Cervical Ectopic Pregnancy: A Clinician's Dilemma

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About the Author

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Keywords Cervical ectopic · Uterine artery embolization

Introduction

Stepwise approach to a rare case of cervical ectopic to preserve the fertility of a child-bearing woman in case of failed medical management but successful conservative approach is discussed below. Ectopic pregnancy, i.e. implantation of the blastocyst outside the endometrium of the uterine cavity, occurs in 1.9 % of reported pregnancies [1]. Cervical ectopic pregnancy is the rarest form of ectopic pregnancy. Its incidence varies from 1/1000 to 1/50,000 [2].

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Case Report

A 34-year-old G3P1L1MTP1 presented with complaints of slight vaginal bleeding since 2 days. She had amenorrhoea of 10 weeks with a positive urine pregnancy test. Her first pregnancy was uneventful full-term vaginal delivery with a

Fig. 1 Cervical pregnancy with increased vascularity around the gestational sac on colour Doppler

Fig. 2 The foetus after suction and evacuation

healthy 8-year-old male child. In her second pregnancy she underwent a medical termination followed by check curettage at one and a half months. She was admitted in good general condition with a pulse rate of 82/min and blood pressure of 110/80 mm Hg. Per abdomen was soft with no tenderness, guarding and rigidity. Gynaecological examination was avoided in view of ultrasound suggesting cervical ectopic. Laboratory tests for complete blood count, liver and renal function tests were within normal limits. Serum HCG was 70,249 IU/ml. Transvaginal scan showed an empty uterine cavity with a ballooned cervical canal and gestational sac with foetal cardiac activity and CRL 10w 3d in the endocervix surrounded by extensive trophoblastic tissue. Doppler study confirmed increased vascularity

(Fig. 1). Since the patient wished to maintain her fertility, a conservative approach was implemented. Four doses of methotrexate were given intramuscularly, a dose of 1 mg/kg alternating with leucovorin rescue of 0.1 mg/kg. Serial serum HCG values were performed, and postchemotherapy reading showed a minimal decline to 50,476 IU/ml. Follow-up ultrasound still showed a live ectopic gestation. Owing to the increased vascularity around the gestational sac uterine artery embolization was attempted under local anaesthesia via transfemoral access using 300- and 500-micron polyvinyl alcohol particles. Following embolization a suction evacuation under ultrasound guidance was performed (Fig. 2). The procedure was uneventful with negligible blood loss, and the patient was discharged in stable condition a week after surgery.

Discussion

Risk factors for cervical ectopic include any compromise in the capacity of the uterine cavity that prevents nidation in the endometrium. These include structural uterine anomalies, intrauterine adhesions, myomas, rapid transport of fertilized ovum due to nonreceptive endometrium, abnormal timing of fertilization in relation to menstrual cycle, postsurgical trauma as well as in vitro fertilization [1, 2]. The cause of cervical ectopic in this case might be surgical trauma to the uterus due to postabortion curettage. Higher the implantation more is its capacity to grow, but chances of haemorrhage also increase due to its close proximity to uterine blood vessels and the proteolytic enzymes released

by the trophoblast on the walls of these large blood vessels which can be potentially life threatening [2]. Clinical criteria given by Paulman and McEllin (1959) include amenorrhoea followed by uterine bleed without cramping abdominal pain, hourglass-shaped cervix, products of conception confined to endocervix, a closed internal os, partially open external os and no placental tissue obtained on endometrial curettage. Cervical ectopic is being increasingly diagnosed due to the advent of ultrasound in obstetrics. Cervical ectopic must be differentiated from an aborting pregnancy by the sliding sign, i.e. when the sonographer applies gentle pressure on the cervix with the probe, the gestational sac of the abortus slides unlike an implanted cervical pregnancy [1]. According to the available literature, the most effective treatment of cervical ectopic up to 12 weeks of gestation is conservative management by means of methotrexate. Ineffectiveness of this cytotoxic drug has been observed with serum HCG level higher than 10,000 IU/ml, presence of cardiac activity and a crown rump length of >10 mm on ultrasound [2]. Methods of fertility preservation in a case of failed medical management include uterine artery embolization and intraamniotic instillation of potassium chloride and/or methotrexate. Methods of management of intractable haemorrhage include insertion of Foley's catheter for tamponade effect postcurettage, cerclage suture at the level of internal os, ligation of descending cervical branches of the uterine artery and internal iliac artery ligation [3]. Because of the risk of massive life-threatening haemorrhage, cervical pregnancy is in most cases treated by a surgical removal of the uterus. However, there has now been a shift in management from aggressive surgical procedures to more conservative management strategies focussing on uterine preservation and fertility maintenance and the need for hysterectomy has declined from 89.5 % in 1979 to 21.7 % in 1994 [4]. Uterine artery embolization (UAE) emerged as an extremely effective technique in our case scenario owing to risk of excessive

haemorrhage if intraamniotic instillation had been performed. It was performed prior to suction and evacuation to prevent the catastrophic haemorrhage. It has high clinical effectiveness and a low complication rate. However, despite all the benefits of UAE, it still remains an underutilized procedure. This occurs due to lack of awareness of the referring clinician, limited availability of modern angiography units and lack of a trained skilled team. Regardless of the conservative approaches, cervical ectopics must be followed up until complete resolutions, i.e. serum HCG values 10 IU/ml, and one must not rely on ultrasound findings alone [4].

Conclusions

Cervical ectopic pregnancies are easy to miss but difficult to treat. Conservative approaches even in late stages have proven beneficial in preserving a woman's fertility.

Compliance with Ethical Standards

Conflict of interest None.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

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