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Cervical heterotopic pregnancy in a spontaneous cycle

Received: 9 April 2006 / Accepted: 8 June 2006 / Published online: 1 August 2006
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Abstract A 28-year old woman with one previous pregnancy termination presented with delayed menstrual periods for about 7 weeks, left-sided lower abdominal pain, mild vaginal bleeding and vomiting. A transvaginal scan revealed an intrauterine pregnancy of 6 weeks' gestation with fetal heart activity and a suspected cervical ectopic pregnancy. She requested termination of the pregnancy. Suction evacuation of the cervical ectopic pregnancy followed by cervical dilatation and suction evacuation of the intrauterine pregnancy was performed with ultrasound scan guidance. Cervical haemostatic sutures were inserted prior to suction evacuation and estimated blood loss was 200 ml. Separate tissue specimens from the two pregnancy sites confirmed pregnancy tissue on histology.

Keywords Ectopic pregnancy · Cervical pregnancy · Cervical heterotopic pregnancy · Suction evacuation

Introduction

Cervical ectopic pregnancies are very uncommon and reported to be less than 1% of all ectopic pregnancies [1]. Cervical ectopic pregnancy co-existing with an intrauterine pregnancy is an even less common condition. This case serves as a reminder of the importance of considering the possibility of an ectopic pregnancy in a patient presenting with abdominal pain or vaginal bleeding and ultrasound evidence of intrauterine pregnancy. Heterotopic pregnancies are very commonly associated with assisted conception cycles. However, as in this patient, they can occur in

spontaneous cycles [2]. There are different treatment modalities available to reduce the risk of massive haemorrhage and conserve the uterus.

Case report

The patient, a 28-year-old, para 0, with a previous pregnancy termination presented for another pregnancy termination at a specialist clinic at about 7 weeks' gestation. She was referred to the District General hospital because of a history of left-sided abdominal pain, mild vaginal bleeding and vomiting for 3 days. A urine pregnancy test was positive.

At presentation in hospital, her blood pressure was 94/59 mmHg, pulse 56 beats per minute and she was tender in the left iliac fossa with no guarding. The cervical os was not dilated and there was no vaginal bleeding. There was no cervical excitation tenderness or tenderness in the fornices. A transvaginal scan revealed an intrauterine pregnancy with crown-rump length of 6 mm corresponding to a gestational age of 6 weeks (Fig. 1). Fetal heart movements were visualised. There was a corpus luteum cyst of the left ovary and a hypoechoic area (with no fetal pole) in the cervix suspected of being a blood clot or a cervical ectopic pregnancy (Fig. 2). She was given an appointment for a repeat scan the following week and told to come back if her symptoms got worse.

She presented a week later complaining of feeling dizzy. Her blood pressure was low (78/33 mmHg), pulse 58 beats per minute and she was tender in both the left and right iliac fossae. She was administered plasma expanders and her blood was cross-matched. In view of her presentation and the initial suspicion of a cervical ectopic pregnancy, consent was given for evacuation of a possible cervical ectopic pregnancy and intrauterine pregnancy. In theatre, the cervix was observed to be enlarged (bulbous) and the transvaginal scan confirmed a cervical ectopic pregnancy and an intrauterine pregnancy.

Haemostatic cervical sutures were placed bilaterally at 9 and 3 o'clock. The cervical ectopic pregnancy was

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Fig. 1 Intrauterine pregnancy showing fetal pole with a crown-rump length of 6 mm. Fetal heart activity was visualised



aspirated with a 18-gauge needle under ultrasound guidance. The aspirated tissue specimen was sent for histology. The cervical os was then dilated to 10 mm and suction curettage performed. The tissue specimen from the uterine cavity was sent separately for histological diagnosis. The scan was repeated and this confirmed complete evacuation of the intrauterine and cervical ectopic pregnancies. The estimated blood loss was 200 ml.

