



Twin Pregnancy in Bicornuate Uterus—One Fetus in Each Horn

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Abstract A 32-year old primigravida female of approximately 20 weeks gestation by her last menstrual period (spontaneous conception) was referred for anomaly scan. The ultrasonography revealed two uterine horns separated by thick (12 mm) uterine tissue with a fetus (average Gestational age 22 weeks each) in each horn.

Keywords Bicornuate uterus · Twin pregnancy · Ultrasonography · MR Imaging

Introduction

Mullerian duct anomalies (MDA) result from abnormal fusion of the Mullerian (paramesonephric) ducts which can yield a variety of anomalies. The bicornuate uterus is classified as class-IV Mullerian duct anomaly [1]. Usually only one horn is functional and pregnancy rate is higher as compared to other Mullerian anomalies [2]. MDA leads to higher incidence of infertility, spontaneous abortion, preterm labor and retained placenta [3]. We describe a twin pregnancy in the lady with bicornuate uterus with one fetus in each horn.

Case Report

A 32-year old primigravida female of a 20 weeks gestation by her last menstrual period (spontaneous conception) was referred for anomaly scan. The ultrasonography revealed

two uterine horns separated by thick (12 mm) uterine tissue with a fetus (average gestational age 22 weeks each) in each horn (Fig. 1a). Color Doppler evaluation revealed blood flow in the myometrium of intervening uterine tissue (Fig. 1b). The placentae were seen attached to anterior wall extending to the intervening tissue (Fig. 1a). The gynecological examination revealed single cervix.

Feto-maternal MR imaging was performed for definitive characterization. The MRI revealed two uterine horns separated by thick uterine tissue with anterior wall placentae extending to intervening tissue. There was a deep fundal cleft (> 1 cm) in the outer uterine contour with inter-cornual distance of > 4 cm, confirming the diagnosis of bicornuate uterus rather than a septate uterus. The fetuses had breech presentation in one horn and cephalic in other horn (Fig. 1c and Fig. 1d). Single cervix was also demonstrated on MR images (Fig. 1e). Thus, the diagnosis of twin pregnancy in bicornuate unicollis uterus was confirmed.

The female was monitored fortnightly and delivered by double lower segment caesarean section at 37 weeks. The pregnancy was uneventful. The babies weighed 2400 and 2450 grams with no need of any post-natal resuscitation. The patient is under follow-up. She is currently on hormonal contraception.

Discussion

The bicornuate uterus belongs to class-IV Mullerian duct anomaly which results due to incomplete fusion of the two para-mesonephric ducts. There is a high abortion rate amongst the pregnancies occurring in patients having Mullerian anomalies and the prognosis is better with bicornuate uterus amongst all Mullerian anomalies if the patient has one functional horn only [1]. The pregnancy in

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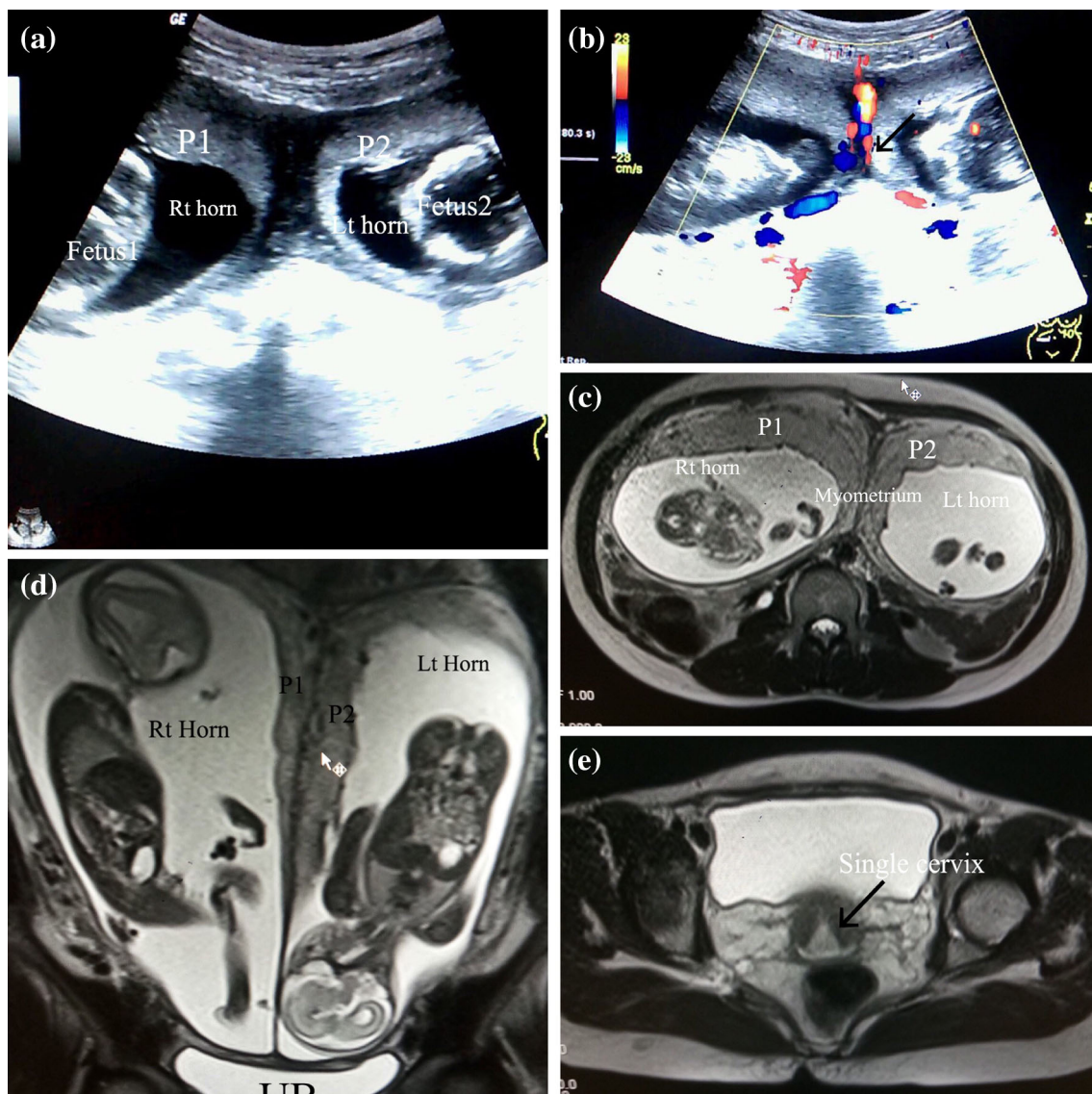


