Bangladesh J Obstet Gynaecol, 2023; Vol. 38(1): 46-48

Case Report

Heterotopic Pregnancy in Natural Cycle: Time to Rethink

PRIYANKA PODDER[1], JOYSREE SAHA[2], JESMIN ARA[3,]

Abstract:

Heterotopic pregnancy(HP) is defined as the simultaneous presence of intrauterine and ectopic pregnancies. It is an uncommon but interesting condition with a high mortality rate despite its low incidence. It can be difficult to diagnose due to its diverse clinical manifestations.

Due to increase use of artificial reproductive techniques its incidence is raised but rarely occurring in natural conception cycles.

The aim of the study is to present the situation of coexistence of intrauterine pregnancy and

tubal pregnancy which were occurred in natural conception.

In this case study we discussed two cases-

1st case is 2nd gravida 8 weeks pregnancy with heterotopic pregnancy (one is anembryonic pregnancy with left sided ruptured ectopic pregnancy)

2nd one is 3rd gravida with 7 weeks pregnancy with heterotopic pregnancy with previous history of 2 LUCS (one is incomplete abortion and another one is live tubal pregnancy)

In both cases there was diagnostic dilemma. Both cases firstly presented as vaginal spotting with pain

ultimately transvaginal ultrasound showed heterotopic pregnancy.

Key Words: *Heterotopic pregnancy, ectopic pregnancy, intrauterine pregnancy, transvaginal ultrasound*

Introduction:

The coexistence of living or dead intrauterine pregnancy, single or multiple, and extrauterine pregnancy located in the oviduct, ovary, uterine cornu, cervix or peritoneal cavity is called heterotopic pregnancy(HP). It is a potentially dangerous condition occurring in only 1 in 30,000 spontaneous pregnancies while with the development of assisted reproductive techniques, the incidence has increased to 1:100 to 1:500 pregnancies. Heterotopic pregnancy is a fatal condition, rarely occurring in natural conception cycles. Usually , this pregnancy is mainly diagnosed during acute cases when surgical intervention is needed. HT pregnancy could be asymptomatic in 24% of cases, can cause abdominal pain in 72%, and 54% present with vaginal bleeding[1]. In HT pregnancy, the chances of abortion are doubled.[1]

Spontaneous HP is a real challenge for healthcare professionals not only in treatment but also in diagnosis due to their rarity and unexpected occurrence. HP pose an even more diagnostic uncertainty; as seeing an intrauterine gestational sac may give false reassurance of an ongoing intrauterine pregnancy, and thus erroneously excluding the presence of an ectopic pregnancy. So When abdominal pain present in early pregnancy , heterotopic pregnancy should be suspected even if they do not have risk factors.

In this study we discussed here two cases. The cases firstly presented as per vaginal bleeding with pain ultimately ultrasonogram study showed heterotopic

1. Resident Surgeon (RS), Dept. of Gynae &Obs, Popular Medical College Hospital
2. Associate Professor, Dept. of Gynae &Obs, Popular Medical College Hospital
3. Assistant Professor, Dept. of Gynae &Obs, Popular Medical College Hospital

Address of Correspondence: Dr. Priyanka Podder, Resident Surgeon (RS), Dept. of Gynae & Obs, Popular Medical College Hospital. Email: dr.priyanka.podder@gmail.com, Contact: 01684946498

pregnancy. Most interestingly both cases occurred in natural cycle , no history of ovulation induction.

Case Study 1:

A 26-year-old gravida 2 para 0+1 woman presented to the emergency department with an increased lower abdominal pain, brownish vaginal discharge. She has a body mass index of 24 kg/m2 and previous history of one spontaneous abortion at 10 weeks. The current pregnancy was a spontaneous conception, without assistance of ovulation induction. She had no history of pelvic inflammatory disease and was a non-smoker.

