Case Report

CERVICAL ECTOPIC PREGNANCY: Successful treatment with methotrexate

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ABSTRACT

The incidence of cervical ectopic pregnancy varies between 1/2400 to 1/50000 of pregnancies and less than one percent of ectopic pregnancies. Predisposing factors are previous abortion, Asherman syndrome previous caesarian, exposire to DES, leiomyoma IVF. Our patient was a thirty two year's old lady with menstruation problems for three months and positive Bhcg test and vaginal bleeding. According to physical exam and paraclinical procedures diagnosis of cervical ectopic pregnancy was made and multiple dose of methotrexate was given to the patient with successful outcome.

KEYWORDS: Cervical ectopic pregnancy, Methotrexate.

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INTRODUCTION

Cervical ectopic pregnancy was first described in 1817. Prior to 1980 clinical diagnosis of cervical pregnancy was usually made when curettage for presumed incomplete abortion resulted in uncontrollable hemorrhage. Most women required emergent hysterectomy and blood transfusion.[1]

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Use of transvaginal sonography, Bhcg allowed early diagnosis of cervical ectopic pregnancy and fertility-sparing treatment options.[2] The incidence of cervical ectopic pregnancy varies between 1/2400 to1/50000 of pregnancies and less than one percent of ectopic pregnancies.[3] Accelerated migration of fertilized ovum through the uterus, change in ability of endometrial lining to accept implantation, and damage to endocervical canal may all be contributing factors.[1]

Clinical diagnosis: Women with cervical pregnancy present with painless first trimester vaginal bleeding and in some studies vaginal bleeding with cramping pain. In physical exam a soft cervix that is disproportionately enlarged compared with uterus, a partially open external os and hemorrhage on manipulation of cervix is detected. It is described as blue or purple and edematous in appearance. Non of these signs are diagnostic and if suspicion of cervical pregnancy arises radiological evaluation is mandatory.[1]

Radiological Diagnosis: The widespread use of transvaginal sonograghy by experienced radi-

ologist in last decade has facilitated the early detection of cervical pregnancy if high suspicion exist. Radiological criteria are enlargement of cervix and uterus, diffuse amorphous intra uterine echoes. Presence of pseudo gestation sac in uterus, the placenta, and entire oval or round chorionic sac must be below closed internal os with evidence of fetus or yolk sac. Use of color Doppler sonography for peritrophoblastic blood flow to distinguish cervical ectopic pregnancy from an aborting intrauterine pregnancy is beneficial. By vaginal sonography examination the gestational sac of an abortous slides against the endocervical canal but this sliding motion may not be found in cervical ectopic pregnancy due to implantation.[1] Use of bedside sonography in emergency wards can help to detect early cervical ectopic pregnancy.[1,4]

Treatment options: In older reports cervical packing by Foley catheter placed gently past external os followed by inflation of the balloon with 30 cc fluid, ligation of cervical artery, uterine artery, internal iliac artery, angiographic embolization, local vasoconstrictive agents(ievasopressin) have been used to minimize bleeding.[1]

Surgical Intervention: Curettage risks hemorrhage was the only treatment available that might retain fertility before introduction of chemotherapy. In 20 percent of patients uncontrollable vaginal bleeding led to hysterectomy.[1] Hysterectomy may be appropriate in intractable hemorrhage to avoid massive transfusion or emergency surgery in women who doesn't desire fertility or in case with second or third trimester diagnosis of cervical pregnancy.[1,5]

Fetocide by Intra amniotic Injection: The studies show intra amniotic injection of potassium chloride or methotrexate under guidance of sonography has been used successfully to treat cervical pregnancy in well selected patients.[1]

Systemic Chemotherapy: Various studies have suggested a high success rate in well selected cases of systemic methotrexate. It seems to be most successful at early gestational age. Single dose or multiple dose of methotrexate is used. The data at present is limited to compare the efficacy of two regimes.[1,6,7]

CASE PRESENTATION

A 32 years old lady from Asadabad classified as gravida four para two with two live child from caesarian delivery presented with history of one abortion with curettage. She recalled the date of her last menstrual period three months ago and presented with vaginal bleeding since two days. Bhcg test was positive one month ago. Physical examination showed vaginal bleeding, uterus of an eight weeks pregnancy, soft abdomen with normal adenexa.

Trans abdominal pelvic sonography showed an empty uterus with normal echomyometrial. The patient's quantitative Bhcg level was found 1290miu/ml on admission, 1130miu/ml after 48 hours. In trans abdominal pelvic sonography on first day uterine size was 105x60mm endometrial thickness 9mm and a 41x48 mass in cervical canal with impression incomplete abortion (Fig-1). But on bimanual exam effaced cervix was prominent with closed external os. With suspicion to cervical ectopic pregnancy trans vaginal sonography was requested with a gestational sac, yolk sac & fetal pole 18mm without fetal heart. It was suggestive of cervical ectopic pregnancy. (Fig-2)

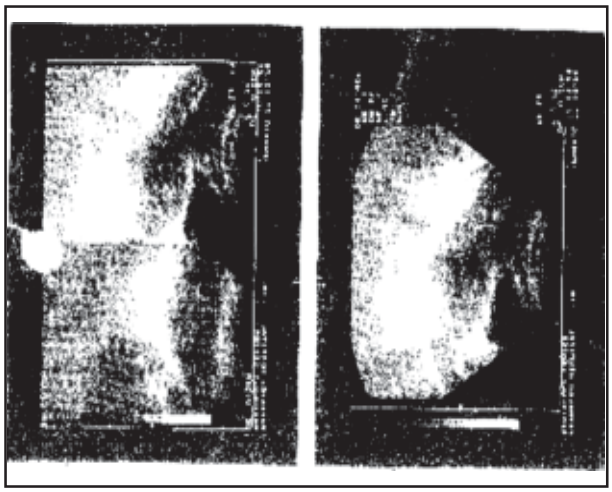

Fig-1: Mass lesion in cervical canal in trans abdominal sonogragh.

