CASE REPORT
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Pregnancy with uterine didelphys and history of recurrent pregnancy loss: Case report

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Background: Uterine didelphys is an embryologic disorder that arises from the failure of Mullerian duct fusion. It is characterized by the presence of two distinct cervices, two vaginas, and two uterine horns. Obstetric complications may arise during pregnancy when uterine didelphys is present; these may include spontaneous abortion, premature labour, and fetal malpresentation.
Case Presentation: A 25-year-old woman has been married for three years and had history of six gravid, zero parity, and five abortion. The patient had uterine didelphys. A fully septated uterus with double cervices and vaginas was found on pelvic magnetic resonance imaging. The patient arrived at the hospital at 27/28 weeks. Periodic sonograms demonstrated breech presentation and no (Intrauterine Growth Restriction) IUGR evidence. At 38/39 weeks, the patient was scheduled for cesarean surgery. Uterine didelphys morphology, pregnancy on the left side of the uterus, and the septum separating the left and right uterine cavities were all observed during the caesarean section. The newborn had three umbilical cords wrapped around his neck. The infant was female, 2800 grams, 48 cm, Apgar score 7-8, Ballard score (BS) 38 weeks, Lubchenco score (LS) p25-50.
Conclusion: Antenatal care is required for investigating risks of uterine didelphys, including cervical incompetence, spontaneous abortion, and preterm birth, using serial sonograms to assess fetal well-being and cervical length.

Keywords: Pregnancy, didelphys, mullerian duct abnormalities, abortion.
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INTRODUCTION

Reproductive organ malformations are observed in an estimated 4.3% of fertile women and 3.5% of infertile women. Among these, the uterine malformation contributes to infertility mostly is the unicornuate uterine. Bicornuate uterine (approximately 25%) and septated uterine (approximately 35%) are the most prevalent abnormalities of the reproductive organ.[1] On the contrary, uterine didelphys is an exceedingly uncommon condition, comprising merely 10% of all mullerian duct abnormalities.[2] Uterine didelphys is an embryologic anomaly caused by the Mullerian ducts failed to fuse. Uterine didelphys is characterized by the presence of two vaginas, two distinct cervices, and an incomplete vaginal septum.[3] Uterine malformations arise from factors such as impaired fusion or resorption of the median septum, halted development of the Mullerian ducts, or failure to resorb the septum. Uterine didelphys occur infrequently among the general female populace.[4] Obstetric complications may arise in pregnant women diagnosed with uterine didelphys, including but not limited to spontaneous abortion, premature labour, cervical incompetence, and malpresentation. Recurrent pregnancy loss (RPL) is correlated with submucous myomas, intrauterine adhesions, and uterine anatomical structural disorders, all of which have the potential to distort the uterine cavity.[3,5] Mullerian duct abnormalities affect less than 5% of the female population. This abnormality occurs due to the asymptomatic nature of congenital uterine malformations. In many instances, recurrent miscarriage is not diagnosed until a woman presents with gynaecological complications. The prevalence of uterine didelphys in women is one in one thousand, while the incidence among expectant women is one in one million.[6] We present a case of uterine didelphys during pregnancy and a history of RPL, which manifested as a breech presentation at term. Cesarean section was an elective method of delivery.

CASE PRESENTATION

A 25-year-old woman with history of six gravid, has been married for three years and has had five miscarriages at the end of the first trimester and early second trimester with one curettage. History of menarche at 15, regular monthly cycle every 28-30 days, duration 7-10 days, changing pads 2-3 times per day at the start of menstruation, no pain, and uterine didelphys after last abortion. The speculum revealed a vaginal septum dividing the right and left vagina (Figure 1). The vaginal touche examination revealed a longitudinal vaginal septum with a thickness of 0.5–1 cm from the introitus to the apex, two smoothly closed cervix, and two uterine sondes of 6 cm each (Figure 2).

A contrast-free magnetic resonance imaging (MRI) of the pelvis identified a completely septate uterus featuring double cervices and vaginas. From the fundus uterine to the cervix, the uterine was divided longitudinally into right-sided and left-sided by a septum. Two cervices were

