Intrauterine ectopic pregnancy. A case report

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Summary

A case of vaginal bleeding occurring in a patient with a cervico-isthmic pregnancy located in a previous caesarean section scar was treated with curettage and systemic methotrexate. Metrorrhagia and uterine rupture are severe complications of this kind of ectopic pregnancy and sometimes require demolitive surgery, still today. Early ultrasonographic diagnosis is necessary to allow conservative treatment.

Introduction

Cervical and cervico-isthmic pregnancies are very rare forms of ectopic pregnancy – only one case out of 10,000 pregnancies [1]. Even rarer is a cervico-isthmic pregnancy occurring in the scar of a previous caesarean section; if it is not identified and treated early, massive hemorrhage or uterine rupture may occur and the patient could die. Diagnosis as early as possible is important especially in patients who have had caesarean sections or in young patients to avoid demolative intervention.

Case report

A 38-year-old patient in her second pregnancy, with one previous caesarean section, was admitted to our clinic for left pelvic pain, lypothymia and vaginal bleeding. Her last menstruation was regular 10 days before but the HCG test was positive. Upon examination the uterine cervix was enlarged and barrel-shaped and the external orifice was closed. The uterine corpus was three times larger than normal and there was massive bleeding. Ultrasound examination identified a gestational sac implanted in the cervico-isthmic area. FCB was present and gestation was seven weeks.

There was a large blood clot inside the uterine cavity. Metrorrhagia required immediate curettage of the cervical canal and uterine cavity under guided ultrasound. We could not do a more accurate pre-operatory ecografic examination to determine the relation between the ovulatory sac and the uterine wall due to urgency.

The intervention confirmed the position of the ovulatory sac; a massive and partly laminated blood clot indicated that the hemorrhage had started a few days before.

As a precaution the patient was put on methotrexate therapy at a dose of 20 mg/day for 3 days. A decrease in HCG was constant – from 10,012 U/L the day after surgery to 3,085 U/L after five days and was completely negative after 15 days. When the patient was released the gynecological exam and ultrasound showed normal volume and a normal uterine structure.

Discussion

Still today cervical and cervico-isthmic pregnancy is a very serious obstetric emergency which in many cases requires hysterectomy. In recent years mortality has been about 5% [2] whereas before ultrasound it was 50% [3] as early diagnosis was relatively impossible. Before 1980 only 11 cases of pregnancy with a favorable outcome for the fetus were reported [4]. In three cases the patients died and in the other eight a total hysterectomy was necessary. After 1980 David *et al.* [4], Jelsema *et al.* [3], and Herman *et al.* [7] published individual case reports of a living fetus but involving demolitive surgery.

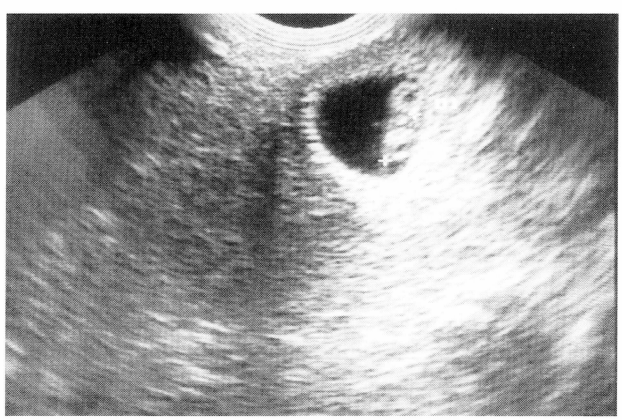

Figure 1. — Embryo implantation at the level of the uterine isthmus.

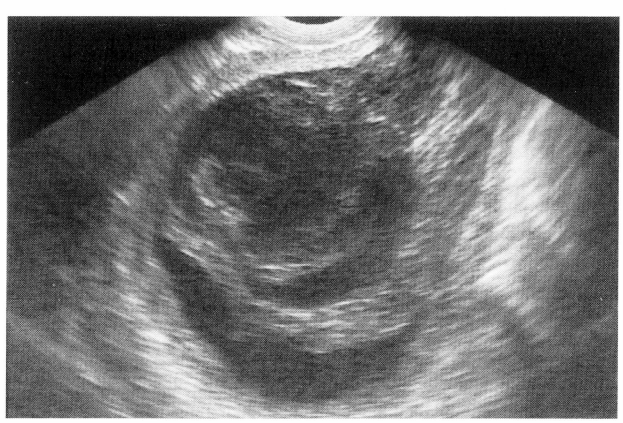

Figure 2. — Enlarged uterine cavity containing a massive blood clot.

Received May 15, 1998
revised manuscript accepted for publication June 10, 1998

The first pregnancy was terminated due to a diagnostic mistake, the second because of the patient's wishes, and the third patient, although advised by the physician to continue the pregnancy to term, underwent demolitive surgery, hypogastric clamping and an additional complication of infection.

A positive outcome for the fetus can not be the only consideration for continuing a pregnancy as the patient's risk is very high and must be taken into account. Isthmic pregnancy could be even more serious if the implantation comes from a previous caesarean scar as uterine rupture may occur at any time during the pregnancy.

The possibility that the improvement in caesarean sections in recent years increases the risk of isthmic pregnancy is sustained by Hemminki *et al.* [6] whereas according to Kendrick *et al.* [5] there is no higher risk. The limits of these studies are due to the lack of statistics regarding the risk of every kind of ectopic pregnancy in relation to previous caesarean sections.

Today the technical improvement of ultrasound, together with magnetic nuclear resonance, permits early diagnosis in the first trimester of intrauterine ectopic pregnancy [8] and additionally, the relation between the gestational sac and the uterine isthmus can be observed. Four cases diagnosed under these improved techniques have been described in the literature. The first, a 9-week gestation treated with methotrexate [8]; the other three by surgery: at 10 weeks with curettage [9], at 24 weeks by total hysterectomy [1] ant the last by hysterectomy after 2 weeks of methotrexate therapy which proved to be ineffective [10].

In our case the ultrasound and operatory findings confirmed an isthmic pregnancy in a previous caesarean scar.

When there is a confirmed diagnosis of cervical or cervico-isthmic pregnancy, it is advisable to terminate the pregnancy as early as possible to preserve the uterus for future pregnancies [2-4]. Conservative therapy may be surgical [9, 11], pharmacological (methotrexate) [8, 12] or combined. In our opinion the combined therapy is the best treatment because it is complete, definitive and reduces patient risk.

Conclusion

Diagnosis of cervical or cervico-isthmic pregnancy may today be done very early. Metrorrhagia can occur during the third month or later and in some cases the pregnancy can come to term. However, the more advanced the pregnancy, the greater the probability of massive hemorrhage; consequently, total hysterectomy is unavoidable even in the second trimester. If the implantation occurs in a hysteretomic scar the risk for the patient is higher. It is useful for patients with a previous caesarean section to undergo ultrasound in the first trimester to prevent symptoms and so conservative treatment can be performed.

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