A new approach to laparoscopic treatment for interstitial pregnancy

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Introduction

Interstitial pregnancies are the rarest form of tubal implantations and have so far been treated mainly by either resection of the cornu or hysterectomy by laparotomy. However, the development of sophisticated endoscopic techniques has made laparoscopic therapy for interstitial pregnancy a feasible procedure. A new approach for laparoscopic management with mechanical peritoneal distention of an unruptured interstitial pregnancy, is presented and the advantage of this technique in the treatment of this rare form of ectopic pregnancy is described.

Case report

A 26-year-old woman, gravida 2, para 1, presented on June 4, 1997 with a normal last menstrual period from April 12 through April 16. She subsequently developed intermittent menstrualtype cramping without vaginal bleeding. Quantitative urine ß-hu chorionic gonadotropin (ß-hCG) was 12,000 IU/l.

Transvaginal ultrasound showed an empty uterine cavity with a live fetus in a 4 cm gestational sac seen separately from the left lateral edge of the uterine cavity and a thin myometrial layer surrounding the gestational sac.

From the findings above, a left interstitial pregnancy was suspected and a laparoscopy was performed using a planar lifting technique (Origin, Medsystem, Menlo Park, Calif.). On laparoscopy, a small amount of old blood in the deep posterior cul-de-sac was noted. The left fallopian tube appeared entirely normal except for about a 3-4 cm firm bulge at the left cornu of the uterus; the possibility of an early interstitial pregnancy was entertained (Fig. 1). The right fallopian tube appeared intact. A total amount of 20 ml diluted vasopressin 0.05 IU/ml was used to infiltrate the uterine wall around the cornual bulge.

A monopolar needle electrode was introduced and set at 30 W of cutting current. The cornual nodule was resected in an elliptical manner. Minute bleeding was coagulated using the needle electrode by true fulguration using a coagulating current. The myometrium and serosa were reapproximated with 1-0 polyglycolic interrupted sutures in two layers (Fig. 2). The incision wound was covered with synthetic adhesion-barrier Interceed (Johnson & Johnson Medical Inc.). Blood loss was minimal and the patient had an unremarkable postoperative course. The titers of urinary ß-hCG fell rapidly thereafter. The final pathology report documented chorionic villi outside the lumen of the interstitial portion of the fallopian tube in the left cornual resection specimen. Three months after surgery, hysterosalpingography revealed a left cornua that was completely healed.

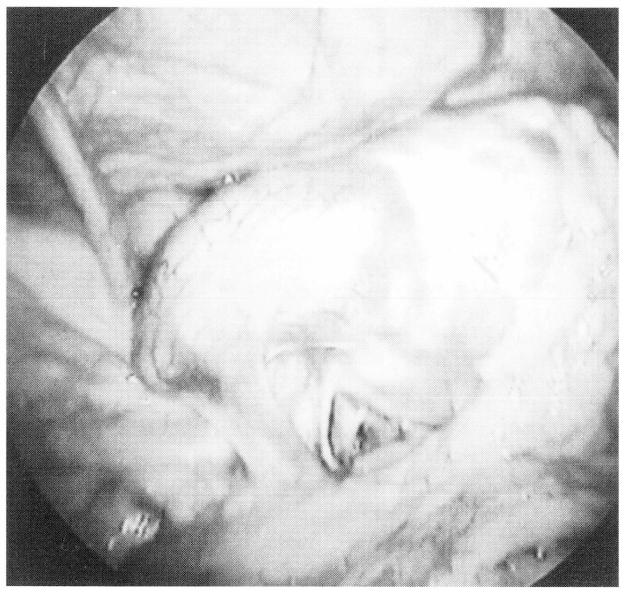

Figure 1. — Firm bulge at the left cornu of the uterus.

