Heterotopic pregnancy

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Abstract

This case report helps to illustrate that whilst we are classically taught that heterotopic pregnancies are very rare they are in fact becoming more common in the presence of assisted reproduction techniques.

Keywords: ectopic pregnancy, intrauterine pregnancy.

Case report

A 36-year-old woman, who had had two previous first trimester miscarriages, fell pregnant following invitro fertilisation treatment in October 2002.
Her last normal menstrual period was recorded as 06/10/2002. The estimated date of delivery was calculated as mid - July 2003. At five weeks gestation by dates a transvaginal ultrasound was performed. This revealed an intra-uterine pregnancy with a CRL = 5mm and a positive foetal heart rate. A 45mm x 45mm cystic mass was present in the right adnexa that was thought to represent a corpus luteal cyst.

Presentation

The patient presented nine days later with abdominal pain and fleeting episodes of loss of consciousness. A full blood count showed the patient to be anaemic with a haemoglobin of 5.8gm%. An emergency ultrasound was performed.

Ultrasound findings

The trans-abdominal ultrasound (Figure 1) revealed a single, intra-uterine pregnancy with a positive foetal heartbeat. The CRL = 14mm and the yolk sac was visible. In the right adnexa there was a 41mm slightly irregular cystic structure. This was thought to be the previously noted corpus luteal cyst.

Figure 1: Ultrasound scan

In addition there was a 61mm x 36mm cystic mass seen in the left adnexa. A large amount of free fluid was seen within the abdomen. In the presence of a viable intra-uterine pregnancy, bilateral cystic masses and the large amount of free fluid a heterotopic pregnancy was suggested.

Management

At operation a ruptured right sided ectopic was identified. A simple cystic structure was identified in the left adnexa. About three litres of blood was present in the abdominal cavity.

The patient was admitted to ICU following the surgery. She recovered well and was discharged to the ward after two days. A follow-up ultrasound was done 48 hours post operation and revealed a viable, intra-uterine pregnancy. The patient had an uneventful post-operative course and continued the pregnancy without incident. The diagnosis was a coexisting intrauterine and right-sided ectopic pregnancy.

Discussion

A heterotopic pregnancy is a multiple pregnancy with one embryo implanting within the uterine cavity and the other simultaneously ectopic [1]. It is an uncommon complication of pregnancy in the absence of risk factors [2]. In many cases if the ectopic is removed the intrauterine pregnancy will continue to term [3].

The overall increase of ectopic pregnancies over the last few decades is thought to correspond to the increase in assisted fertilization procedures, Caesarean deliveries as well as the rise in pelvic inflammatory disease [4]. Heterotopic pregnancies, in the general population, are rare with an incidence of 1:6800 to 1:30000 [5] but this is not necessarily so in the presence of assisted fertilisation procedures.

With assisted fertilisation procedures the multiple birth rate is 10-25% with an ectopic rate of 3%. The heterotopic pregnancy rate in this scenario is in the region of 1 per 100. However, if five or more embryos are transferred the rate can increase to 1 in 45 [6]. Women at particular increased risk of heterotopic pregnancy are those with distorted tubal anatomy and the transfer of four or more embryos [7].

In one study 43% of the patients diagnosed with a heterotopic pregnancy managed to continue with a normal intrauterine pregnancy and delivery once the ectopic had been removed [8]. The main role of ultrasound is to diagnose an intra-uterine pregnancy and rule out an adnexal mass [7]. Only 50% of heterotopic pregnancies are diagnosed by ultrasound and most are diagnosed at emergency laparoscopy or surgery [8]. With assisted fertilisation becoming more common the possibility of encountering heterotopic pregnancies is likely to increase. This should always be considered in the differential diagnosis in a patient who has undergone assisted reproduction techniques and presents with ectopic symptoms [3].

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