J Obstet Gynecol Ind Vol. 54, No. 1 : January/February 2004 Pg 87-88

Heterotopic Pregnancy Following Induction of Ovulation with Clomiphene

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Key words: clomiphene, heterotopic pregnancy, tubal pregnancy

Introduction

The occurrence of heterotopic pregnancy (simultaneous intrauterine and extrauterine pregnancies) following induction of ovulation with clomiphene for infertility is rare. It represents a life-threatening complication of pregnancy and its diagnosis is often difficult. When an ectopic pregnancy is suspected after induced ovulation or assisted reproductive technologies, the presence of an intrauterine pregnancy should not be considered reassuring and the patient should be evaluated rigorously to rule out heterotopic pregnancy which otherwise can have serious adverse effects on the intrauterine fetus and the mother.

Case Report

A 22 year old nulliparous woman conceived after three cycles of ovulation induction with clomiphene. She presented to her private physician at 6 weeks of gestation with lower abdominal pain. Ultrasound examination showed an intrauterine pregnancy of corresponding period of gestation. At 9 weeks, she had one episode of vaginal spotting and a viable fetus of 8 weeks and 5 days was obvious on ultrasound. She received human chorionic gonadotrophin (hCG) but continued to have pain. Four days later, she had acute abdominal pain followed by a syncopal attack. Her general condition deteriorated in the next 24hours when an ultrasound repeated by a sonologist showed a non-viable intrauterine fetus and free fluid in the peritoneal cavity. She was subsequently referred to us. On examination she had pallor. Her pulse was 124/min and supine blood pressure 140/90 mm Hg. There was a generalized abdominal distention and tenderness. Bimanual examination revealed a tender cervix. All the fornices were full and tender. Uterine size could not be made out. Ultrasound showed free fluid in the peritoneal cavity (Figure 1), a nonviable intrauterine pregnancy and a 5 ems x 5 ems heterogenous mass in relation to the left adnexa (Figure 2) . Abdominal paracentesis yielded hemorrhagic fluid. Her hemoglobin was 7 gm/dL and coagulation parameters were normal. On exploratory laparotomy there were approximately lL ofhe'moperitoneum and a ruptured left tubal pregnancy. The uterus was of 8 weeks size. Left salpingectomy and therapeutie abortion of non-viable intrauterine pregnancy were performed. Pathological examination confirmed a ruptured left tubal pregnancy and a intrauterine pregnancy. Her postoperative recovery was smooth.

Paper received on 2/09/02 ; accepted on 7/05/03

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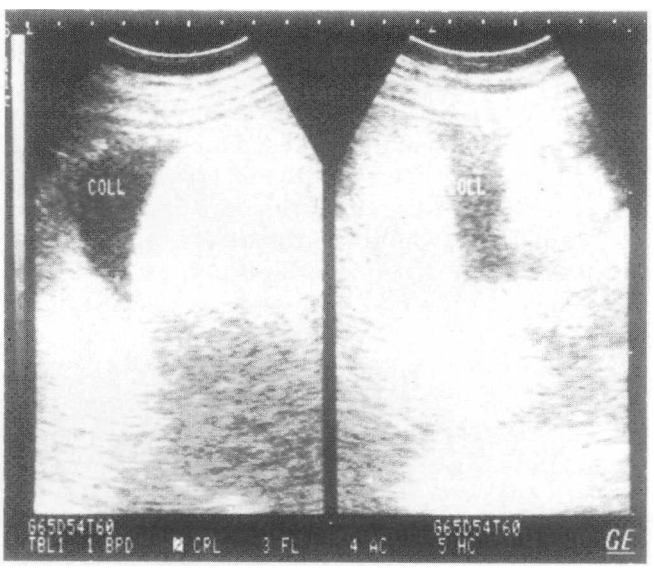
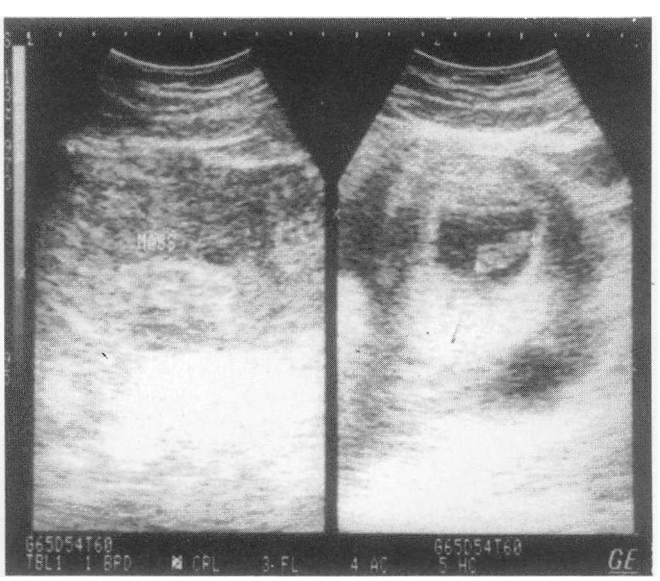


