Reminder of important clinical lesson

Heterotopic pregnancy: should we instrument the uterus at laparoscopy for ectopic pregnancy

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Summary

The coexistence of intrauterine and ectopic pregnancy (heterotopic pregnancy) occurs in 1/30 000 of spontaneous pregnancies. However, it is getting more common at 1/900 in clomiphene citrate-induced pregnancies and rises to 1% in assisted reproduction. It is a potentially life-threatening condition with diagnostic and therapeutic complexities. Our patient is a 40-year-old who has been trying to get pregnant for 3 years. A planned non-instrumentation of the uterus at laparoscopy despite clear signs of a ruptured ectopic pregnancy has given her a chance of a continuing intrauterine pregnancy. With the increasing number of in vitro fertilisation-embryo transfers, the incidence of heterotopic pregnancies is also increasing, hence issues discussed here is whether the uterus should be instrumented at all during laparoscopy in early pregnancy and misdiagnosis with its sequel.

BACKGROUND

Routine instrumentation of the uterus at laparoscopy to assist mobilisation for ease of access to the pelvic and pelvic operation will have destroyed a much-wanted coexisting intrauterine gestation in a ruptured heterotopic pregnancy.

CASE PRESENTATION

We present an interesting case of heterotopic pregnancy after spontaneous conception. Our patient is a 40-year-old who has been trying to conceive for 3 years. She is a gravida 3 para 1 who has a 7-year-old boy delivered by normal vaginal delivery previously and also had one uncomplicated surgical termination 19 years ago. She presented to the emergency department with a history of abdominal pain of 12 h duration, dizziness, fainting and shoulder tip pain. Her last menstrual period was 8 weeks previously and she had a positive pregnancy test 2 weeks prior to this presentation. Initial examination revealed cold and clammy extremities, blood pressure of 101/64, pulse rate of 66–77/min. Abdomen was tender with guarding and rebound tenderness. Vaginal examination revealed cervical excitation tenderness and fullness in both adnexae. A clinical diagnosis of a ruptured ectopic pregnancy was made and an emergency laparoscopy with possible conversion to laparotomy was planned. Under the circumstance the diagnosis could not be confirmed with ultrasound prior to surgery so the uterus was not instrumented prior to laparoscopy. At laparoscopy, while suctioning the blood from the peritoneal cavity the patient became haemodynamically unstable and a decision was made to proceed to an open procedure. Ruptured right isthmic ectopic gestation with 2500 ml haemoperitoneum was identified and a salpingectomy performed. Postoperative recovery was uneventful and our initial diagnosis had apparently been confirmed at operation so the patient was discharged the

next day. Histopathological examination confirmed the presence of chorionic villi and ectopic pregnancy in the tube. There was therefore no indication for further routine human chorionic gonadotropin (HCG) testing.

On review at 6 weeks postoperation, however, the patient had not had a period and further questioning revealed that the patient has had no vaginal bleeding even prior to surgery and reported persisting symptoms of pregnancy. A repeat urine pregnancy test was positive and serum HCG level was 18 000 and ultrasound scan revealed single live intrauterine gestation of approximately 16 weeks.

DIFFERENTIAL DIAGNOSIS

Ruptured single ectopic pregnancy.

OUTCOME AND FOLLOW-UP

Continuing normal intrauterine pregnancy.

DISCUSSION

The coexistence of intrauterine and ectopic pregnancy (heterotopic pregnancy) occurs in 1/30 000 of spontaneous pregnancies. However, it is becoming more common at 1/900 in clomiphene citrate-induced pregnancies and rises to 1% in assisted reproduction.¹ It is a potentially life-threatening condition with diagnostic and therapeutic complexities, this 40-year-old who has been diagnosed with secondary infertility was fortunate to keep an ongoing pregnancy because of planned non-instrumentation of the uterus. In all of the reported cases of heterotopic pregnancy in the literature, the intrauterine component has already been diagnosed pre-operative; thus this guides the non-instrumentation of the uterus at surgery.² When intrauterine pregnancy has already been diagnosed then non-instrumentation of the uterus is a matter of course and the traditional teaching is to avoid manipulation of the uterus and the cervix.^{3 4}

However, ectopic pregnancy presents in a varied number of ways and our patient presented with acute abdomen and ended up with a laparoscopy which was then converted to laparotomy. There was minimal manipulation of the uterus and cervix at surgery. Given the diagnostic complexities of ectopic and failed pregnancies and the fact that diagnostic laparoscopy yields up to 2% false-positive and 4.5% false-negative results with potentially serious consequences⁵ caution is advised in those infertility patients who may undergo 'routine' curettage at laparoscopy for ectopic pregnancy and thus, be at risk for inadvertent termination of an otherwise salvageable intrauterine pregnancy.⁶ We stress on the importance of exclude it not only after in vitro fertilisation but also in case of spontaneous conception. In pregnancies following in vitro fertilisation-embryo transfers, this diagnosis should particularly, as in our case, be considered in cases with abdominal pain. Ultrasound examination may lead to early diagnosis even in asymptomatic cases.² Our case extends the high index of suspicion and awareness of heterotopic pregnancy to spontaneous conception. A non-surgical approach can be used safely and effectively to manage patients who are clinically stable and where an HTP is recognised relatively early in gestation. The successful non-surgical management of six cases of HTP using potassium chloride injection into the tubal ectopic pregnancy has been reported.⁷ Our patient had a laparotomy because of haemodynamic instability but has an ongoing intrauterine pregnancy.

Learning points

- ▶ The incidence of heterotopic pregnancies is rising in both assisted and spontaneous pregnancies.
- ▶ A high index of suspicion and awareness is required for diagnosis.
- ▶ Caution is therefore advised during surgical treatment of ectopic gestation when a coexisting intrauterine pregnancy has not been excluded.
- ▶ Minimal manipulation of the uterus is advised.

Competing interests None.

Patient consent Obtained.

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