She was not using any contraception. On presenting to our emergency, she was vitally stable and apart from some tenderness in both adnexa, the abdominal and vaginal clinical examination was unremarkable. Laboratory investigations revealed a serum â-hCG of 109,863 mIU/ml. Transvaginal ultrasound with color dopplers revealed a anembryonic pregnancy of 8 weeks and 5 days and a heterogeneous complex left adnexal mass with haemorrhagic collection in cul de sac..

After counseling and taking informed consent, the patient was taken to the operating theatre. Under anesthesia, a laparotomy was performed which revealed left fallopian tube was ruptured. The other (right) tube and both ovaries were unremarkable. Left sided salpingectomy was performed and this was sent for histopathological assessment. D&C was also done. The postoperative course was uneventful and the patient was discharged home.

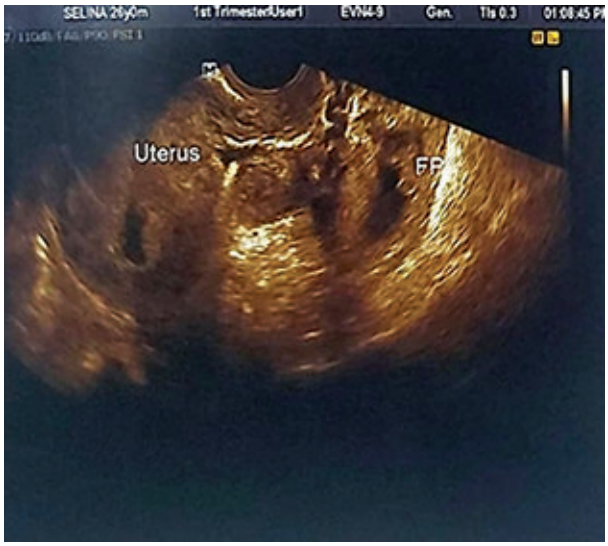

Fig.-1: *Anembryonic pregnancy with tubal pregnancy*

Case Study 2:

A 28-year-old gravida 3, para 2 woman presented to the emergency department with per vaginal bleeding and increased left sided iliac fossa tenderness.She has a body mass index of 19 kg/m2 and previous history of two caesarean section. 1st caesarean section is done due to fetal distress and 2nd one is elective one. The current pregnancy was also a spontaneous conception. She was non smoker and had no history of pelvic inflammatory disease.

She was not using any contraception. On presenting to our emergency, she was vitally stable and the abdominal and vaginal clinical examination was unremarkable. She came to us with a report of incomplete abortion. She has also history of taking abortifacient drug. Laboratory investigations revealed a serum â-hCG of 27833mIU/ml. Transvaginal ultrasound with color Doppler revealed a incomplete abortion and a live extrauterine pregnancy suggestive of heterotopic pregnancy. The ovaries were unremarkable, and a small pelvic fluid collection was also seen. Doppler ultrasound of the described mass revealed a 'ring of fire' sign.

After counseling and informed consent, under anesthesia, laparotomy was performed which revealed a distended left fallopian tube and process of rupture had started . The other (right) tube and both ovaries were unremarkable. Left sided salpingectomy was performed, and this was sent for histopathological assessment. D&C was also done for incomplete abortion. The postoperative course was uneventful, and the patient was discharged home.

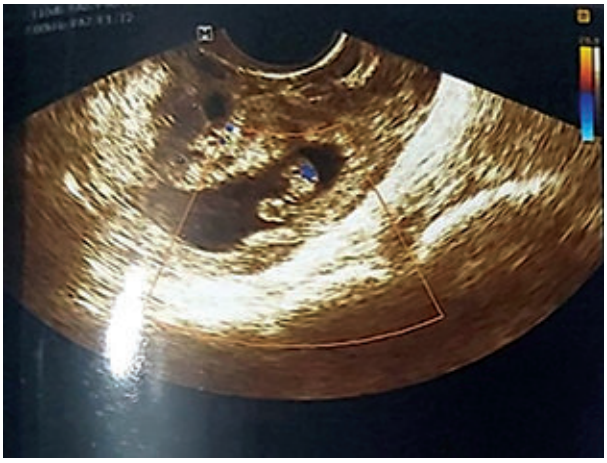

Fig.-2: *Live tubal pregnancy*

Discussion:

Heterotopic pregnancy rarely occurred in natural conception cycle. In our two cases occur spontaneously without any predisposing factor similar to Sadia et al. [2]

Tal et al., showed 70% heterotopic pregnancies are detected between 5 and 8 weeks of pregnancy. [3] In our both cases, HP occur in 7-8 weeks.

