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Case Report

Case Report of Successful Term Pregnancy Following Open Laparotomy for Spontaneous Heterotopic Pregnancy

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Abstract

Heterotopic pregnancy is the simultaneous presence of intrauterine and ectopic pregnancy. Its clinical presentation are usually non-specific and this can result in wrong diagnosis. The presence of an intrauterine sac on ultrasound scan **usually** gives a false reassurance making diagnosis to be challenging. Management of this condition may be challenging due to the presence of an unwanted ectopic pregnancy and a desired intrauterine pregnancy. We report a rare case of successful term pregnancy following open laparotomy for spontaneous heterotopic pregnancy associated with massive haemoperitoneum. **She was a 32 year old gravida 1 para 0 lady who presented with features of ruptured ectopic pregnancy. An abdominopelvic ultrasound done showed massive haemoperitoneum with 2 gestational sacs; one within the uterus and the other in the right adnexa. She then had an emergency laparotomy with salpingectomy. Pregnancy was carried to term. Mother and baby were in good and stable condition. They were discharged home there after. In conclusion, heterotopic pregnancy is very rare following spontaneous natural cycle conception. Diagnosis can be quite challenging but prognosis appears good.**

Keywords: Heterotopic pregnancy, ectopic pregnancy, laparotomy, salpingectomy.

Introduction

Heterotopic pregnancy is the simultaneous presence of intrauterine and ectopic pregnancy. It is a rare form of twin pregnancy with a reported incidence of 1/30000 in a natural conception cycle.[1,2] The incidence is higher following use of assisted reproductive technology. Other risk factors are related to that for ectopic pregnancy.[3] **Its** clinical presentation are usually non-specific and this can result in wrong diagnosis. The presence of an intrauterine sac on ultrasound scan gives a false reassurance making diagnosis to be challenging.[1] Similar to ectopic pregnancy, abdominal pain, vaginal bleeding and a positive pregnancy test should raise suspicion for heterotopic pregnancy though this is more complicated.[4,5] Management of this condition may also be challenging due to the presence of an unwanted ectopic pregnancy and a desired intrauterine pregnancy. The aim of treatment is usually to remove the ectopic pregnancy and preserve the intrauterine one. **We report a case of spontaneous heterotopic pregnancy with successful term pregnancy following earlier open laparotomy and salpingectomy for the ruptured ectopic gestation with massive haemoperitoneum.**

Case Presentation

A 32-year-old gravida 1 para 0 woman presented with lower abdominal pain after 7 weeks of absent menses. There was no associated nausea, vomiting or vaginal bleeding. Index pregnancy was a spontaneous conception. There were no identifiable risk factors for ectopic pregnancy and other history did not contribute to her current state. She had tachycardia (120 beats per minute). There was generalized abdominal tenderness, guarding and rebound tenderness. Abdominopelvic ultrasound scan showed a gestational sac both within the

uterus and right adnexa (Figure 1). Urgent packed cell volume (PCV) was 18%.

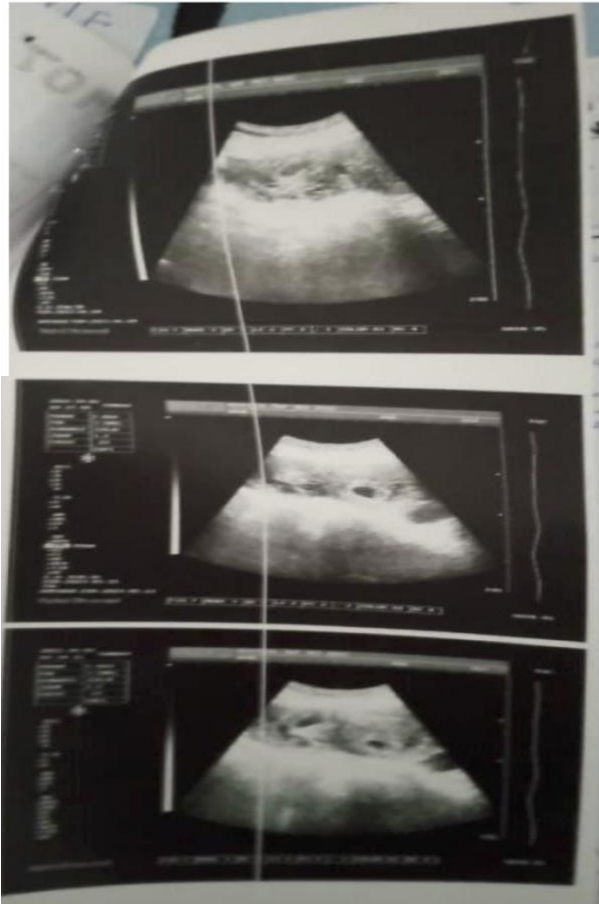

Figure 1: ultrasound scan suggestive of heterotopic pregnancy.

