

Heterotopic Pregnancy Following Induction of Ovulation: A Case Report.

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Abstract

Heterotopic pregnancies are occurring more commonly with the increasing use of assisted reproductive methods. No single investigation can predict the presence of heterotopic pregnancy. Heterotopic pregnancy should be suspected in any patient who presents with lower abdominal pain in the early phase of an obvious intrauterine pregnancy following fertility treatment. Transvaginal ultrasonography is a useful diagnostic adjunct. Early intervention is essential to salvage the intrauterine pregnancy and avoid maternal morbidity and mortality.

Key Words: Pregnancy, Ectopic, Heterotopic, Ovulation Induction. [Trop J Obstet Gynaecol, 2002, 19: 115-116]

Introduction

Heterotopic pregnancy (HP), is the combined occurrence of intrauterine and extrauterine gestations. Though the extra-uterine component is usually tubal, it may also be ovarian¹. Despite an earlier report on 215 cases of combined intrauterine and extrauterine pregnancies in 1933², HP was considered a rare condition. However during the past decade, the rising incidence of HP following induction of ovulation with clomiphene citrate was reported by various authors³. A literature review published in 1996 revealed evidence suggesting that the incidence of HP increased in recent years because of escalating use of new reproductive technologies in infertility patients and that it has stabilized at approximately 1:100 pregnancies with these procedures⁴.

The purpose of this case report is to remind all practicing gynaecologists taking care of patients who have undergone various forms of assisted reproductive treatments of this potentially fatal condition.

Case Report

A 30-year old patient reported at the emergency room with a history of dull abdominal ache of one week's duration, after seven weeks of amenorrhoea. There was no associated history of vaginal bleeding, but she had dysuria and three bouts of diarrhoea on the day of admission. The quantitative serum β hCG estimated a day before admission was 1842mIU/ml. This was her second pregnancy. She had a spontaneous vaginal delivery in a hospital six years earlier after an uneventful pregnancy. The current pregnancy followed induction of ovulation with clomiphene citrate and pergonal injections over "many months", prescribed by her private practitioner.

Her physical condition was satisfactory on admission. She was not clinically anaemic. Her pulse rate was 88 beats per minute, blood pressure 120/80 mmHg and temperature 36°C. Her abdomen was soft, with no definite area of tenderness.

Transabdominal ultrasonography revealed a clear intrauterine gestational sac, with a fetal node. There was some fluid collection in the utero-rectal pouch. The patient refused transvaginal ultrasonography. The baseline investigations done on admission included a full blood count, random blood sugar estimation, serum electrolytes, stool and urine examinations. Her haemoglobin was 13.6g/dl and total white cell count was $8.3 \times 10^9/l$. There were no pus or red blood cells on urine microscopy.

At this point, the only obvious presumptive diagnosis was an early intrauterine pregnancy with probably a ruptured corpus luteum. After an initial 8 hours of conservative management on intravenous fluids and observation, her symptoms subsided, her vital signs remained stable and she was allowed oral food intake.

Sixteen hours after admission, she developed sudden severe left-sided lower abdominal pain and was ill looking. Her pulse rate was 104/min., blood pressure 100/60mmHg and temperature 37°C. She had a generalized abdominal tenderness, maximal at the left iliac fossa. Transabdominal ultrasonography revealed an intrauterine pregnancy with a cystic mass, 5 x 4 cm in dimension, on the left side of the uterus, with free particulate fluid in the peritoneal cavity.

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These findings were confirmed by transvaginal ultrasonography, which the patient now accepted. She experienced a lot of pelvic discomfort during the procedure. At this stage, the possibility of a co-existing ruptured ectopic pregnancy was also considered. Her haemoglobin had dropped from 13.6g/dl to 10.9g/dl.

Emergency laparotomy revealed haemoperitoneum (500 mls) and left ampullary tubal ectopic gestation with bleeding from the ostium. Left salpingectomy was performed. Histology confirmed the presence of a left tubal ectopic gestation. She made satisfactory post-operative progress and her post-operative haemoglobin was 10.1g/dl. When she had a fresh ultrasound scan on the sixth post-operative day, the fetus was found to be viable. She was then discharged home.

The progress of the pregnancy was uneventful. At 39 weeks gestation, she had emergency lower segment caesarean section for breech presentation with fetopelvic disproportion in labour. She was delivered of a healthy male baby that weighed 3100 grams. The patient and her baby were discharged home in satisfactory condition seven days later.

Discussion

Heterotopic pregnancy (HP), a rare event in the past, has become a common complication of assisted reproduction techniques, including the wider use of ovulation induction agents⁵. The patient presented developed HP following induction of ovulation. Her lower abdominal pains were not taken seriously initially because of the ultrasonic evidence of an

intrauterine pregnancy. Transvaginal ultrasound, which has a sensitivity of 100% and a specificity of 99.9% in diagnosing ectopic pregnancy at serum β -hCG levels of 1500mIU/mL and above⁶, was not used promptly due to the patient's initial rejection of the procedure. This delayed the institution of definitive treatment. No single risk factor, laboratory test or combination of these is sensitive or specific enough to predict the occurrence of heterotopic pregnancy⁷. The level of serum β -hCG is therefore not of much diagnostic importance in HP. A high index of suspicion, repeated ultrasonography, and early intervention are mandatory to salvage the viable intrauterine pregnancy and avoid maternal mortality⁵. Some authors reported selective embryo reduction in HP, using potassium chloride injection into the chorionic cavity of an ectopic pregnancy⁸. Salpingectomy is, however, probably the safest treatment and the least traumatic for a good outcome of intrauterine pregnancy⁹. Laparoscopic management of this ectopic pregnancy was not considered because the patient was not haemodynamically stable at the time that the diagnosis was made.

Conclusion

It is important that every gynaecologist managing patients on infertility treatment consider the possibility of HP in their pregnant patients. Transvaginal ultrasound is an important diagnostic tool. Prompt diagnosis and treatment are paramount towards fetal and maternal survival. Salpingectomy through laparotomy is an effective definitive procedure.

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