Postnatal complications and management of pregnancy in *uterus didelphys*

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INTRODUCTION

Uterine didelphys is a rare condition. It is associated with several congenital anomalies. Moreover, the ability to naturally conceive and the successful completion of pregnancy and delivery can be a hurdle with this condition. An early diagnosis of uterine didelphys will facilitate the necessary interventions and appropriate follow-up can prevent unfavourable outcomes to both the mother and the baby.

BACKGROUND

Uterus didelphys is a uterine malformation with an unknown aetiology. The uterus presents as a paired organ due to the failure of the Müllerian ducts to fuse between the 10th and 17th weeks of gestational. This results in a double uterus with two separate cervices, and often a double vagina as well. It is stated that the reported incidence is 0.5-1.0% of women.[1] Uterus didelphys condition is associated with miscarriage or premature birth and is commonly linked with kidney abnormalities.

Uterus didelphys may manifest with signs and symptoms such as a pelvic mass, unusual pain before or during a menstrual period, and menorrhagia. Many women with a double uterus are capable of normal sexual intercourse, pregnancies and deliveries, though these tend to be the exception, rather than the rule.

It is associated with obstetric complications, including infertility, miscarriage and premature delivery.[2] Reported cases stated that breech presentation is common with uterus didelphys and most will have caesarean sections as a consequence.[3] Therefore, an early diagnosis of uterus didelphys and management of pregnancy will lead to a better outcome.

Though there have been numerous reports of pregnancies with uterus didelphys throughout the world, the documented case reports of management of complications during the antenatal, labour and immediate postnatal periods are limited.

This particular case highlights these issues with aims to provide learned lessons in management, particularly in the importance of early intervention.

CASE PRESENTATION

A 26-year-old woman went to her general practitioner's surgery for a routine smear test, when, on physical examination, it was discovered that she had two cervices and longitudinal vaginal septum. The patient denied having a family history of congenital abnormalities. Based on these findings, the general practitioner (GP) referred the patient to obstetrics and gynaecology at Furness General Hospital for further follow-up.

Ultrasound (USS) and magnetic resonance imaging (MRI) demonstrated the extent of the abnormality (see figures 1 to 3). The USS and MRI identified no other anomalies other than the uterus didelphys.