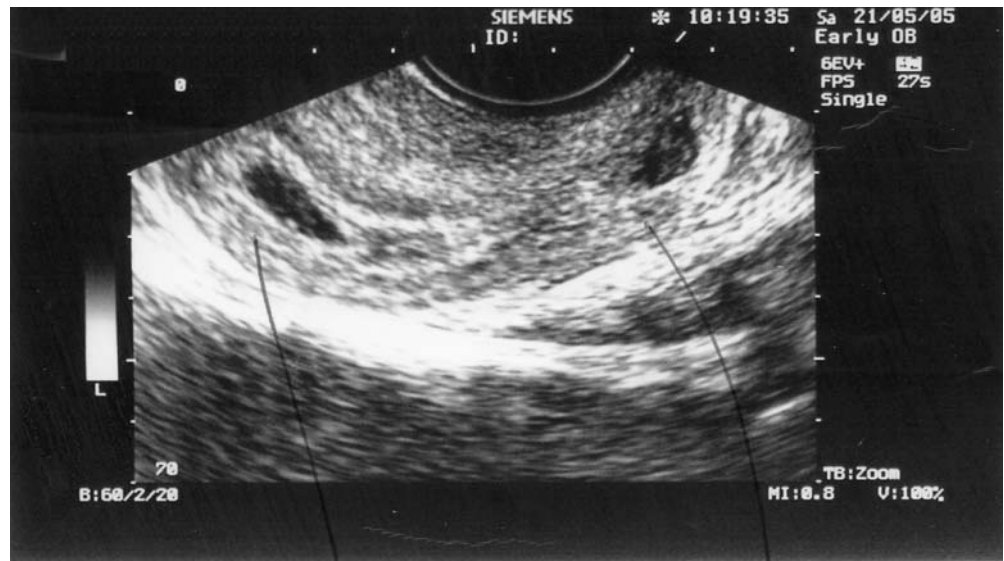
The patient was discharged the following day and reviewed 2 weeks later in the early pregnancy clinic. She was well and the histology report revealed products of conception from the separate tissue specimens taken from the cervical canal and the uterine cavity confirming the diagnosis of heterotopic pregnancy.

Discussion

The aetiology of cervical ectopic pregnancy is unknown; however, local cervical abnormalities, sometimes of iatrogenic origin have been suggested as possible predisposing factors. This patient had a previous pregnancy termination by dilatation and curettage and this has been reported as a possible predisposing factor [3]. Patients presenting with cervical ectopic pregnancy are reported to typically present with painless first trimester bleeding [4], but that was not the case with this patient. She had an enlarged (bulbous) cervix, which is one of the clinical signs suggestive of a cervical ectopic pregnancy.

It was initially difficult to confirm the diagnosis of a cervical heterotopic pregnancy on the transvaginal scan because of the absence of a fetal pole in the hypochoic

Fig. 2 Longitudinal section of uterus showing intrauterine and cervical pregnancies



Intrauterine pregnancy

Cervical pregnancy

area in the endocervical canal. However, the initial transvaginal scan images (Fig. 2) did show some evidence of trophoblastic invasion of the endocervical tissue represented by a hyperechoic area at the interphase between the cervical pregnancy and endocervical tissue. This important sign [5] became more obvious when the patient was subsequently scanned in theatre before surgical evacuation. The cervical mucosa has no protection against trophoblast invasion and allows deep penetration of any proliferating chorionic villi into the fibromuscular layer.

Jurkovic et al. [6] have also suggested the use of the “sliding sign” to differentiate between a cervical abortion and a cervical pregnancy. The abortus slides against the endocervical canal following gentle pressure by the sonographer while the cervical pregnancy does not. In addition, cervical ectopic pregnancy displays peritrophoblastic blood flow, while an incomplete miscarriage does not, as it is separated from the maternal blood supply [7].

Management of cervical pregnancy can be surgical, medical or a combination of both methods. Medical methods usually involve the use of chemotherapeutic agents injected either locally or systemically [8]. Surgical treatment as in this patient mainly involves evacuation of the cervical ectopic pregnancy in combination with some procedure to limit blood loss in view of the high risk of massive haemorrhage. This patient was successfully treated with transvaginal ultrasound-guided aspiration and cervical haemostatic sutures resulting in limited blood loss. Chen et al. [9] have also reported using the same method to successfully evacuate a cervical pregnancy with the intrauterine pregnancy progressing to term. However, this patient requested a termination of the intrauterine pregnancy.

Various other techniques to limit blood loss have been reported. This includes inserting a Foley catheter into the cervical canal as a tamponade device and embolisation of

the uterine arteries [10]. Current treatment options provide the opportunity for women such as this patient to retain their uterus.

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