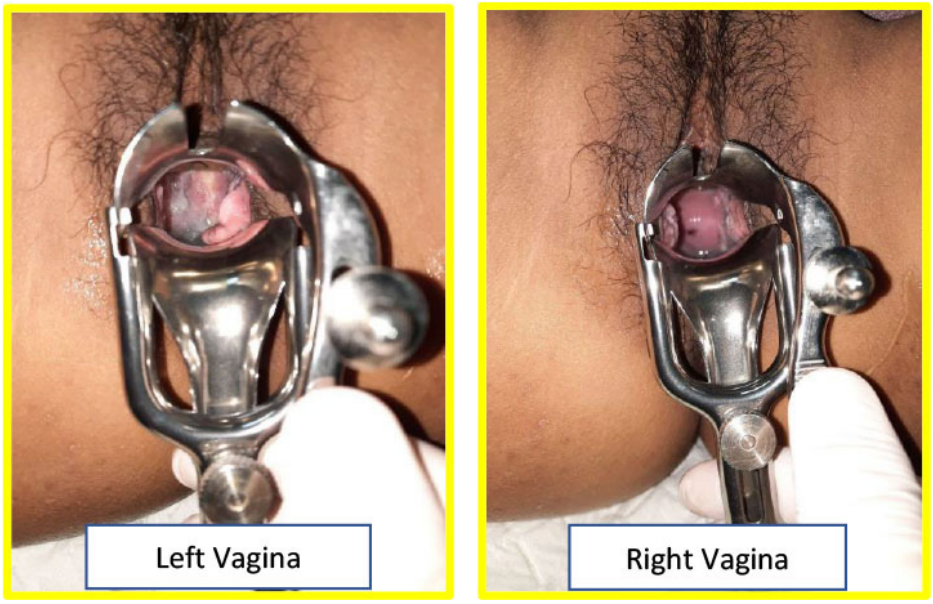


Figure 1. Inspeculum examination revealed there were 2 vaginas and 2 cervices.

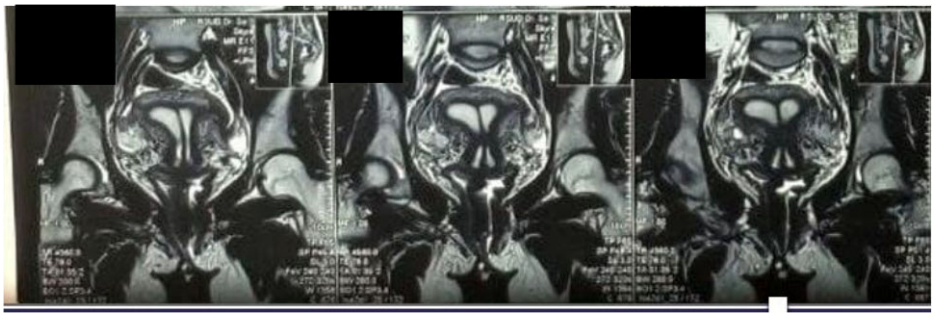


Figure 2. MRI pelvic examination without contrast coronal view.

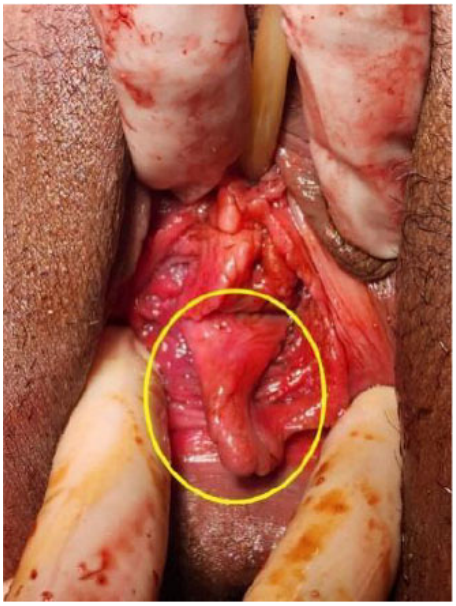


Figure 3. Vaginal Septum.

procured and anatomically connected to each uterine. A complete longitudinal septum separates the vagina into right and left sides from the vaginal introitus to the cervix, connected to each cervix and uterus (Figure 3).

