Case Report

Outcome of Heterotopic Pregnancy Following Ovulation Induction by Clomiphene Citrate

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ABSTRACT

Heterotopic pregnancy, though rare is a combined pregnancy in which simultaneous intrauterine and extrauterine pregnancy occur. The estimated incidence is 1 in 30000 following spontaneous pregnancy while it can be as high as 1 % after the use of artificial reproductive techniques. We present a case of 33 year old female who conceived after ovulation induction with clomiphene citrate and came with acute abdominal pain. Her ultrasound was suggestive of 10 weeks live intrauterine pregnancy with ruptured left tubal ectopic. Laparotomy with left salpingectomy was done without affecting intrauterine pregnancy. Pregnancy progressed uneventfully until 37 weeks and a healthy male baby was delivered by caesarean section. So, heterotopic pregnancy must be considered in a patient with lower abdominal pain in early gestation particularly those who conceive after artificial reproductive techniques.

Keywords: Ectopic pregnancy, Heterotopic pregnancy, Infertility, Tubal pregnancy

Heterotopic pregnancy is a coexistence of intrauterine and extrauterine pregnancies [1-3]. It is a rare medical condition. The incidence has been estimated to be about 1 in 30,000 in spontaneous pregnancy. With the use of assisted reproductive technologies, the incidence is as high as 1 in 100 [1,2,4,5]. Clomiphene citrate increase the rate of heterotopic pregnancy to 1 in 900 [6]. We report this case to highlight the importance of early diagnosis and management. If diagnosed on time, appropriate management can avoid loss of intrauterine pregnancy and maternal morbidity and sometimes mortality.

CASE REPORT

A 33 year old gravida 2 Para 0 came to emergency department of our tertiary care public hospital with 10 weeks of amenorrhea with acute onset of severe abdominal pain and vaginal spotting. She belonged to lower socioeconomic class. She had a no past history of any medical diseases besides one previous spontaneous 1st trimester miscarriage and had a history of secondary infertility for 2 years. Patient conceived after ovulation induction with clomiphene citrate where she was advised for follow up but she did not. Also, there was no history of any ultrasound during this pregnancy.

On examination, she was pale, her pulse rate was 120/min and blood pressure was 100/60 mm-Hg. She had abdominal distension with tenderness in lower abdomen. Pelvic examination showed uterus of 10 week size with forniceal tenderness and minimal spotting was present. Her haemoglobin was 7 gm/dl. Other routine laboratory investigations were within normal limits. Ultrasonography examination was suggestive of live intrauterine pregnancy of 10 week size with free fluid present in peritoneal cavity and ruptured left tubal ectopic pregnancy (Figures 1-3).

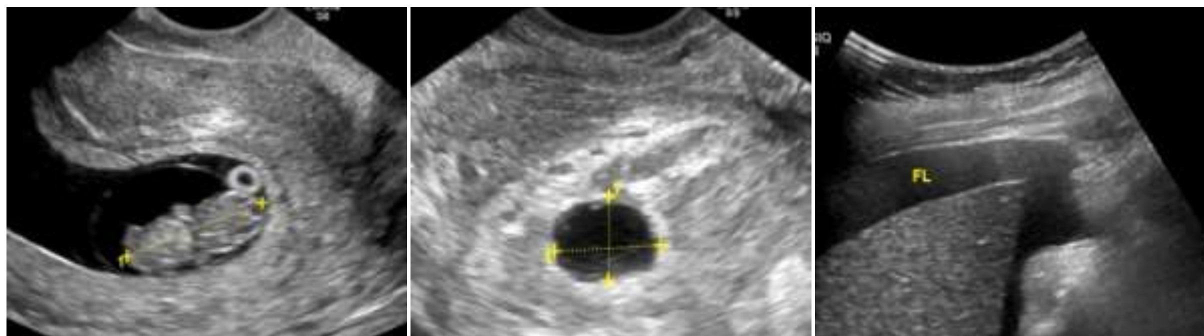

Figure 1-3: Ultrasound abdomen showing Fig 1 - an intrauterine pregnancy of 10 weeks. Fig 2 - intra tubal pregnancy (Left Adnexa) Fig 3 - free fluid in Morrison's pouch

After initial management and one blood transfusion, she was taken for laparotomy. Intraoperative findings include hemoperitoneum (approximately 1 liter) and left sided ruptured ectopic in ampullary region of the tube along with 10 week size uterus. Right fallopian tube and both the ovaries were normal. Left salpingectomy was done and tissue was sent for histopathological examination, which confirmed the ruptured tubal ectopic pregnancy. Minimal handling of uterus was done.

Postoperative ultrasonography confirmed the viability of intrauterine pregnancy. Post operative period was uneventful and she was discharged on 5th post operative day. Patient followed up in Out Patient Department for rest of the duration of pregnancy. She underwent frequent antenatal checkup and fetal growth assessment. She did not develop any complications throughout her antenatal period. She delivered a male child at 37 weeks of gestation by Cesarean section for contracted pelvis, with baby weight 2.8 kg. Postpartum period was uneventful.