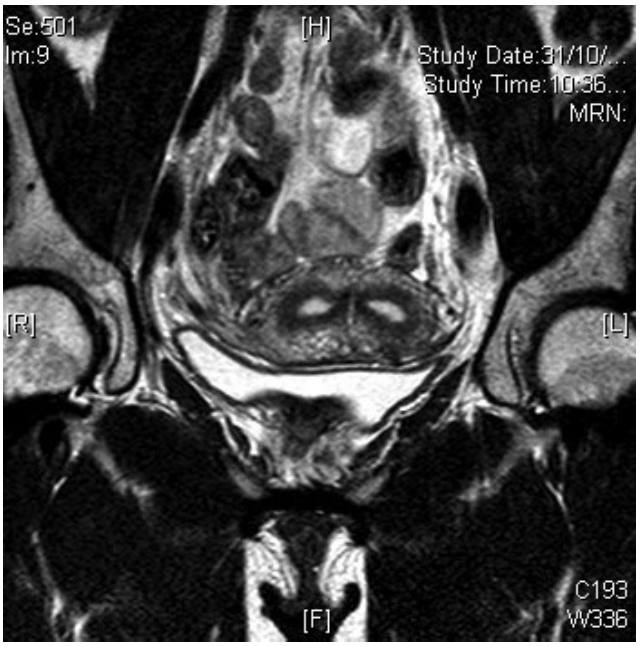

Figure 1 MRI scan identifying separate uterine cavities

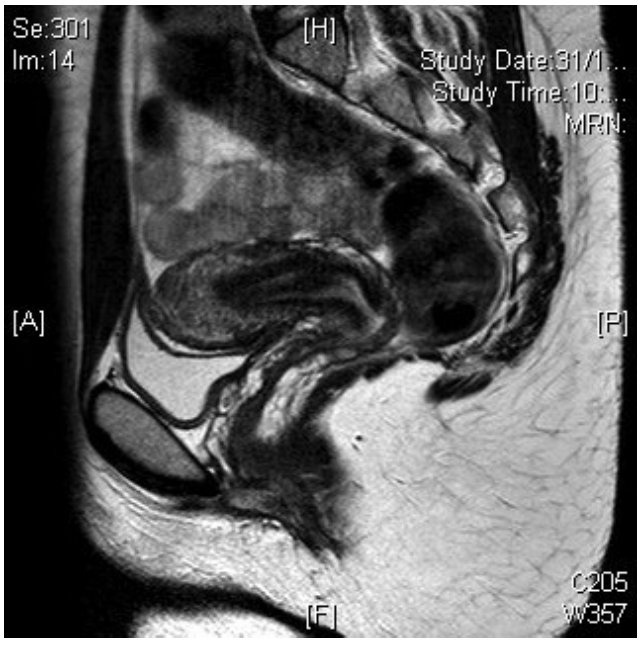

Figure 2 MRI Scan identifying vaginal septum

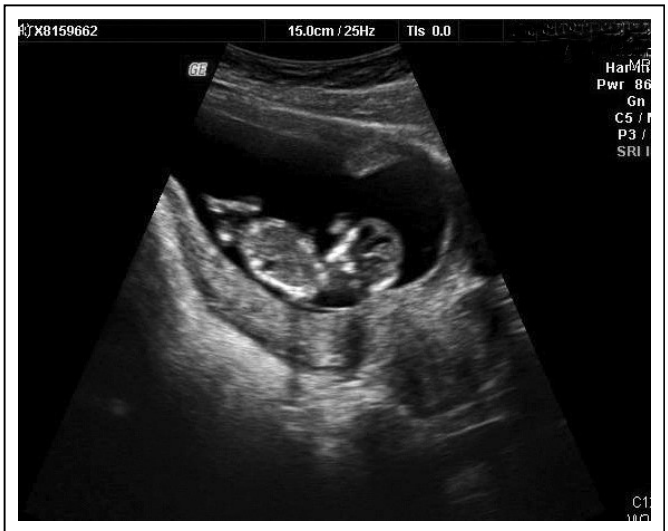

Figure 3 Ultrasound scan identifying left intrauterine gestation

Following the MRI and USS, the patient was further investigated under anaesthesia with the aim to perform vaginal septectomy. The procedure was successful with no complications, resulting in the successful separation of the distal two thirds of the vaginal septum and leaving the proximal one third in place.

The success of this operation allowed the patient to conceive naturally several months later. Her pregnancy was closely monitored. Dating and developmental scans showed a single intrauterine gestation with no abnormalities in the left horn of the uterus.

A 20-week antenatal scan reported placenta praevia, which resolved by the time she had a scan at the 33rd week of gestation. Otherwise, the antenatal period completed uneventfully. No abnormalities were noted on antenatal blood results.

TREATMENT

The patient was initially planned for a normal vaginal delivery; unfortunately, due to the non-engagement of presenting part past the expected due date, a caesarean section was performed and she was delivered of a healthy female. Operative findings included: 'a double uterus, which are attached together with separate uterine cavities, both uterine tubes and ovaries appeared healthy. Normal amount of blood lost, IV Syntocinon given, all placental tissues were removed.'

The postoperative period was complicated only by a lower respiratory tract infection, which settled with antibiotics. On physical examination, the uterus was well contracted and normal vaginal bleeding was noted on discharge day, which was the third postoperative day. A routine follow-up was arranged with a midwife.

OUTCOME AND FOLLOW-UP

On the eighth postoperative day, the patient presented in a state of collapse with massive vaginal bleeding, requiring transfusion and drainage under general anaesthesia. The patient was transfused with four units of blood. Ensuing scans revealed a massive haematometrium with no retained products of conception or known etiology, which required draining under general anaesthesia (see figure 4). The patient required active follow-up scans on a weekly basis.

DISCUSSION

Pregnancy in uterine didelphys is rare, though a number reported cases of pregnancy in either of each half cavity are widely available in medical journals.[4,5] In the case of single pregnancy in uterus didelphys, literature shows the right uterus is predominant in having the pregnancy. In findings recorded by Tsibris,[6] a totally occluded left tube was found on the histopathology of a uterus in a 23-year-old woman with a uterus didelphys following a hysterectomy, one year after having a child. The pathology in the endometrium revealed that the oestrogen and progesterone receptors, both cytoplasmic and nuclear, were determined in five longitudinal sections of each horn, and were equal in amount and distribution. These receptors were normal, but the receptor content of the right horn was higher than that of the left. Cytoplasmic receptor values were in the expected normal range, and in general, had descended from the fundus to the cervix as in normal uteri. Nuclear receptor values were also in the expected range for secretary nuclei and their distribution was as seen in normal uteri. Both receptors (oestrogen + progesterone?cytoplasmic + nuclear) were higher in the right horn *versus* the left horn; this difference was ascribed to in the woman's earlier pregnancy.

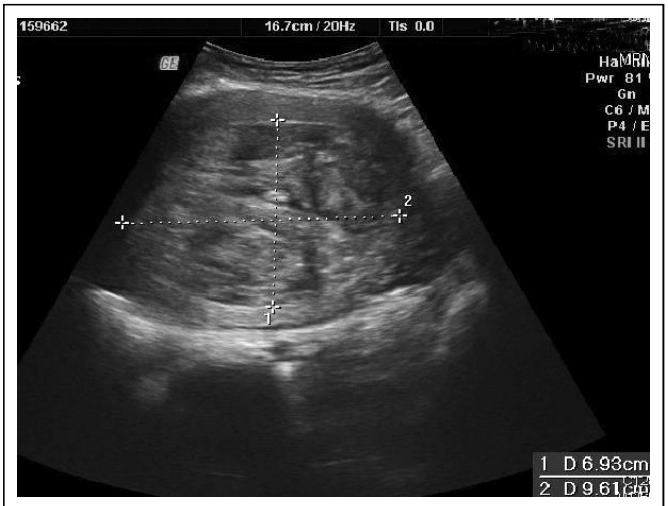

Figure 4 Ultrasound identifying left haematometra on day eight, of postpartum

In contrast, the patient in our case report had a single pregnancy in her left uterus only and gave birth to a baby by caesarean section, which does not corroborate with the findings of Tsibris' earlier study. However, our patient in this present case report did not have a history of miscarriage or premature birth, though she was used to having unusual pain before or during a menstrual period.

Furthermore, on reported cases in relation with immediate postnatal complications, there was a case reported in Canada where a 37-year-old woman with uterine didelphys had postpartum bleeding for five months and she had been followed up by a specialist throughout that period with ultrasound imaging.[7]

CONCLUSION / LEARNING POINTS

- A double uterus is not usually associated with fertility problems and does not generally require treatment.
- Female patients with congenital anomalies of the reproductive system need further investigations to identify other underlying anomalies of other organs.
- Importance of early diagnosis in pregnancy of uterine didelphys and specialist consultant follow-up.
- Understanding the possible high risks associated with immediate/ late postpartum care with uterine didelphys and the clinical importance of follow up.
- Further embryological study on uterine didelphys and environmental causes.

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