CASE REPORT

Spontaneous heterotopic pregnancy presenting with tubal rupture

O.A. Jibodu1 and F.J. Darne

Department of Obstetrics and Gynaecology, Derby City Hospital, Uttoxeter Road, Derby DE22 3NE, UK

1To whom correspondence should be addressed

We present the case of a woman who sought pregnancy termination but who, in the interval between consultation and surgical termination, presented with clinical signs of a ruptured ectopic pregnancy. This was managed as such, but post-operative follow-up soon revealed that she also carried a viable intrauterine pregnancy.

Key words: ectopic/heterotopic/pregnancy/rupture/tubal pregnancy

Introduction

Heterotopic pregnancies are rarely spontaneous. They are more common following assisted conception. It is accepted gynaecological practice to exclude an ectopic pregnancy by ultrasound confirmation of an intrauterine pregnancy. With increasing use of assisted conception techniques, however, doctors must be alert to the fact that confirming an intrauterine or ectopic pregnancy clinically or by ultrasound does not exclude a co-existing ectopic or intrauterine pregnancy respectively. After diagnosis, the ectopic component is usually treated surgically and the intrauterine one is expected to continue normally. Ultrasound scanning and serial serum β-human chorionic gonadotrophin (β-HCG) assays are used to monitor the progress of the ongoing pregnancy.

Case report

A 29 year old woman presented in our outpatients clinic requesting termination of an unplanned 9 week pregnancy. She had had a pregnancy terminated 7 years earlier, endometriosis diagnosed 5 years previously, and had been led to believe she was infertile. She was fit and well and no physical abnormality was found at the consultation.

She was meant to return 2 days later for a surgical termination but returned instead as an emergency admission about 12 h after her initial consultation. She complained of lower abdominal pains and pains over both shoulders. She looked pale, her blood pressure was 110/60 mmHg and her pulse 80/min. Her abdomen was tense, more in the right iliac fossa than the left, with guarding but no rebound tenderness. Her pelvis was very tender on vaginal examination. A clinical impression of ectopic pregnancy was made but a conservative approach was adopted until an ultrasound scan was available next morning. Significantly, her haemoglobin concentration had dropped from 11 g/dl when she first consulted to 9.3 g/dl when she was admitted.

When reviewed the next morning, a clinical diagnosis of ruptured ectopic pregnancy or ovarian cyst was made and it was thought unnecessary to perform a pelvic ultrasound scan at that time. Laparoscopy confirmed a ruptured left tubal ectopic pregnancy. The tube was also adherent to the pelvic side wall, rendering a laparoscopic procedure unsafe. Partial salpingectomy was performed via a laparotomy incision. One litre of blood was found in the peritoneal cavity. She made an uneventful post-operative recovery after a four-unit blood transfusion.

A serum β-HCG assay performed 4 days after her salpingectomy returned as 35 600 IU/l. A repeat assay 1 week later was 21 200 IU/l. A pelvic ultrasound scan confirmed a viable 12 week intrauterine pregnancy. Histology of the salpingectomy specimen confirmed an ectopic pregnancy. She opted to continue with the intrauterine pregnancy.

Discussion

A heterotopic pregnancy is in effect a multiple pregnancy with one or more intrauterine pregnancies co-existing with an ectopic one. The ectopic one is usually tubal but could be ovarian, cervical, cornual or abdominal (Marcus et al., 1995a; Fisch et al., 1995). Spontaneous heterotopic pregnancies are rare, with an incidence of 1 in 30 000 (DeVoe and Pratt, 1948). There is a strong association with assisted conception techniques where the incidence is up to 2% (Marcus et al., 1995a; Marcus and Brinsden, 1995). We have found no previous reports of heterotopic pregnancies from spontaneous conception presenting with signs and symptoms of tubal rupture. Furthermore, this patient originally presented as a pregnancy termination request. Of concern was the fact that she could have had her intrauterine pregnancy terminated with no histological confirmation and gone on to rupture the tubal component later with life-threatening implications. This could have posed medico-legal problems. Our decision to perform a laparotomy for clinically diagnosed peritoneal haemorrhage meant a co-existing intrauterine pregnancy was missed. This is perhaps a lesser medico-legal problem than the scenario of a surgically terminated pregnancy with subsequent rupture of a co-existing ectopic one.

The clinical diagnosis of intraperitoneal haemorrhage implied urgent surgical intervention. A preoperative ultrasound
scan, especially if transvaginal, could have identified a heterotopic pregnancy but would more likely have suggested intraperitoneal fluid in the presence of a viable intrauterine pregnancy (Fa and Gerscovich, 1993; Marcus et al., 1995b). Demonstration by ultrasound of a viable intrauterine pregnancy in spontaneous conception is often taken virtually to exclude ectopic pregnancy. This could have encouraged further nonsurgical management to the detriment of our patient.

Ideally, transvaginal ultrasound and serial serum $\beta$-HCG assays allow monitoring of ectopic and heterotopic pregnancies. This approach is, however, only applicable when the ectopic component is unruptured. After surgical removal of the ectopic component, the intrauterine one is followed up similarly and the serial levels of $\beta$-HCG may be of prognostic value (Marcus et al., 1995b).

Post-operative $\beta$-HCG assays are usually unnecessary after salpingectomy. Our patient, however, had a great deal of blood and tissue debris in the pelvis at surgery and, although this was cleaned out, we thought it prudent to exclude residual trophoblast with a $\beta$-HCG assay.

The increased risk of heterotopic pregnancy with assisted conception techniques is well established, but with increasing incidence of pelvic inflammatory disease the risk of ectopic pregnancy is rising and probably so is the risk of heterotopic pregnancies from spontaneous conception.

References

Received on October 31, 1996; accepted on March 10, 1997