Cervical Ectopic Pregnancy Managed with Methotrexate

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Cervical pregnancy is a rare, life-threatening form of ectopic pregnancy.

We report a case of cervical pregnancy successfully managed with a single dose of systemic Methotrexate, 50 mg/m^2, intramuscularly. A repeat BHCG revealed a reduced level to 259 mlu/ml. The patient started to have intermittent painless vaginal bleeding. The patient had 2 units of RBCS and passed the products of conception spontaneously. The patient was discharged with an HB of 11 gm/dl. Two weeks later, BHCG was 0.5 and transvaginal scan revealed an empty uterus with thin endometrium.

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Cervical ectopic pregnancy is extremely rare. Its incidence is approximately 1 in 9,000 deliveries, less than 1% of ectopic pregnancies[1,2]. It is associated with potentially serious complications if not diagnosed and treated early. Cervical pregnancy is a serious condition due to trophoblast cells penetrating through the cervical wall and into the uterine blood supply, leading to severe hemorrhage.

Despite the well-known theory regarding predisposing factors that lead to endometrial damage, such as cesarean section, Asherman's Syndrome, intrauterine device, previous dilatation and/or cervical ectopic pregnancy, the etiology is still unknown.

Because of early ultrasonography diagnosis of cervical pregnancy and b-human chorionic gonadotropin (BHCG) measurement, conservative management has evolved.

The aim of this report is to present a case of successful conservative management of cervical ectopic pregnancy.

THE CASE

A twenty-two-year-old primigravida presented with five days history of vaginal bleeding and lower abdominal pain. Her last menstrual period was ten weeks before her presentation. There was no significant medical and/or obstetrical history.

On examination, the patient was hemodynamically stable; ultrasound revealed an empty uterine cavity with an endometrial thickness of 11 mm and enlarged barrel shaped cervix with a gestational sac. Both ovaries were normal, no adnexal mass and no free fluid, see figure 1. Speculum examination revealed an enlarged cervix with blush black mass seen through opened external os and mild bleeding. BHCG was 384 mlu/ml and Hb 11.7 gm/dl. Ultrasound confirmed cervical ectopic pregnancy, see figures 2 to 5.

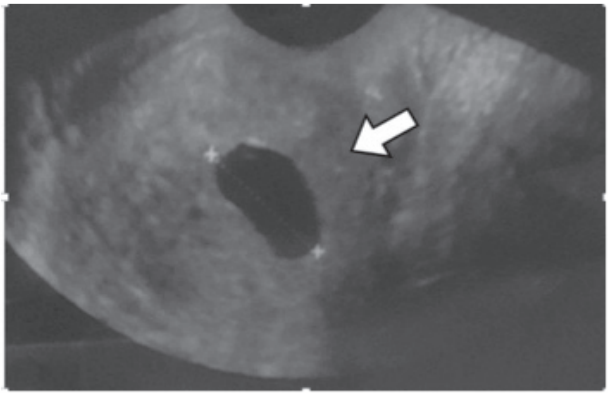

Figure 1: Transvaginal Ultrasonography Showing Gestational Sac in the Cervix and Ballooned Cervical Canal

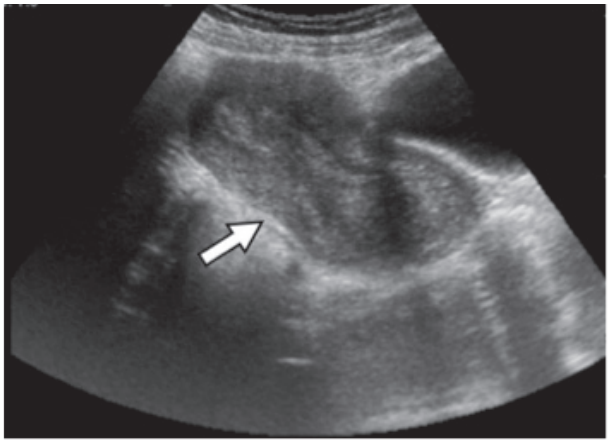

Figure 2: Transabdominal Ultrasound Showing the Typical Hour-Glass Configuration of the Uterus

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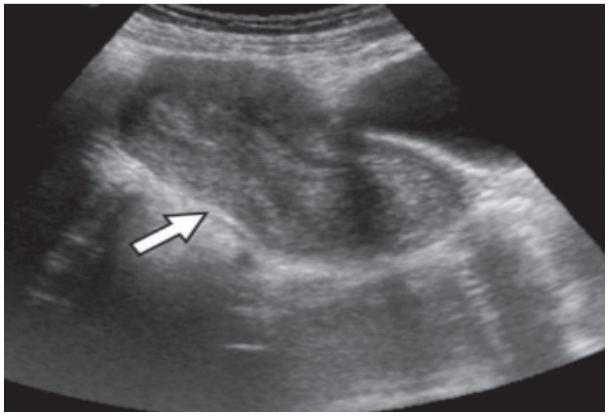

Figure 3: Transabdominal Ultrasound Showed Ballooned Cervix Containing Gestational Sac and Decidual Ring

