervical ectopic pregnancy after intra-uterine insemination. *Hippokratia.* 2013; 17(1): 95.
- [3] F Gary Cunningham, Kenneth J Leveno, Steven L Bloom, John C Hauth, Dwight J Rouse, Catherine Y Spong. Ectopic pregnancy. *Williams Obstetrics* (23<sup>rd</sup> edition). McGraw Hill. 2010;251.
- [4] Chaudhary V, Sachdeva P, Kumar D, Arora R, Banavaliker J, Khan M. Conservative management of cervical pregnancy: a report of two cases. *JReprod Med.* 2013;58(9-10):451-7.

- [5] Secen E I, Keskin H L, Avsar A F. CERVICAL ECTOPIC PREGNANCY: THREE CASE REPORTS. *J Turk Soc Obstet Gynecol.* 2012; 9(2): 124- 7.
- [6] Kochi K, Hidaka T, Yasoshima K, Yoneda K, Arai K, Arai T. Cervical pregnancy: A report of four cases. *J Obstet Gynaecol Res.* 2013 Oct 10. doi: 10.1111/jog.12185.
- [7] Saha E, Paul AK. Cervical ectopic pregnancy mimicking missed abortion. *Bang Med J (Khulna)* 2011; 44: 28-30.
- [8] Havaladar NA, Naik K, Krishna LG. "A rare case of cervical ectopic pregnancy treated successfully with single-dose methotrexate". *Saudi J Health Sci* 2012; 1:156-8.
- [9] Weibel HS, Alserri A, Reinhold C, Tulandi T. Multidose Methotrexate Treatment of Cervical Pregnancy. *J Obstet Gynaecol Can* 2012; 34(4):359–362.
- [10] Farabow WS, Fulton JW, Fletcher V Jr, Velat CA, White JT. Cervical pregnancy treated with methotrexate. *N C Med J.* 1983; 44: 91–93.
- [11] Zakaria MA, Abdallah ME, Shavell VI, Berman JM, Diamond MP, Kmak VC. Conservative management of cervical ectopic pregnancy: utility of uterine artery embolization. *Fertility and Sterility.* 2011; 95(3): 872-876.
- [12] Joelle T, Tamer Y; Munire A. Successful conservative management of cervical ectopic pregnancy: a case series. *Archives of Gynecology&Obstetrics.* 2011; 283(6):1215.
- [13] Shan N, Dong D, Deng W, Fu Y. Unusual ectopic pregnancies: A retrospective analysis of 65 cases. *J Obstet Gynaecol Res.* 2013
- [14] Mohebbi MR, Rosenkrans KA, Luebbert EE, Hunt TT, Jung MJ. Ectopic Pregnancy in the Cervix: A Case Report. *Case Reports in Medicine.* 2011. Article ID 858241, 2 pages.
- [15] Anupreet D, Michael I, Kathryn F. Cervical Ectopic Pregnancy: A case report. *Internet Journal of Gynecology&Obstetric.* 2009; 11(1):7.
- [16] Ashouri M, Mousavi A, Najmi Z, Marashi M. A Case of Cervical Pregnancy Following Uterine Curettage: the Most Advanced in Iranian Population. 2011.
- [17] Bartosch C, Brandão O, Montenegro N." Cervical ectopic pregnancy: hysterectomy specimen examination clarifies the cause of first trimester pregnancy bleeding", *FertilSteril.* 2011; 95(3):1091-3.
- [18] Shavell VI, Abdallah ME, Zakaria MA, Berman JM, Diamond MP, Puscheck EE. Misdiagnosis of cervical ectopic pregnancy. *Archives of Gynecology and Obstetrics* February 2012; 285( 2):423-426.
- [19] Youssef M A F M. Cervical Twin Ectopic Pregnancy After In Vitro Fertilization-Embryo Transfer (IVF-ET): Case Report. *Gynecological endocrinology.* 2011.
- [20] Bianchi P, Salvatori MM, Torcia F, Cozza G, Mossa B. Cervical pregnancy. *FertilSteril.* 201; 95(6):2123.