Heterotopic Pregnancy Following Intrauterine Insemination: A Case Report

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A 30 years old patient admitted to our clinic with severe pelvic pain and vaginal bleeding. In history, it was also learned that she had been pregnant for triple gestation after intrauterine insemination. She was advanced anemic by inspection. Patient was evaluated by transvaginal ultrasonography, there were three gestational sacs and fetuses with fetal heart movements and CRL values correlated with 10th week of gestation within the uterine cavity. Left adnexal area was normal, but there was an ectopic gestational sac and fetal echo on the right tuba-ampullary region. There was also hematoma adjacent to the ectopic focus and large amounts of fluid within the abdominal cavity. Laparotomy was planned. Salpingotomy was performed, and ectopic focus was taken out. On the postoperative 3rd day, since patient was stabilized, she was discharged from hospital. Triple gestation is still being followed-up at 20 weeks without any problem.

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Key Words: Heterotopic pregnancy, Intrauterine insemination, Laparotomy

The incidence of ectopic pregnancy has been reported to be elevated by increased salpingitis incidence, increased ovulation induction procedures and increased tubal sterilization techniques.[1] Mostly detected in women between 35-44 years of age.[2] Although incidence has been reported to be elevated, morbidity and mortality related to disease has been found to be decreased by advanced diagnostic and therapeutic procedures[1] The incidence of heterotopic pregnancy among naturally occurring pregnancies is reported as 1 in 30000. It is suspected to be seen more frequently after cycles induced by clomiphene citrate and after menotrophin usage and in vitro fertilization techniques.[3]

Case Report

A 30 years old patient admitted to our clinic with severe pelvic pain and vaginal bleeding. In history, patient stated that she has been infertile for 12 years and treated by intrauterine insemination following ovulation induction by recombinant technology 3 months ago. It was also learned that she had been pregnant for triple gestation after treatment. The vital signs of patient were found to be TA: 80/40 mmHg, pulse: 126/min, fever 35.7ºC. She was advanced anemic by inspection. Abdominal examination revealed disseminated defence and rebound. In pelvic examination, there was minimal vaginal bleeding and the cervical movements were painful. Patient was evaluated by transvaginal ultrasonography, there were three gestational sacs and fetuses with fetal heart movements and CRL values correlated with 10th week of gestation within the uterine cavity. Left adnexal area was normal, but there was an ectopic gestational sac and fetal echo on the right tuba-ampullary region. There was also hematoma adjacent to the ectopic focus and large amounts of fluid within the abdominal cavity, douglas pouch. In laboratory, Hb:7.9 gr/dl, serum liver and renal function tests were also found to be normal. Laparotomy was planned. During laparotomy, approximately 1 liters of hemorrhage with clots was drained from the abdominal cavity. Uterus sized correlated with gestational week. Left tube and the ovary were normal. There was a 3x4 cm sized ruptured ectopic pregnancy focus was observed on the right tuba-ampullary region. Active bleeding was detected from the right fimbrial edge. Salpingotomy was performed and the ectopic focus was taken out. Bleeding control was supplied. On the postoperative follow-up, no complication was observed. On the postoperative 3rd day, since patient was stabilized, she was discharged from hospital. Triple gestation is still being followed-up at 20 weeks without any problem.

Discussion

Heterotopic pregnancy is defined as simultaneous presence of intrauterine pregnancy with ectopic pregnancy. The incidence of heterotopic pregnancy among naturally occurring pregnancies is reported as 1 in 30000. It is suspected to be seen more frequently after cycles induced by clomiphene citrate and after menotrophin usage and in vitro fertilization techniques.[3] With assisted reproduction techniques, however, this incidence increases to between 1/100 and 1/500.[4,5]

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Spontaneous ectopic pregnancy occurs in 5% of pregnancies achieved after IVF.[6,7]

Factors predisposing to heterotopic pregnancy appear to be identical to those predisposing to ectopic pregnancy, i.e. tubal damage after pelvic inflammatory disease, endometriosis or former tubal surgery. One possible explanation for this is that the transferred embryos that migrate into the damaged tubes are not expelled by peristaltic movements.[8,9] In our case, there was not any predisposing factor identified.

The differential diagnosis is difficult since progesterone and βhCG levels are found to be high due to ongoing intrauterine pregnancy.[3] Unfortunately, 58.9% of heterotopic pregnancies are still found incidentally, and 18.8% are diagnosed between the 9th and 11th weeks of pregnancy. Tal et al.[4] reported that 70% of heterotopic pregnancies were diagnosed between 5 and 8 weeks of gestation, 20% between 9 and 10 weeks and 10% after the 11th week. Usually, signs of the extrauterine pregnancy predominate.[10] Reece et al.[10] defined four common presenting signs and symptoms; abdominal pain, adnexal mass, peritoneal irritation, and an enlarged uterus. Tal et al.[4] reported abdominal pain in 83% of heterotopic pregnancies, and hypovolemic shock with abdominal tenderness in 13%; half of the patients did not complain of vaginal bleeding.

Approximately, 98% of ectopic pregnancies were observed in fallopian tubes. Among these patients, 93% are detected in ampullary region. Ampullary pregnancies are expected to rupture in late pregnancy weeks, between 8-12 weeks of gestation.[2]

The standard treatment for ectopic pregnancy is surgery by laparoscopy or laparotomy with minimal manipulation of the uterus. Another treatment for heterotopic pregnancy with an intact tubal ectopic site is the local injection of potassium chloride.[11] In our case, we have preferred laparatomy, because there was large amount of intra-abdominal bleeding and the vital signs revealed pre-shock values.

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