Fig. 1 (a) Sonographic image showing two uterine horns separated by thick myometrium with fetal parts in each cavity with two anterior wall placentae (P1 and P2) in each horn. (b) Doppler image showing the flow in the intervening uterine tissue (Black arrow) of the two

uterine horns. (c) MR images showing the two uterine horns with fetal parts and placentae (P1 and P2). (d) Coronal T2 weighted MR image showing the two fetuses in two uterine horns with anterior wall placentae. (e) MR image showing the single cervix (Black arrow)

the both horns of a bicornuate uterus is rare phenomenon and there are no set guidelines for the management of such a case due to very low incidence of these cases. The management depends upon the case-to-case basis [2]. In the current case, the babies were delivered by a double lower segment caesarean section. Twin pregnancies with uterine malformations have a high rate of miscarriage [4], but in the present case, there were no complications and the babies were delivered safely. In some cases, cervical circlage has been tried to prevent the pre-term delivery. The aim of presenting this case is to create awareness among the obstetricians and radiologists regarding this type of rare twin pregnancy, so that if such a condition is encountered

in practice, early management may be planned accordingly (Fig. 1).

Review of Literature

The review of literature reveals that there are no set guidelines for the management by any recognized body owing to the very low incidence of such cases. But from the review of literature, it is evident that elective caesarean section is the best modality to deliver the babies in such cases. Doruk et al. [3] delivered a case of twin pregnancy in bicornuate uterus via caesarean section. They also

concluded that it is better to perform elective caesarean section in such cases to avoid possible complications by dystocia. In a retrospective study conducted by Fox et al. [5], the data of 516 pregnant females with twin pregnancies was analyzed (2005–2012). Out of 516, 16 had uterine malformations. They had concluded that patients with uterine malformations were associated with increased risk of pre-term delivery and lower birth weights, but no fetal growth restriction. In the present case, the fetal weights were 2400 and 2450 grams. Cruceyra et al. [6] conducted successful delivery of twin pregnancy in a bicornuate uterus (unicollis) by bilateral caesarean section. The same procedure was applied in the present case. Osazuwa and Ejenobo [7] delivered a twin gestation in septate bicornuate uterus by elective bilateral caesarean section. They had done accidental septal resection for morbidly adherent placenta. Ahluwalia et al. [8] delivered a case of twin pregnancy in bicornuate uterus by emergency caesarean section. In their case, the diagnosis was missed by routine sonography and confirmed only intra-operatively. Arora et al. [9] reported a case of successful twin pregnancy after spontaneous conception in a patient with uterus bicornis unicollis. Nanda et al. [10] reported a case of successful twin pregnancy in a unicornuate uterus with one fetus in the non-communicating rudimentary horn.

Conclusion

Pregnancy in each horn of a bicornuate uterus is a rare phenomenon. Ultrasonography and MR Imaging play an important role in the diagnosis and help in devising the management course.

Compliance with Ethical Standards

Conflict of interest All authors declare that they have no conflict of interest.

Human and animal rights No animals were used in the study. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

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