CASE REPORT

Heterotopic Pregnancy - A Diagnostic Dilemma

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Introduction

Heterotopic pregnancy refers to the co-existence of an Intrauterine pregnancy and an ectopic pregnancy[1].Heterotopic or combined pregnancy was previously thought to be an extremely rare condition. However recent reports in literature strongly suggests that it occurs more often than previously believed especially with the advent and increasing use of Assisted Reproduction Techniques[2,3,4]. Ectopic pregnancy is associated with significant mortality if not properly diagnosed. Thus it often presents a real diagnostic dilemma. This paper reports two separate cases of heterotopic pregnancy seen and managed in Holy family Red Crescent Medical College Hospital (HFRCMCH). One was a case of incomplete MR (Menstruation regulation) diagnosed later as a combined pregnancy. The second case was a threatened abortion which was treated conservatively in home and admitted later with ruptured ectopic pregnancy. In both instances, there was delay in diagnosis of the ectopic component of the pregnancies. Both the cases illustrate the importance of keeping ectopic pregnancy in the differential diagnosis.

Heterotopic pregnancy is an important cause of maternal mortality and morbidity. This paper reports two cases presented in Holy Family Red Crescent Medical College Hospital (HFRCMCH) with amenorrhoea and lower abdominal pain. In the first case menstrual regulation (MR) was done by a health visitor four days back and there was no vaginal bleeding or discharge. In the second case patient attended in outpatient department with irregular vaginal bleeding and treatment was given for threatened abortion. In both cases, early ultrasonography failed to diagnose the heterotopic pregnancy. However both the cases were managed promptly by surgery. These cases suggest that clinician should consider associated ectopic pregnancy while evaluating a patient presenting with pelvic pain in the face of a documented intrauterine pregnancy.

Case I

A 22 year old multiparous housewife presented to HFRCMCH in February, 2004 with an uncertain last menstrual period of 6 weeks with severe lower abdominal pain since that morning. Her previous two babies were delivered at home. She gave a history of an MR done four days back by a health visitor. There was no vaginal bleeding or discharge. On examination, she was severely anaemic, normotensive with pulse rate 92 beats/minute .Per abdominal examination revealed slight distension with tenderness in the suprapubic region with rebound and guarding. Bimanual examination revealed a bulky uterus with cervical motion tenderness, a closed cervix without bleeding. An intravenous channel was opened and I.V. fluid started. The hemoglobin level was 6.2gm/dl. Her blood group was AB+Ve Pelvic ultrasound revealed an 8 weeks non- viable fetus within the uterus and a viable fetus in right adenexa with huge amount of blood in pelvic cavity.Two pints of blood were transfused and laparotomy done. There was huge amount of blood in the whole peritoneal cavity, filling the pouch of douglas and extending up to the hepato-renal pouch. Right sided salpingectomy was done with the pregnancy sac in situ. Evacuation of the product of conception was done simultaneously. Her post operative period was uneventful and she was discharged on the seventh post operative day.

Case II

A 21 year old primigravida housewife from middle class family presented with history of amenorrhoea for eight weeks, lower

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abdominal pain and irregular vaginal bleeding for twelve days. Urine for pregnancy test was positive. Pelvic sonography revealed bulky uterus with no gestational sac. She was advised admission for observation but she refused and went home. After two weeks the patient presented with severe lower abdominal pain and gradually increasing bleeding per-vagina. On examination, she was found to be dehydrated, severely anaemic, pulse rate was feeble and 120 beats / minute, her blood pressure was 90/50 mmHg. Per abdominal examination revealed a rigid tender distended abdomen. Pervaginal examination revealed the uterus was bulky, pain on rocking of cervix ; fornices full and tender and the os was closed with blood stained discharge.

