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Case Report

Heterotopic triplet pregnancy after ovulation induction with recombinant gonadotropin and intrauterine insemination

Burcu Kasap*, Melike Nur Akin, Eren Akbaba, Nilgun Ozturk Turhan, Mert Kucuk

Department of Obstetrics and Gynecology, School of Medicine, Mugla Sitki Kocman University, Mentese, Mugla, Turkey.

Abstract

Ectopic pregnancy foci might not be recognized despite advanced gestational ages and might present with life threatening symptoms like sudden rupture and acute abdomen. We report a triplet heterotopic pregnancy case with acute abdomen symptoms. The patient had both an intrauterine alive twin pregnancy at 9+5 weeks gestation and also tubal ectopic pregnancy. The pregnancy was achieved after ovulation induction with recombinant gonadotropin and intrauterine insemination. In conclusion, despite the presence of a demonstrated intrauterine viable pregnancy, pelvic examination and scanning must be performed in all asymptomatic pregnant women in order not to overlook ectopic pregnancy cases.

Key words:

Acute abdomen, heterotopic pregnancy, intrauterine insemination, recombinant gonadotropin, triplet pregnancy

Introduction

Heterotopic pregnancy is the concurrent existence of both intrauterine and ectopic pregnancy [1]. The incidence of heterotopic pregnancy varies between 1:100 and 1:30000 [2]. But in current literature the classical incidence rate of 1/30000 was revised as 1/3889 according to new analyses and but it might reach to 1/100 in Assisted Reproductive Technology (ART) [3,4]. After widespread use of ART, the incidence of triplet conception increased by 5.9 fold [5]. Triplet heterotopic pregnancy is an unusual form of this rare obstetrical condition and number of reported cases with tubal ectopic and coexisting twin pregnancy is limited in the literature [5]. This rare obstetrical condition may lead to serious morbidity and mortality issues for the mother due to spontaneous rupture [6]. Herein we report the management of a rare case of tubal ectopic and intrauterine viable twin pregnancy after ovulation induction with recombinant gonadotropin and intrauterine insemination.

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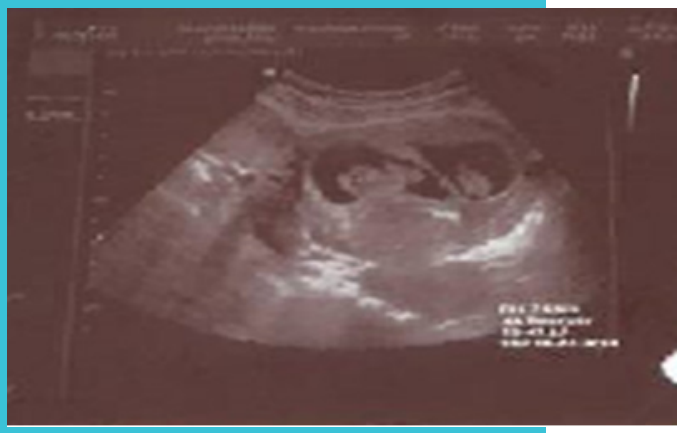
*** Correspondence:** Burcu Kasap, MD
Department of Obstetrics and Gynecology, School of Medicine, Mugla Sitki Kocman University, Mugla, 48000, Turkey
Phone: +90 (252) 2114800/5156
Email: burcuharmandar@gmail.com

Case presentation

A 32-year-old, Gravidity 1, Parity 0 patient was admitted to emergency department with severe abdominal pain. She had unexplained infertility for four years and had a history of ovulation induction trial with clomiphene citrate for three times before the current pregnancy. The current pregnancy had been achieved via ovulation induction with recombinant gonadotropin and intrauterine insemination. İn physical examination muscular and rebound tenderness were identified. All hemodynamic parameters including hemoglobin level and blood pressure were stable. In transvaginal ultrasonography, she had 9+5 weeks viable dichorionic and diamniotic intrauterine twin pregnancy as also stated

in her previous examinations (Figure 1). In right adnexal region there was also another 9+5 weeks ectopic pregnancy focus with positive fetal heart beats (Figure 2). In douglas region free fluid was present. The patient underwent urgent laparotomy since she opted against laparoscopic surgery. In pelvic exploration unruptured ectopic pregnancy focus was detected at the right tubal ampullary region (Figure 3). The operation was terminated with right salpingectomy since the bleeding from the ectopic pregnancy focus could not be stopped during salpingostomy. The postoperative period was uneventful and the patient was discharged with viable intrauterine twin pregnancy on the fourth postoperative day. The antenatal follow up was completed successfully and she delivered two healthy babies at term without any complications.

Figure 1.



