HETEROTOPIC PREGNANCY IN A NORMAL CONCEPTION CYCLE PRESENTING AS A RUPTURED ECTOPIC PREGNANCY

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INTRODUCTION

We report a case of heterotopic pregnancy, which presented with ten weeks of amenorrhoea, lower abdominal pain and shock. Ultrasound scanning showed a viable intrauterine pregnancy, right adnexal mass with free fluid in the pouch of Douglas. Emergency laparotomy and right salpingectomy were performed. The patient recovered uneventfully and went on to have a normal delivery at term.

CASE REPORT

A 21-year-old woman (gravida 2 para 1) was referred by her general practitioner to the gynaecology assessment unit. She was ten weeks pregnant with sudden onset of severe lower abdominal pain worst in her right lower quadrant, shoulder tip pain, pallor and feeling faint. There was no vaginal bleed or discharge. A chlamydia infection had been treated five years prior to presentation. Her previous pregnancy ended at term with a normal delivery three years prior to presentation. There was no history of reproductive assistance in this pregnancy.

Clinical examination revealed signs of shock, severe pallor, tachycardia, hypotension and cold clammy extremities. Her blood pressure was 84/60 mmHg and pulse 104/min, weak and thready. She had significant abdominal guarding and rebound tenderness. The uterus was bulky with severe tenderness in the right adnexa. Cervical excitation tenderness was present. A portable pelvic scan at her bedside showed a viable intrauterine pregnancy at ten weeks +/- 2 days, right adnexal mass and free fluid in the pouch of Douglas. Differential diagnosis of a ruptured corpus luteal cyst, heterotopic pregnancy or surgical cause for acute abdomen was made. She was resuscitated with intravenous fluids and appropriate blood tests were done. Her preoperative haemoglobin concentration had dropped to 4.0 g/dl.

At laparotomy, a ruptured right tubal pregnancy with 3.5 litres haemoperitoneum was found. Both ovaries and left tube were normal. A routine right salpingectomy was performed. She was transfused with eight units of blood and two units of fresh frozen plasma, ventilated and transferred to the intensive therapy unit for 24 hours. A repeat pelvic scan two days later showed a continuing viable intrauterine pregnancy and posterior placenta with no haematoma collection.

Histology confirmed right tubal ectopic pregnancy. She made an uneventful recovery and was discharged five days later. Review at four weeks post operation showed her to be remarkably well. She was counselled regarding the risks of anaesthesia and possible hypoxic episodes affecting the fetus during management of the acute event and possible impact on the pregnancy. A routine anomaly scan at 20 weeks gestation

was unremarkable and she went on to have an uneventful antenatal period. She had a normal vaginal delivery of a live baby weighing 4.08kg at 41 weeks gestation.

DISCUSSION

Duverny first reported heterotopic pregnancy in 1708. It is the combination of an intrauterine and extrauterine pregnancy with the ectopic more likely to be tubal but could be ovarian, cervical, abdominal or corneal⁽¹⁾. Classically, the incidence of normally occurring heterotopic pregnancy has been reported as 1:30000. The incidence in spontaneous conceptions is now thought to be 1:4000 to 1:7000 pregnancies⁽²⁾. It is much higher following in vitro fertilisation and embryo transfer with the reported rate ranging from 1% to 3% of all clinical pregnancies.

Heterotopic pregnancy should be suspected when there is a definite intrauterine pregnancy associated with unaccountable abdominal pain, adnexal swelling or swelling in the pouch of Douglas. Because of the confusing clinical picture with this condition, there may be a delay in diagnosis due to symptoms being attributed to complications of intrauterine pregnancy⁽²⁾. Ideally, transvaginal ultrasound and serial serum beta human chorionic gonadotrophin (BhCG) allow monitoring of ectopic and heterotopic pregnancies if the ectopic component is unruptured. In the absence of intrauterine pregnancy, corpus luteum cysts are usually distinguished from ectopic pregnancy by a ßhCG level. Distinguishing heterotopic pregnancy from ruptured corpus luteum cyst with normal intrauterine pregnancy can be difficult clinically and sonographically. Surgical visualisation and treatment may be required via laparoscopy or laparotomy.

Assisted conception has led to an increase in heterotopic pregnancy rates and as ßhCG is often in the normal range a high index of suspicion is needed, especially following gamete manipulation procedures.

Heterotopic pregnancy was once considered a rare phenomenon *de novo*. The increased risk of this condition with the popular use of reproductive assistance is well documented, however, with increasing incidence of pelvic inflammatory disease and subsequent development of peritubal adhesions, the risk of ectopic pregnancy is rising and probably so is the risk of heterotopic pregnancies from spontaneous conceptions⁽³⁾. Even in patients without these predisposing risk factors, the possibility should be entertained in any pregnant woman with abdominal pain and intrauterine pregnancy confirmed by ultrasonographic examination.

There has been concern about the safety of general anaesthesia in pregnancy in terms of incidence of spontaneous miscarriage, effects of inhalation agents on the

developing fetus, possible teratogenicity and longterm sequelae during childhood development. The overall safety of anaesthesia in pregnancy is well documented. Studies show no evidence of developmental or physical abnormalities implying no strong teratogenic effect compared to the general population^(4,5,6,7). There may, however, be a small increased risk of miscarriage for which factors responsible are not clear.

Where heterotopic pregnancy is suspected, studies suggest that laparoscopic management is preferred over laparotomy if the patient is haemodynamically stable. In these instances, it is recommended there should be minimal manipulation of the uterus with avoidance of cervical instrumentation⁽⁸⁾. Recent reviews have supported this less invasive approach, with no complications reported^(9,10).

There have been case reports in literature of non-surgical management of heterotopic pregnancy with the use of transvaginal ultrasound scan guided injection of potassium chloride into the ectopic component of the pregnancy. This led to spontaneous resorption of the fetus while the intrauterine pregnancy continued to term. This was tried only in haemodynamically stable women with an early diagnosis of heterotopic pregnancy having being made^(11,12). These reports, however, are few. More studies need to be done before this becomes established as a widely accepted treatment option.

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