Urgent sonography was performed which showed ruptured ectopic pregnancy along with an intrauterine incomplete abortion. One bag of blood was transfused and emergency laparotomy done. The whole peritoneal cavity was filled with blood. There was rupture of the left tube in the ampullary region. Left sided salpingectomy was done. Evacuation of the product of conception was done. She made a good post operative recovery and was discharged on the sixth post operative day

Discussion

Heterotopic pregnancy, the presence of a combined intrauterine pregnancy and ectopic pregnancy, though rare, is increasing in incidence. The risk was estimated to be 1 in 30,000 spontaneous pregnancy[5]. More recently, the reported incidence has ranged from 1 in 2600 to 1 in 8,000 for the general population[6-9]. Molloy et al[10] reported the incidence to be 1 in 130 patients having in vitro fertilization and 1in 70 patients receiving gamete intrafallopean transfer. Overall, it has increased over the last several decades due primarily to the increased incidence of sexually transmitted pelvic infection, as well as the advent of antibiotic therapy resulting in partial tubal patency as opposed to total

occlusion[2,4,11]. Other risk factors contributing to its etiology are congenital narrowed luman, prior pelvic surgery, use of progestine only contraceptives and a history of prior ectopic pregnancy[12]. Whether there is a relation between ectopic pregnancy and previous induced abortion has been a topic of much debate. Parazzine et al[13] attempted to show that the risk of ectopic pregnancy increases after induced abortion. Levin et al[14] showed only a possible link between multiple previously induced abortions and subsequent ectopic pregnancy. Two more recent studies found no associated between induced abortion and ectopic pregnancy[15,16].

Ruptured ectopic pregnancy is a rare complication of recent induced abortion. Sudden maternal death has occurred from rupture of an unrecognized ectopic pregnancy in a woman who had elective abortion but in whom the intrauterine pregnancy was not confirmed by histologic examination[17,18]. This can occur in patients with a heterotopic pregnancy or simply in patients misdiagnosed with an intrauterine pregnancy. In Case I, MR was done without ultrasonographic confirmation of pregnancy. Thus it has been recommended that an intrauterine pregnancy should be confirmed in some way before or after an induced abortion[19]. Although the extremely rare simultaneous visualization of fetal & cardiac motion in both the intrauterine and extra uterine fetuses is the only basis for preoperative diagnosis of heterotopic pregnancy[7]. The adnexa should be scanned and the patient assessed clinically in every case, especially those with risk factors for ectopic pregnancy[9]. Even ultrasonography may fail to diagnose the heterotopic pregnancy as in case II. Two common pitfalls exist in making a diagnosis of ectopic pregnancy. First, the intrauterine fluid sometimes found in ectopic pregnancies can be misinterpreted as a true gestational sac[20]. The gestational sac which is the earliest finding specific to an intrauterine pregnancy exhibits a double echogenic ring[21]. Second, a pseudo gestational sac can be seen in the uterus in ectopic pregnancies as a result of deciduation of the endometrium in response to the hormones produced by the ectopic gestation[20]. This can seen in 10 - 20% of ectopic pregnancies. In both cases, heterotopic pregnancies were diagnosed before operative interference. It is suggested that heterotopic pregnancy be considered in a patient with a documented intrauterine pregnancy who presents with acute pelvic pain and peritoneal irritation[12]. Patients who have undergone pregnancy termination and demonstrate an enlarged uterus and persistent amenorrhoea or a rising quantitative beta hCG level, also warrant close evaluation[12]. In both the cases in the present series after laparotomy operation, curettage

was done and the specimen were sent for histopathology which were evaluated by a pathologist and intrauterine pregnancies were confirmed.

Conclusion

Early diagnosis of cases of ectopic pregnancy is the cornerstone in reducing the morbidity and mortality from ectopic pregnancy. The diagnosis of heterotopic pregnancy being the rarer condition should be kept in mind while dealing with cases of ectopic pregnancy. An index of suspicion should be raised in patients presenting with abdominal pelvic pain in the face of a confirmed intra uterine pregnancy, particularly in those having undergone ovulation induction or having participated in IVF program[20,21]. Moreover sending the aborted specimen for pathological examination is most important in terms of verifying that there was in fact an intra uterine pregnancy[17].

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