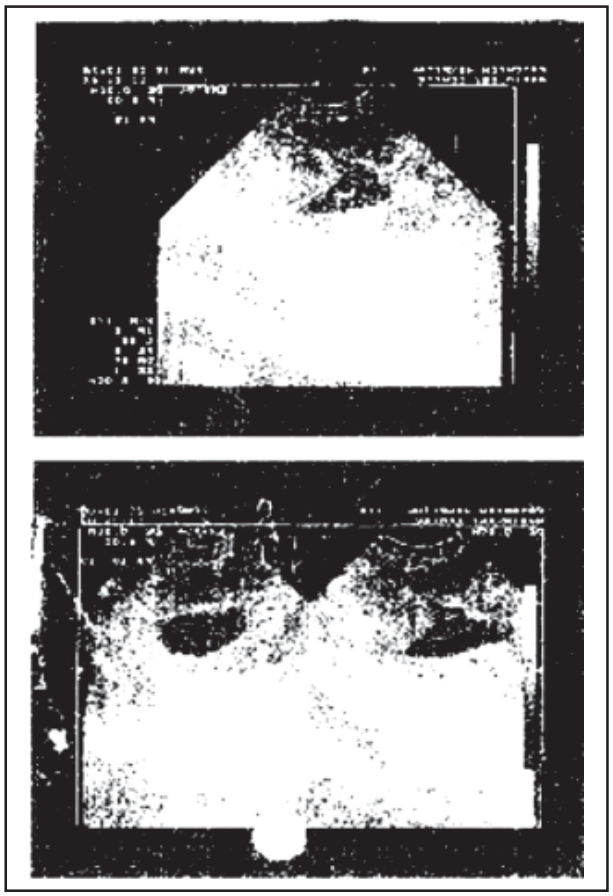

Fig-2: Gestational sac in cervix in transvaginal sonography.

The patient took multiple doses of methotrexate 1mg/kg and folinic acid0/1mg/kg. She had vaginal bleeding, tissue passing that was controlled with cervical packing. After last dose of methotrexate Bhcg level decreased to 37miu/ml.Trans vaginal sonograghy showed normal uterine size of 78mm, normal echo and endometrial thickness 7mm without space occupying lesion in cervix. The patient was discharged in good general condition. Bhcg next week became negative and vaginal bleeding stopped.

DISCUSSION

Cervical ectopic pregnancy is a rare type of ectopic pregnancy. Its incidence increases with ART.[6] Seventy percent of the cases have history of previous dilatation and curettage.[7,8] Trophoblastic tissue invade in endocervix and duration of cervical pregnancy depend on site of implantation in cervix. In upper part of cervical implantation risk of hemorrhage is increased.[8,6]

There is vaginal bleeding in 90 percent of cases of cervical ectopic pregnancy and 30 percent has sever vaginal bleeding.[7,8] Cervix is enlarged, round, dilated with thinning of cervical wall and partially dilated external os. Cervical ectopic pregnancy seldom last to 20 weeks of gestational age.[9]

Diagnosis is with clinical suspicion and sonography. In sonography there is an empty uterus and trophoblastic tissue in cervical canal. MRI can show trophoblastic invasion to endocervical canal.[10]

In homodynamic stable patient's conservative management with methotrexate, uterine artery embolization is used. There is no clinical trial for their management only several case reports are present. Methotrexate is a folic acid antagonist which prevent DNA proliferation in molar pregnancy and ectopic pregnancy.[7,8]

Pascaal et al has reported successful treatment with intra amniotic injection of methotrexate and curettage in an alive twin eight weeks cervical pregnancy.[5] Another study was done by Kung on efficacy of methtrexate in non viable cervical ectopic pregnancy. In this retrospective study for seventeen years cervical ectopic pregnancy had successful outcome with systemic methotrexate in 97 percent of cases.[11] In yet another study in 2000 Leeman et al has reported a 42 years old lady with gestational age eight weeks of pregnancy and vaginal bleeding, an empty uterus and ovarian cyst in trans abdominal sonography with quantitative Bhcg 580. In trans vaginal sonography there was an empty uterus with gestational sac and fetal pole in cervix without fetal heart rate. She took methotrexate 50mg/m2 intra muscular without massive vaginal bleeding. Titrage of Bhcg decreased. There was no trophoblastic tissue after five months in trans vaginal sonography.[12]

Gun et al has reported cervical ectopic pregnancy with sever vaginal bleeding treated with systemic methotrexate and uterine artery

embolization. In homodynamic stable patient conservative management with methotrexate or etoposide can preserve fertility and decreased massive transfusion.[13]

In this homodynamic stable patient clinical suspicion of cervical ectopic pregnancy and evaluation with transvaginal sonography led to diagnosis and systemic methotrexate multiple dose with folinic acid resulted in a successful outcome.

These studies show a success rate 80 percent in well selected patients.[2] The most efficacy of methotrexate is in early gestation age of pregnancy but successful result was reported in presence of fetal heart and Bhcg higher than 40000.Early diagnosis decreases maternal mortality and morbidity.[1,4,6]

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