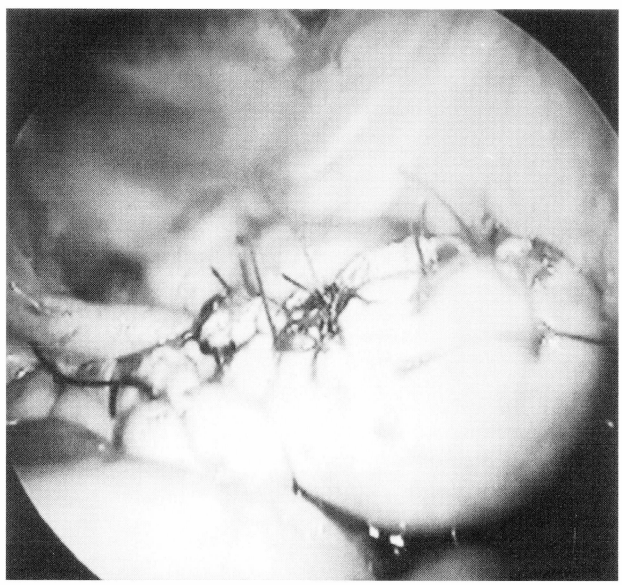

Figure 2. — The incision wound closed with 1-0 polyglycolic interrupted sutures.

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Discussion

The recent trend for less invasive procedures in the management of ectopic gestation has led to both laparoscopic and hysteroscopic treatment of interstitial pregnancies. Cornual resection, cornuostomy with forceps scissors, electrosurgery, or topical injection with methotrexate via the hysteroscope [1] may be used. It is still unclear which procedures are superior. It has been reported [2] that the procedure of cornuostomy is easier to perform than cornual resection because meticulous closure of the myometrium bed following cornual resection is technically difficult via laparoscopy with pneumoperitoneum. For our patient we selected resection of the cornua to avoid retention of the chorionic villi as the size of the interstitial pregnancy was relatively large and the level of ß-hCG was high. Tulandi *et al.* [2] also recommended that large interstitial pregnancies (larger than 4 cm) may be better managed by cornual resection than cornustomy with laparoscopic surgery.

Cornual resection, on the other hand, often necessitating myometrial excision, thereby causes concern for the outcome of subsequent pregnancies. Information regarding subsequent pregnancy outcome is limited; uterine rupture is the most serious complication encountered as the integrity of the scar may be insufficient partly due to difficulty of suturing. Rupture of the pregnant uterus after laparoscopic myomectomy has also been reported [3]. The gasless technique in cornual resection of an interstitial pregnancy makes it easier to make intracorporeal suture placement by using conventional instruments during laparoscopic surgery. It can lead to sufficient healing and integrity of the scar to prevent uterine dehiscence in a pregnancy subsequent to cornual resection of an interstitial pregnancy.

References

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Women's health in the 2000 from reproduction to menopause

ROME, ITALY - Aula Convegni CNR - December 9-11, 1998

President: *Ermelando V. Cosmi*

SCIENTIFIC PROGRAM (preliminary)

overwiew

Wednesday, December 9

Round Table: Women's health in the 2000.
Plenary Sessions: Contraception - Assisted reproduction.
Sponsored Symposia: Low-dose contraception; AMICA project; New trends in the induction of ovulation; Management of chronic pelvic pain.

Thursday, December 10

Plenary Sessions:
Gynecological Oncology; Gynecological endoscopy; Menopause and HRT.
Sponsored Symposia: GnRH analogues; Use of Tamoxifen in breast cancer; Endouterine levo-norgestrel; Treatment of climacteric depression; Treatment of osteoporosis in rheumatoid arthritis; Drug Delivery Systems.

Friday, December 11

Plenary Sessions:
New trends in prenatal diagnosis; Assessment of fetal well-being;
Diagnosis and management of NRDS e SIDS;
Perinatal infections.
Satellite Symposia:
Symposium on the Surfactant System of the Lung.
Sponsored Symposia: Cosmetics and pregnancy; 3-D ultrasonology; Endocrinology of labor; Progestins in pregnancy.

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