Conservative management of cervical ectopic pregnancy: case report and review of literature

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Summary

Purpose of investigation: The aim of the study is to describe the management of a case of cervical ectopic pregnancy at six weeks. *Case*: A 34-year-old patient presented with six weeks of amenorrhea and a cervical pregnancy diagnosed by transvaginal ultrasound. Obstetrical anamnesis showed previous cesarean section and celiac disease as medical complications. At six weeks and one day 50 mg intramuscular methotrexate (MTX) was started and repeated three days later. At six weeks + six days the patient had vaginal bleeding so she was submitted to an emergency surgical procedure consisting of dilatation and curettage followed by a Foley balloon tamponade, which was gradually deflated and removed after two days. *Conclusion*: Early diagnosis and an appropriate MTX regimen in combination with adjuvant conservative procedures allow successful treatment of a cervical pregnancy, preserving the uterus and future reproductive outcome. However further studies are needed to define the best approach for management of cervical pregnancy.

Key words: Cervical pregnancy; Methotrexate.

Introduction

Ectopic pregnancy is defined as a pregnancy in which the implantation of the embryo occurs outside the uterine cavity. Of all reported pregnancies, 0.4-2% are extrauterine [1, 2].

The improved accuracy of transvaginal ultrasonography (TVS) early in pregnancy and the quantitative measurement of the β-unit of human chorionic gonadotropin (βhCG) allow early detection of ectopic pregnancies [3, 4]. Early detection has led to a steady decline in maternal deaths associated with this condition since the early 1970s [5].

Indications and criteria for the different management options are described in the literature and in clear guidelines from institutions such as the Royal College of Obstetricians and Gynaecologists.

Methotrexate (MTX), in a single dose protocol, is widely used in the medical management of ectopic pregnancy, associated or not with surgery.

We report a case of a cervical ectopic pregnancy successfully treated with MTX, subsequent cervical curettage and intracervical Foley catheter placement with gradual deflation of the balloon.

Case Report

A case of a 34-year-old patient with a cervical pregnancy diagnosed by TVS at six weeks was referred to our division. Obstetrical anamnesis showed a previous cesarean section and celiac disease as medical complications. TVS showed a cavity 19.3 mm x 6.81 mm in diameter located on the right lateral wall of the cervix, containing a yolk sac (Figure 1). Serum βhCG levels, before and after MTX administrations, are shown in Table 1. Hematologic exams were substantially normal while clinical symptoms revealed pelvic pain. At six weeks and one day 50 mg intramuscular MTX was started and repeated three days after. At six weeks + six days the patient had vaginal bleeding so she was submitted to an emergency surgical procedure consisting of dilatation and curettage followed by a Foley ballon tamponade, which was gradually deflated and removed after two days.

Severe hemorrhage during suction curettage or other adverse effects were avoided. Histological examinations of the specimen confirmed the cervical pregnancy.

Table 1. — *Seriate βhCG levels before and after MTX administrations.*

Weeks of pregnancy	βhCG levels
5 weeks + 2 days	3,245 mIU/ml
5 weeks + 4 days	8,941 mIU/ml
5 weeks + 5 days	12,396 mIU/ml
6 weeks + 1 days, MTX 50 mg IM	
6 weeks + 2 days	20,038 mIU/ml
6 weeks + 4 days, MTX 50 mg IM	20,231 mIU/ml

Discussion

Extrauterine pregnancy contributes substantially to maternal mortality in all parts of the world and, despite fluctuations in the incidence in different countries, it will remain a challenge to clinicians in the future.

Early diagnosis allows the clinician to consider a more conservative approach such as expectant management or medical therapy, also because recognized risk factors are known [6-8]. The etiology is still unknown but there is evidence of its association with cervico-uterine instrumentations, such as in the case reported.

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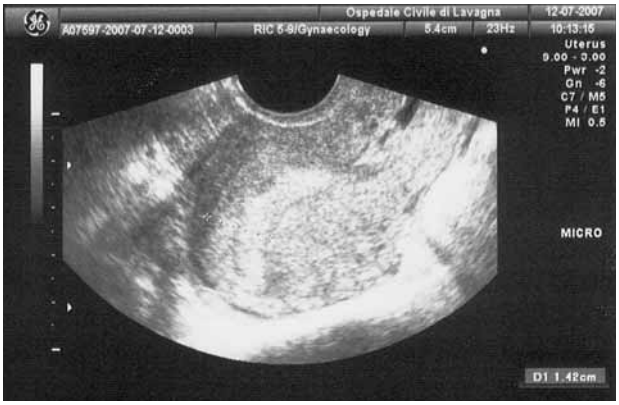

Figure 1. — TVS showed a cavity of 19.3 mm x 6.81 mm in diameter located on the right lateral wall of the cervix containing a yolk sac.

In our country there are no clear guidelines for cervical pregnancy but analysis of the literature showed that if a cervical pregnancy is present and diagnosed early, treatment with MTX is effective as definitive therapy [9-11] and appears to be a convenient method for the treatment of the majority of cervical pregnancies before 12 weeks of gestation.

In contrast Hung *et al.* [12] reported prognostic factors for successful MTX treatment of cervical pregnancy, concluding that cervical pregnancy presenting with a serum βhCG concentration of ≥ 10,000 mIU/ml or gestational age > 9 weeks or crown rump length ≥ 10 mm are factors associated with a higher unsatisfactory rate of primary MTX treatment. These observations suggest that an appropriate selection of candidates for MTX treatment for cervical pregnancies is needed because currently there are no specific recommendations for the best treatment of this entity [13], and also in consideration of the low incidence of the problem, occurring in one out of 8,628 deliveries [14, 15].

Particularly the main problem of conservative treatment is life-threatening hemorrhage after pregnancy evacuation.

Ushakov *et al.* reported in 1997 that the use of a cervical canal tamponade with a Foley catheter balloon led to reliable hemostasis in 92.3% of cases in which this method was used [15].

Cosin *et al.* reported combined use of MTX and arterial embolization to avoid surgical intervention in cases in which hemorrhage occurs after chemotherapy treatment [16] while some authors have suggested vaginal ligation of the cervical branches of the uterine arteries as an emergency surgical procedure [17, 18].

Conclusion

The case reported confirms the observations reported in the literature but further studies are needed to define the best approach for the management of cervical pregnancy.

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