DISCUSSION

Heterotopic pregnancy is a rare condition; however, use of ART and ovulation induction drugs like clomiphene citrate and gonadotropins increases the risk of heterotopic pregnancy. It is due to the combined effect of hyperstimulation and simultaneous transfer of more than one embryo into the uterus and retrograde flow in to the fallopian tube [3, 7-9]. In our patient also, pregnancy occurred following use of clomiphene citrate for ovulation induction.

Heterotopic pregnancy is difficult to diagnose clinically. It is reported that approximately 70% of heterotopic pregnancies are diagnosed between 5 and 8 weeks of gestation, 20% between 9 and 10 week, and 10 % are diagnosed after 11 week. Approximately, 50% of the heterotopic pregnancies are asymptomatic and most of them are diagnosed after the rupture of tube when they present with acute abdomen [10-12].

Significant morbidity and occasional mortality have been reported as a result of delayed diagnosis [3]. Estimation of human chorionic gonadotrophin is not reliable, as there is simultaneous intrauterine pregnancy. Often abdominal and pelvic ultrasound also fails to demonstrate ectopic pregnancy or is misinterpreted because of a presence of an intrauterine pregnancy [3, 9]. As no single investigation can predict the heterotopic pregnancy, it should be suspected when patient comes with early intrauterine gestation with lower abdominal pain, particularly following fertility treatment [11]. Presence of an intrauterine pregnancy is no longer a reliable indicator for excluding an ectopic pregnancy [3,5].

Heterotopic pregnancy can be managed by surgical or non surgical approach. In patients who are clinically stable or who have early gestation, local instilation of KCL or hyperosmolar glucose in to tubal ectopic can be tried [9]. Systemic methotrexate is contraindicated because of live intrauterine pregnancy. Surgical management includes laparoscopic salpingostomy or salpingectomy in unruptured ectopic during early gestation. However, in patients with ruptured ectopic pregnancy or who are hemodyanamically unstable, emergency laparotomy is the only option. In our case we did immediate laparotomy followed by left sided salpingectomy after the diagnosis of ruptured ectopic made as patient was hemodynamically unstable. The prognosis of intrauterine pregnancy after treatment of ectopic pregnancy is good.

CONCLUSION

Heterotopic pregnancy should always be considered in patients who present with lower abdominal pain in early gestation with documented intrauterine pregnancy specifically those who have conceived after fertility treatment. Detailed ultrasound examination should be done in early gestation week, even though intrauterine gestational pregnancy is confirmed.

REFERENCES

1. Dumesic DA, Damario MA, Session DR. Interstitial heterotopic pregnancy in a women conceiving by invitro fertilization after bilateral salpingectomy. Mayo Clin Proc 2001;76:90-2.
2. Maaita ME, Murad N, Dabbas M. Advanced heterotopic pregnancy. J Obstet Gynaecol 1999;19:677-8.
3. Mistry BM, Balasubramaniam S, Silverman R, Sakabu SA, Troop BR. Heterotopic pregnancy presenting as an acute abdomen. A diagnostic masquerader. Am Surg 2000;66:307-8.
4. Dessole S, Ruiu GA, Cherchi PL. Co-existence of a heterotopic pregnancy associated with a homolateral ovarian cyst in a patient subjected to elective abortion. Gynecol Obstet Invest 2000;49:277-8.
5. Hill J. Assisted reproduction and the multiple pregnancy. Increasing the risks for heterotopic pregnancy. J Diagn Med Sonogram 2003;19:258-60.
6. Bello GV, Schonholz D, Moshirpur J, Jeng DY, Berkowitz RL. Combined pregnancy: The Mount Sinai experience. Obstet Gynecol Surv 1986;41:603-13.
7. Perkins JD, Mitchell MR. Heterotopic pregnancy in a large inner city hospital. A report of 2 cases. J Natl Med Assoc 2004;96:363-6.
8. Mishra A, Youssefzadeh D, Parente JT. Heterotopic pregnancy. Female Patient 1998;23:39- 42.
9. Scheiber MD, Cedars MI. Successful non-surgical management of a heterotopic pregnancy of an abdominal pregnancy following embryo transfer with cryo preserved-thawed embryos. Hum Reprod 1999;14:1375-7.
10. Cholkeri-Singh A. LaBarge A. Spontaneous heterotopic triplets: a case report. Fertil Steril 2007;88:968.e5-7.
11. Bugatto F, Quintero-Prado R, Kirk-Grohar J, Melero-Jim´enez V, Herv´ıas-Vivancos B, Bartha JL. Heterotopic triplets: tubal ectopic and twin intrauterine pregnancy. A review of obstetric outcomes with a case report. Arch Gynecol Obstet 2010;282:601–6.
12. Sun SY, Araujo Junior E, Elito Junior J, Rolo LC, Campanharo FF, Sarmento SG, et al. Diagnosis of heterotopic pregnancy using ultrasound and magnetic resonance imaging in the first trimester of pregnancy: a case report. Case Rep Radiol 2012;2012:317592.
13. Archibong EI, Etuk SJ. Case report: heterotopic pregnancy following induction of ovulation. Trop J Obstet Gynecol 2002;19:115-6.

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