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CASE REPORT

Heterotopic pregnancy following induction of ovulation in PCOS

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ABSTRACT

A case of successful intrauterine pregnancy diagnosed after surgical removal of a ruptured ectopic pregnancy in a patient subjected to induction of ovulation for PCOS. Heterotopic pregnancy is a problem with increasing incidence that needs high alertness to avoid serious complications.
Key Words: Ectopic pregnancy, induction of ovulation, heterotopic pregnancy

INTRODUCTION

Heterotopic pregnancy or combined intrauterine and extrauterine pregnancy was first reported in 1708 (1). Traditionally, the rate of occurrence has been thought to be 1:30,000 pregnancies, but in the recent literature a rate of 1:2600 has been reported in high-risk groups with the use of assisted reproduction techniques (1), although, a rate of 1:100 has been reported with the use of these techniques by Tal et al in 1996 (2).

This report presents a case of combined intrauterine and tubal pregnancy after the use of ovulation induction for the treatment of infertility, with special emphasis on the issues of diagnosis and therapeutic problems.

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CASE REPORT

A 24 years old lady, known as a case of primary infertility for 5 years and polycystic ovaries. She was overweight, and had mild hirsutism. She received ovulation induction by Clomiphene citrate 100 mg/ day starting on day 2 of the cycle and continued with recombinent FSH 100 I.U./day on day 7. Transvaginal ultrasound on day 9 showed 2 follicle in the right ovary measuring 12.0 x 9.0 and 13.0 x 10.0 mm, and 4 follicles in the left ovary measuring 10.0 x 10.0, 12.0 x 13.0, 14.0 x 9.0, and 9.0 x 9.0 mm. She continued to receive the same dose of FSH for 2 days and a repeat ultrasound on day 12 showed 2 good size follicles in the right ovary measuring 20.0 x 18.0, and 19.0 x 23.0 mm, in-addition to other small follicles less than 10.0 mm. The left ovary contained 2 good size follicles measuring 22.0 x 17.0 and 25.0 x 18.0 in-addition to other small follicles less than 10.0 mm. There was no fluid in the Pouch of Douglas and the endometrium was 10.0 mm thick. She was given 10,000 I.U. of HCG on day 12 and was advised for natural intercourse on day 13. No Progesterone

support was added. Her next presentation to the clinic was at 5 weeks of amenorrhea with severe lower abdominal pain and vaginal bleeding. She had a positive pregnancy test and ultrasound scanning showed fluid collection in the Pouch of Douglas, empty uterus and a right adnexal mass suggestive of ectopic pregnancy. She had an emergency laparoscopy, which diagnosed a ruptured right-sided ectopic tubal pregnancy, therefore, laparotomy was carried out and right-sided salpingectomy was performed. Blood transfusion was not needed for the patient as her Haemoglobin was 9.0 g/l pre-operatively and she was stable hemodynamically during surgery. No Beta HCG sub unit was requested pre- or post-operatively

During her post-operative stay, she continued to complain of vaginal bleeding, abdominal pain, and severe nausea. A repeat ultrasound scan was done on the fifth post-operative day showed a small intrauterine gestational sac with a small yolk sac but no fetal pole. Histology of the operative specimen confirmed the presence of chorionic villi. She was given vaginal Progesterone support post-operatively. A follow up scan was done 1 week later showed a viable intrauterine pregnancy which was followed out till term and ended in spontaneous vaginal delivery of a healthy baby boy.

DISCUSSION

Ectopic pregnancy is a major cause of morbidity and mortality in reproductive age women. There is no single non-invasive test to detect the presence of an ectopic pregnancy. The old traditional teaching that the presence of an intrauterine pregnancy excludes an ectopic is not applicable any more in current practice.

Combined intrauterine and ectopic pregnancy is an insidious disease with a constant increase in incidence especially in infertile women subjected to assisted reproduction techniques with a rate of 1.5% among all IVF patients (3). The combined use of serum beta human chorionic gonadotropin (HCG) level along with transvaginal ultrasound improved the sensitivity to diagnose intrauterine pregnancy to 100% (4), but for ectopic pregnancy or a combined intra and extrauterine pregnancy a high suspicion should be present in the managing physician especially in patients submitted to assisted reproduction in order to avoid serious maternal life threatening conditions such as rupture of an ectopic pregnancy.

Most of the heterotopic pregnancies present in the first trimester as in this case report. Once a heterotopic pregnancy is diagnosed, the next dilemma that arises is how to manage it without harming the intrauterine pregnancy. In cases similar to our case with ruptured ectopic pregnancy, the standard treatment is surgical removal of the ectopic either by laparoscopy or laparotomy with minimal manipulation of the uterus. In stable patients, many other alternatives has been reported such as ultrasound guided injection of Potassium Chloride (4,5), local administration of Methotrexate into the ectopic pregnancy (6), or aspiration of the ectopic sac under ultrasound guidance followed by local injection of Methotrexate. The follow up of surviving intrauterine pregnancies has been reported to be normal after that with a rate of successful pregnancy and delivery of 43% (3).

The worse of all scenarios is diagnosing the ectopic pregnancy and missing the diagnosis of the intrauterine pregnancy with the administration of parental Methotrexate to treat the ectopic which may lead to multiple anomalies in the developing fetus. It was recommended previously to perform D&C prior to Methotrexate administration if the Beta HCG level is less than 2000 mIU/ml to avoid Methotrexate embryopathy (7).

In conclusion, Knowledge of the possibility of heterotopic pregnancy and understanding the epidemiological risk factors associated with it are important for early diagnosis and avoiding complications. All patients who undergo assisted reproduction should be submitted to careful monitoring in early pregnancy.

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