Photograph 1 : Ultrasonogram showing free fluid in the peritoneal cavity



Photograph 2 : Ultrasonogram showing a heterogenous mass in relation to the left adnexa and an intrauterine pregnancy.

Discussion

Heterotopic pregnancy represents a form of dizygotic twinning with separate sites of implantation of blastocyst. The incidence of spontaneous heterotopic pregnancy has been estimated to be 1 in 30,000 gestations'. The first case of heterotopic pregnancy following clomiphene induced ovulation was reported in 1971[2]. Clomiphene by hyperstimulating the ovaries and probably by altering the myoelectrical activity responsible for propulsive action of fallopian tubes, is associated with increased rate of twinning and ectopic pregnancy and thus could be associated with a higher rate of heterotopic pregnancyv'. An early diagnosis of heterotopic pregnancy is important for the intrauterine fetus and the mother. In an early case conservative management with laparoscopy or by injecting potassium chloride solution in the ectopic gestation sac under vaginal sonography is advised.

The signs and symptoms of heterotopic pregnancy have been reviewed by Reece et al[5]. Heterotopic pregnancy has been a rare cause of acute abdominal pain", Ultrasound is helpful and vaginal ultrasound is superior to abdominal ultrasound for the diagnosis of ectopic pregnancies. A diagnostic laparoscopy should be performed whenever the diagnosis remains unclear".

The present case emphasizes the possibility of heterotopic pregnancy following clomiphene therapy and the adverse consequences of missed diagnosis. Further observations on such cases would define the risk. Gynecologists, primary care physicians, sonologists, radiologists and emergency room physicians should have a high index of suspicion of heterotopic pregnancy in women who conceive after using ovulation inducing agents.

References

1. Winer AE, Bergman WD, Fields C. Combined intra- and extrauterine pregnancy. *Am J Obstet Gynecol 1957;* 74:170-8 .
2. Payne 5, Duge J, Bradbury W. Ectopic pregnancy concomitant with term intrauterine pregnancy. *Obstet Gynecol* 1971; 38:905-6.
3. Glassner MJ, Aron E, Eskin BA. Ovulation induction with clomiphene and the rise in heterotopic pregnancies: A report of two cases. *J. Reprod Med 1990;* 35: 175-8.
4. Ahove 01, Sotiloye OS. Heterotopic pregnancy following ovulation stimulation with clomiphene: a report of three cases. *West Afr J Med* 2000; 19:77-9.
5. Reece E, Petrie R, Sirmons M et al. Combined intrauterine and extrauterine gestations: a review. *Am J Obstet Gynecol 1983; 146:323-30.*
6. Franke C, Rohrborn A, Thiele H et al. Combined intrauterine and extrauterine gestation. A rare cause of acute abdominal pain. *Arch Gynecol Obstet 2001;* 265: 51-2.
7. Silva PD, Meisch AI. Laparoscopic treatment of heterotopic pregnancy. *JAm Assoc Gynecol Laparosc* 1995; 2:213-6.