She was counseled on the findings and consent was obtained for an emergency laparotomy after resuscitation. At surgery there was a ruptured right tubal ectopic pregnancy with total blood loss of 1.6L. She had a right salpingectomy and 3 units of blood transfused. Postoperative period was unremarkable though she had anaemia (PCV 26%) which was corrected with 2 units of blood (PCV 31%). Tocolysis was achieved with intravenous salbutamol infusion in the immediate postoperative period and thereafter nifedipine. Repeat ultrasound scan showed a viable intrauterine pregnancy. She attended her routine antenatal clinic visits and had emergency caesarean section at term for severe pre-eclampsia with unfavourable cervix. Mother and baby were subsequently discharged in good condition.

Discussion

Heterotopic pregnancy is rare. Risk factors are similar to that of ectopic pregnancy. Pelvic inflammatory disease, use of assisted conception and previous pelvic surgery are risk factors for ectopic/heterotopic pregnancy. There may be no identifiable risk factor as seen in the index case.

Heterotopic pregnancy remains a diagnostic challenge.[6] It usually presents with features of ectopic pregnancy. Pain and vaginal bleeding are the most common findings in heterotopic pregnancy, but these are non-specific symptoms. It may present as an acute abdomen.[6] Heterotopic pregnancy may even be mistaken for threatened miscarriage when it is associated with vaginal bleeding. Index patient presented with features of ruptured ectopic pregnancy. There are therefore no clear clinical features to distinguish ectopic pregnancy from heterotopic pregnancy.

Imaging is the only reliable method to distinguish for diagnosis of heterotopic pregnancy.[7,8] Transvaginal ultrasound scan is useful for the diagnosis of both intrauterine and extrauterine pregnancy. Bed side ultrasound scan in the index case revealed both tubal and intrauterine pregnancy. The diagnosis may not be easy to make even on ultrasound scan. Ectopic pregnancy coexisting with intrauterine pregnancy may even be misdiagnosed as corpus luteum cyst of pregnancy. The presence of an intrauterine pregnancy on ultrasound scan may give a false reassurance even when heterotopic pregnancy is present. Due to these challenges magnetic resonance imaging may be helpful in diagnosis. This **is** however not readily available in low- and middle-income countries and even when **it is,** cost is prohibitive. Early diagnosis may be particularly difficult in asymptomatic patients.

Treatment for heterotopic pregnancy usually involves removing the ectopic and allowing the intrauterine pregnancy to continue. It may be surgical, medical or expectant.[9] Expectant management should be considered only in asymptomatic and haemodynamically stable cases with non-viable ectopic pregnancy. There is no consensus on the preferred treatment option since the condition is rare with a few reported cases. Surgery appears to be the preferred option which could be laparoscopy or laparotomy. Though there are different surgical options for the management of ectopic pregnancy, salpingectomy was the most appropriate option in the index case as the fallopian tube was already ruptured. Following surgery, there is no significantly increased loss for the intrauterine pregnancy hence can be carried to term. Potassium chloride and hyperosmolar glucose can be used as embryo-toxic drugs in the management of heterotopic

pregnancy.[10] Methotrexate should be avoided due to its teratogenic effect. Following tubal rupture and haemoperitoneum, surgery was adjudged to be the best option in the index case.

Conclusion

Heterotopic pregnancy is very rare following spontaneous natural cycle conception. Diagnosis is challenging and requires ultrasound scan. Routine transvaginal ultrasound scan is recommended in the diagnosis of intrauterine and extrauterine pregnancy. Misdiagnosis may lead to fatal consequences including maternal death. Following treatment of the extrauterine pregnancy, the intrauterine pregnancy should be allowed to continue till term.

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