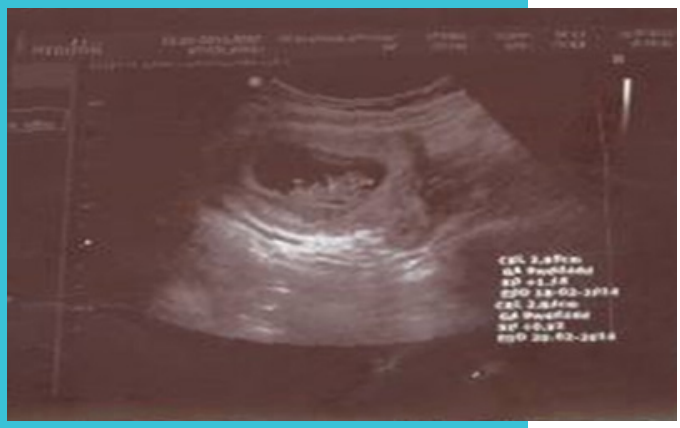
Intrauterine dichorionic diamniotic twin pregnancy

Discussion

Heterotopic pregnancy is characterized by the presence of coexistent intrauterine and ectopic pregnancy [1]. The most common implantation site of the ectopic pregnancy is in the ampullary segment of fallopian tube (80%) [7]. The incidence of heterotopic pregnancy is 1/30,000 in spontaneous pregnancies [8] and it is much greater (1/100-1/3600) in pregnancies resulting via ART [3,4,6]. Overall, the incidence of heterotopic pregnancy is around 1/7000 [9] to 1/15000 live births [10]. Early diagnosis of this clinical condition is crucial for saving maternal lives and intrauterine pregnancies and also for preserving further fertility. Maternal mortality related with heterotopic pregnancy is around 1% and also intrauterine fetal mortality might reach to 45-65% [4].

The diagnosis of the heterotopic pregnancy is a very difficult entity since the serial beta human chorionic gonadotropin (β-hCG) follow up becomes insignificant and the diagnosis of intrauterine pregnancy might hide the ectopic pregnancy. The high index of suspicion for early diagnosis of this condition is crucial since 50% of heterotopic pregnancies are asymptomatic [8]. 70% of heterotopic pregnancies are diagnosed between 5 and 8 weeks of gestation, 20% are diagnosed between 9 and 10 weeks, and 10% are diagnosed after 11 weeks [11]. The presented case was diagnosed at 9 weeks and 5 days old gestation.

Figure 2.

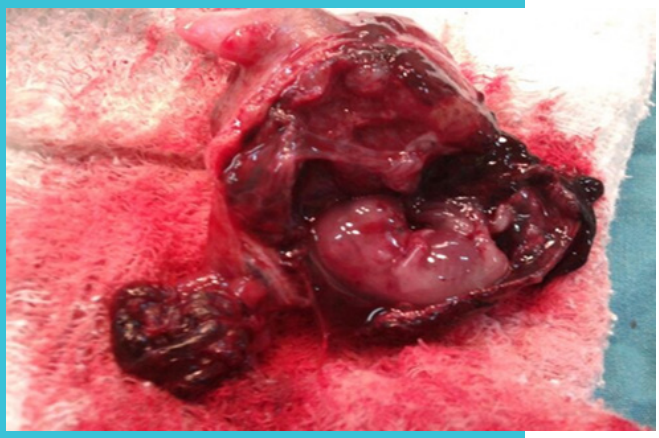


Ultrasonographic examination of ampullary ectopic pregnancy focus with positive fetal heart beats

In cases of heterotopic triplets only 57% were diagnosed preoperatively [12], while 78.5% were diagnosed after the rupture of the tube, with acute abdomen symptoms [12]. This was also the state of the patient in this case report. The purpose of the treatment in heterotopic pregnancies is to eliminate the ectopic pregnancy while preserving the intrauterine pregnancy. The therapeutic options vary according to clinical conditions of the patient. Most of the patients with heterotopic pregnancy were treated surgically either with laparoscopy or laparotomy. Early diagnosis of the patients at stable hemodynamic conditions might give chance for laparoscopic resection or salpingostomy [13]. Otherwise patients at instable hemodynamic conditions are mostly treated with salpingectomy during emergency laparotomy. It was emphasized not to destroy the ovarian circulation for the safety of corpus luteum during both laparoscopy and laparotomy [2].

In heterotopic pregnancies including cervical pregnancy, local injection of potassium chloride or hyperosmolar glucose is a good option. However, the use of methotrexate is not an alternative or option for heterotopic pregnancy due to destructive effects on ongoing intrauterine pregnancy [11].

Figure 3.



9+5 weeks old fetus in ampullary ectopic pregnancy focus.

The prognosis of the intrauterine pregnancy is generally good after laparotomies performed for heterotopic pregnancies. The incidence of uncomplicated ongoing pregnancies and healthy birth rates after heterotopic pregnancies was reported by Recce et al. as 75% and by Molley et al. as 60% [2]. The rate of miscarriage or stillbirth of the concurrent intrauterine pregnancy was 9%, premature birth was 16% and viable delivery at term was 75% [2]. In the present case the pregnancy reached to term and she delivered two healthy babies without any complications. In conclusion, for all asymptomatic pregnancies, even in the presence of a diagnosed intrauterine pregnancy following ART, the index of suspicion should be high and adnexal ultrasonographic examinations should be performed in order to save intrauterine gestation in the presence of heterotopic pregnancy particularly for those who conceived after infertility treatment.

Conflict of Interest

The authors have no conflict of interest.

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