Heterotopic pregnancies can pose a difficult diagnostic challenge and present with serious clinical presentations as tubal rupture, acute abdomen, shock and hemoperitoneum. Others may be asymptomatic and seeing an intrauterine pregnancy in ultrasonogram can add to the confusion.

The level of serum â-hCG in HP represents the combined contribution of both the intrauterine (mainly) and extrauterine pregnancy and are unlikely to be of clinical use for the diagnosis of a HP. Furthermore, visualizing both intrauterine and extrauterine fetal heart activity – although can be diagnostic – is unfortunately rare. Whenever confusion arises , it is wise to approach for transvaginal sonography (TVS) that has a specificity of 73.7% and positive predictive value of 89.8%.[4,5]

Systemic methotrexate is contraindicated with a viable intrauterine pregnancy[6] . Local injection of potassium chloride and hyperosmolar glucose suggested to avoid the use of systemic agents[7]. Although local injections of these agents avoid surgery.

Practical approaches in HP with one of the tubal pregnancies are performing a laparoscopy (preferred option) or laparotomy (depending on the clinical condition) and undertaking a salpingectomy (usually if the other tube is normal) or salpingotomy[8]. Another advantage of the surgical approach is that laparoscopy (or laparotomy) can confirm the diagnosis in addition to providing a definitive treatment.

Conclusions:

Timely diagnosed heterotopic pregnancy will decrease both maternal mortality and morbidity. Any intrauterine pregnancy presented with severe abdominal pain ,HP should be considered as differential diagnosis and careful ultrasonographic assessment is needed.

Declaration:

This manuscript is original work and has not been submitted for publication elsewhere.

Reference:

1. Rojansky N, Schenker JG: Heterotopic pregnancy and assisted reproduction - an update. J Assist Reprod Genet. 1996, 13:594-601. 10.1007/bf02066615
2. Tamanna S, Begum J, Johora F, Jahan H: Heterotopic Pregnancy: A Case Report. Journal of Brahmanbaria Medical College 2020 ; 2(2) 38-40
3. Tal J, Haddad S, Gordon N, Timor-Tritsch I. Heterotopic pregnancy after ovulation induction and assisted reproductive technologies: a literature review from 1971 to 1993. Fertil Steril 1996;66:1–12.
4. Chowdhury, S, and T Chowdhury. 2012. “Heterotopic Pregnancy: A Clinical Case Report”. Bangladesh Medical Journal 39 (3).
5. Raine-Fenning N, Fleischer AC. Clarifying the roles of three dimensional transvaginal sonography in reproductive medicine: an evidence based appraisal. Journal of Experimental Clinical Assisted Reproduction, 2005; 2: 10
6. Georgiou EX, Domoney C, Savage P, Stafford M: Heterotopic abdominal pregnancy with persistent trophoblastic tissue. Acta ObstetGynecol Scand. 2011, 90:551-53. 10.1111/j.1600-0412.2011.01093.
7. Luo X, Lim CE, Huang C, Wu J, Wong WS, Cheng NC: Heterotopic pregnancy following in vitro fertilization and embryo transfer: 12 cases report. Arch Gynecol Obstet. 2009, 280:325-29. 10.1007/s00404-008-0910-2.
8. Melendez J, Paraskevopolou SM, Foo X, Yoong W: Heterotopic pregnancy: tubal ectopic pregnancy with a viable IVF intrauterine pregnancy. J ObstetGynaecol. 2010, 30:742-43. 10.3109/01443615.2010.501414.