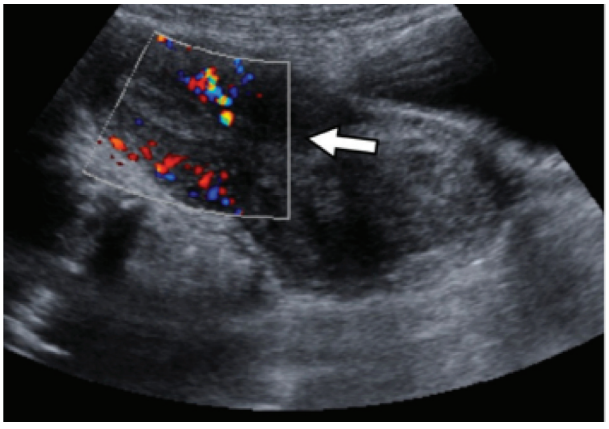

Figure 4: Transabdominal Scan Showing Gestational Sac in the Cervix with Blood Flow around with Sign of Ring of Fire

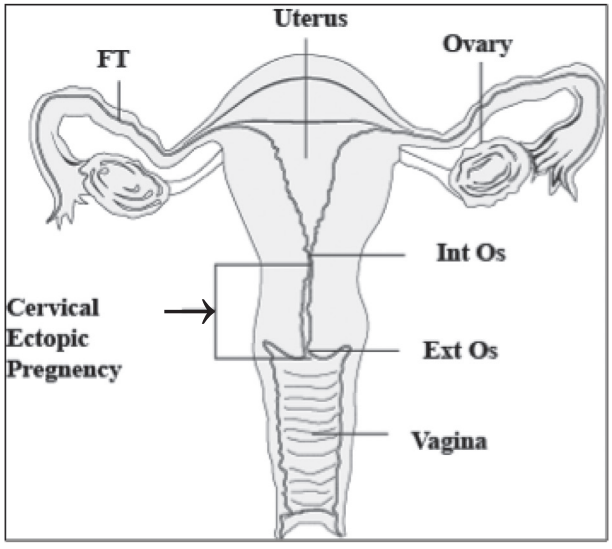

Figure 5: The Cervical Ectopic Pregnancy Area (Arrow)

The potential risk of Methotrexate, such as bone marrow suppression, gastrointestinal symptom, increase liver enzyme and the risk of hysterectomy if treatment failed was discussed with the patient. Complete blood count, liver function and renal function test were performed.

A single dose of 50 mg/m^2 Methotrexate intramuscularly was administered. On the next day, a repeat BHCG revealed a reduced level to 259 mlu/ml. The patient had intermittent painless vaginal bleeding. She was monitored closely in high dependency unit. After she had bled significantly, vaginal examination revealed opened cervical external os and products of conception was felt.

The patient had two units of RBCS. The patient passed the products of conception spontaneously. She was monitored for four days with serial BHCG level to confirm complete resolution of her condition. BHCG trended down: 259, 165, 121, and 48.

The patient was discharged without complications with an HB of 11 gm/dl. Two weeks later, BHCG was 0.5 and a transvaginal scan revealed an empty uterus with a thin endometrium.

DISCUSSION

Cervical ectopic pregnancy is the implantation of the gestational sac in the endocervix below the level of internal os[4,5,6]. It accounts for less than 0.1% of all pregnancies. Even with recent advance of early ultrasonography diagnosis and a wide variety of management options, it is still a life-threatening condition[6].

The presenting symptom is mainly painless vaginal bleeding following a period of amenorrhea. On examination, a product of conception may be seen in the cervical canal through opened external os.

Although many theories explain the condition, the definite etiology is unknown. Endometrial damage due to previous dilatation and curettage, cervical surgery, intrauterine device and in vitro fertilization may be predisposing factors. One less known theory is the rapid passage of embryos through the endocervical canal or unreceptive endometrium.

The criteria described by Rubin which necessitates hysterectomy are of limited value as conservative management has high success rate[7].

The diagnosis of cervical pregnancy is mainly based on ultrasound findings. The empty uterus and the presence of gestational sac below the level of uterine arteries are the most important findings, a barrel-shaped cervix and blood flow around the gestation sac may be found[8,9]. In addition to the five clinical criteria proposed by Palman and McElin; which have been met in our case: "Uterine bleeding without cramping pain following a period of amenorrhea; soft, enlarged cervix equal to or larger than the fundus (hour glass appearance of the uterus); products of conception entirely located within and firmly attached to the endocervical canal; closed internal os and partially opened external os"[9].

Treatment options for cervical pregnancy vary from conservative therapy with drug administration to radical surgery depending on symptom and gestational age and could be divided into five categories: tamponade, reduction of blood supply, excision of trophoblastic tissue, intra-amniotic

feticide and systemic chemotherapy with Methotrexate[10-12]. Furthermore, Methotrexate could be given locally or both with a high success rate up to 91%[13]. Monitoring with ultrasound and BHCG is needed.

CONCLUSION

Cervical pregnancy is a potentially serious condition, which needs early diagnosis and treatment in order to avoid any serious complication, unnecessary interventions and to preserve fertility. The use of single dose of Methotrexate is an effective, acceptable option in the management of cervical ectopic pregnancy.

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