Heterotopic Pregnancy: Case Report and Short Literature Review

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Summary

To report a heterotopic pregnancy with successful delivery of the intrauterine pregnancy at term following salpingectomy for rupture of the tubal pregnancy in the first trimester. Case report and review of literature. Result: Patient underwent exploratory laparotomy and salpingectomy on 21st January 2005 and delivered of a live male fetus by cesarean section on 16th July 2005. Heterotopic pregnancy presents a diagnostic and therapeutic challenge. The cause of misdiagnosis is usually the presence of a mischievously reassuring intrauterine pregnancy on scanning. The possibility of this life-threatening condition should be considered in a patient presenting in early pregnancy with severe lower abdominal pains, intrauterine pregnancy and a tender adnexal cyst.

Key words: *Heterotopic pregnancy, adnexal mass, clomiphene citrate.*

Case Report

A 32year old G3 $P2^{+0}$ presented at the clinic on 14th of December 2004 with severe lower abdominal pains (LAP) and slight vaginal bleeding which started about 8 hours earlier. Her last menstrual period was 3rd of November 2004. Last delivery was May 2001 after which she commenced injectable contraceptive (Depo-Provera) until December 2003.

Her menstruations were scanty and irregular while on contraception but became regular from August 2004. She visited her physician on seeing her menstrual period on 3rd of November 2004 to complain of her inability to conceive despite discontinuation of contraception 10 months earlier. She was placed on clomiphene citrate.

On presentation to our clinic, she was not pale, the blood pressure, pulse and respiratory rates were within normal range. Abdomen was soft, with vague tenderness on deep palpation of lower abdomen.

External genitalia was normal, stained with brownish blood. Uterus was bulky and tender. Cervix was closed and the adnexa were tender. There was bright red blood on gloved fingers. Pelvic scan on admission revealed a bulky uterus with a single gestational sac and a fetal node, gestational sac diameter was 19 mm, equivalent to 6W + 2D. A corpus luteum cyst measuring 29mm x 31mm was also seen in the left adnexa.

She was admitted with diagnosis of threatened abortion of an early intrauterine pregnancy and was placed on bed rest and analgesics. She was discharged on 17th of December 2004.

The patient was re-admitted with similar symptoms on 29th of December 2004. Vaginal bleeding was minimal but pain and tenderness were more severe. Other findings were essentially same as for previous admission. Repeat scan showed intrauterine sac with a single fetus of 8W 5D gestation and regular cardiac pulsation. A coexisting left (L) adnexal cyst measuring 40mm x 42mm was also described. She was discharged on 5th of January 2005 after the pains and bleeding from vagina has subsided.

On the 21st of January 2005, the patient was rushed to the clinic with severe LAP radiating to the anus, dizziness and inability to stand without support. She was pale on admission, pulse rate was 110/min, BP 100/60 mm Hg. Abdomen was soft and tender in the left iliac fossa. Vaginal examination revealed a bulky uterus with closed cervix. Cervical excitation was tender and the left adnexae was full and tender. An emergency scan revealed an intrauterine gestational sac with an active fetus (CRL 38mm GA 10W 5D) and an area of mixed echogenicity on the left adnexal region with free fluid in the pouch of Douglas (POD). A paracentesis done in the left iliac fossa revealed hemoperitoneum. Laparotomy was performed same day and a ruptured left ampullary pregnancy was found with about 600 ml of blood in the peritoneal cavity. The right fallopian tube and the ovaries were normal. Blood and clots were gently suctioned from the peritoneal cavity and the POD and a left salpingectomy was performed. Post operative recovery was uneventful and she was discharged on the 7th post operative day.

She registered for antenatal care there after and was delivered at 39 weeks of a 3.5kg live male child by elective cesarean section on 16th of July 2005. Indication for cesarean section was term breech.

Discussion

Heterotopic pregnancy (combined intrauterine and extrauterine pregnancy) can no longer be considered as rare as it is increasingly being diagnosed and reported(1-2). The risk of heterotopic pregnancy was about 1 in 30000 spontaneous pregnancies in 1948(3) but as high as 2600 pregnancies in 1982(4). The incidence has been on the rise

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with increasing incidence of ectopic pregnancies. Increase in ectopic pregnancies can be attributed to the rising incidence of pelvic inflammatory disease (PID), use of drugs to induce ovulation(1,5), and the advent of assisted reproductive technologies (ART)(6).

Heterotopic pregnancy still present a diagnostic challenge, the usual cause of misdiagnosis as in our case being the presence of a viable intrauterine pregnancy on abdominal ultrasonography(7). Any history of pain or the demonstration of an adnexal cyst on ultrasound is usually interpreted as a corpus luteum cyst(7).

Abdominal ultrasound failed to assist in this case as the patient had repeated scans without suspicion. This is not uncommon as detection rates by transabdominal ultrasound is less than 14%(6). Even with evidence of hemodynamic instability on presentation, we needed to do a paracentesis to reconfirm our suspicion.

If available, transvaginal ultrasound which gives a detection rate of over 90%(8) is superior to transabdominal ultrasonography and could have helped us arrive at an earlier diagnosis thereby preventing the patient from prolonged suffering. In our patient, the identifiable risk factor which has been documented in many studies[1,5] was the use of clomiphene citrate to induce ovulation in November 2004. The higher ectopic pregnancy rate after clomiphene use could be explained by its anti-estrogenic effects on tubal oestrogen receptors with an alteration of the local estradiol/progesterone ratio, disturbing tubal peristalsis which predisposes to ectopic implantation(9). Use of clomiphene is widespread in Nigeria and is often prescribed to infertile couples for empirical ovulation induction without investigations(10), and even self prescribed by patients on advice of friends and can easily be bought without prescriptions at pharmacy stores. This patient also possibly has an additional risk factor being of Yoruba race. It has been postulated that the high twinning rate among the Yoruba race of Nigeria may be a possible etiological factor for heterotopic pregnancy (1).

In conclusion, this case illustrates the need to suspect the coexistence of an ectopic pregnancy in any woman carrying an intrauterine pregnancy and an adnexal cyst. This is particularly important in patients with increased risk factors. With indiscriminate use of ovulation induction drugs, most infertile couples in Nigeria carry such risk. A high index of suspicion, meticulous examination and vigilance would help reduce delay in diagnosis, morbidity and mortality associated with this condition.

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