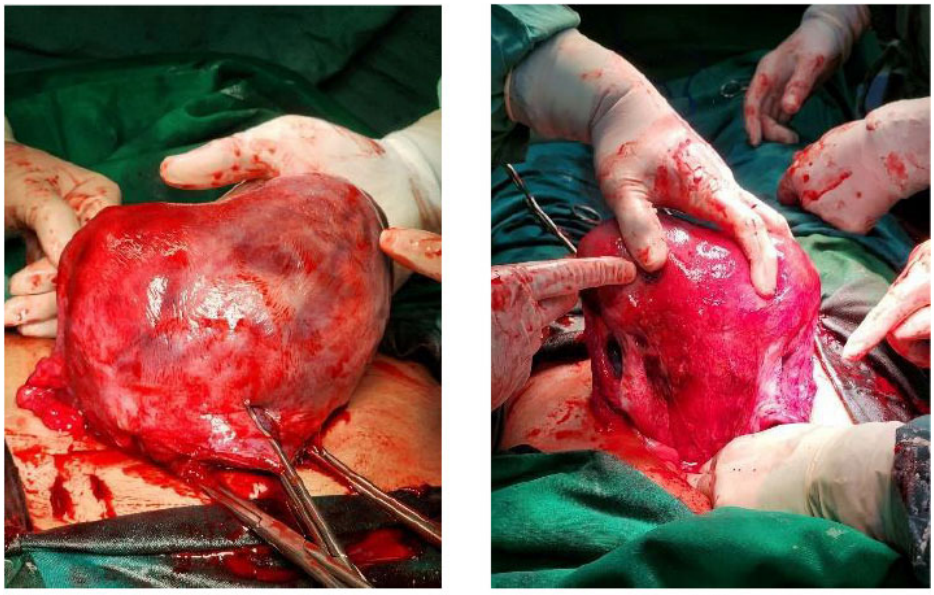
The patient first visited our outpatient clinic at 27/28 weeks. By transabdominal sonography, the uterine duplex with a single breech presentation pregnancy in the left and right uterine was in normal size (7.9 x 3.9 cm) with a cervical length 2.9 cm. This patient experienced no issues during pregnancy. Periodic sonograms showed no IUGR. Laboratory results were at normal limit. The patient received oral progesterone, iron supplement, and calcium supplement during antenatal care. The patient was scheduled for cesarean delivery at 38/39 weeks owing to breech presentation, uterine didelphys, RPL, and a high social value baby.

The caesarean section procedure revealed the presence of uterine didelphys, with the pregnancy located on the left side (Figure 4). Additionally, a septum was identified, dividing the uterine cavity into left and right compartments. Three umbilical cord loops encircling the baby's neck were observed (Figure 5). The newborn infant was identified as female, with a birth weight of 2800 grams and a length of 48 centimetres. The Apgar score at one and five minutes was 7-8, indicating a satisfactory overall condition. The gestational age was determined to be 38 weeks, based on the Ballard Score assessment. The weight-for-age percentile was also calculated to be between the 25th and 50th percentile.

DISCUSSION

The failure of the Mullerian duct to fuse results in duplication of Mullerian structures, causing uterine didelphys. Uterine didelphys have two cervices and cavities. Most women with uterine didelphys have a longitudinal septum.[3,4] It had two uterine horns, a longitudinal vaginal septum, and two cervices. Early labour and recurrent miscarriage are common in uterine didelphys pregnancies. Approximately 10-15% of RPL women exhibit uterine abnormalities. Due to enhanced volume and blood circulation between the two uterine horns, uterine didelphys have a slightly better obstetric outcome than unicornuate.[4,5,6] This patient was with six gravid, five abortion. Since this patient has no fertility issues, this phenomenon can cause miscarriage. Involuntary infertility affects 5–10% of the population. 9.1% of women with uterine anomalies in a study had primary infertility.[7] Furthermore, another study found that 6.3% of individuals with uterine anomalies had primary infertility.[8] Oral progesterone throughout pregnancy reduced premature labour risk.[9] Chromosomal abnormalities, autoimmune illnesses, and blood viscosity issues can induce RPL in addition to uterine structural abnormalities. However, miscarriages caused by these disorders are more common in the early first trimester and this patient has not been further evaluated regarding other factors that cause recurrent miscarriages.[4,5]

Uterine didelphys distort the uterine cavity, causing fetal malpresentation. The fetus in this patient was breech presentation since early pregnancy. Studies found that 30% of women with cervical incompetence had uterine anomalies, mostly bicornuate



(a) (b)

Figure 4. Uterine didelphys with pregnancy in the left uterus. (a) Anterior view (b) Posterior view.

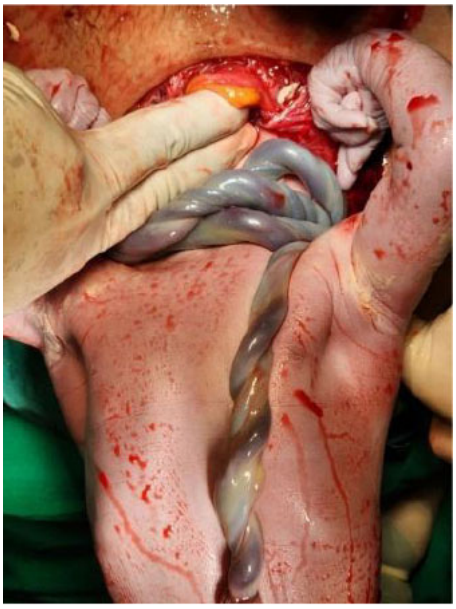


Figure 5. Umbilical cord twists on the baby's neck.

uteri. Cervix length is normal in this case. Uterine didelphys does not indicate caesarean.[10] The cesarean section was planned because the fetus was breech presentation with an unproven pelvis (five previous pregnancies were miscarriages). We found uterine didelphys, left-sided pregnancy, and a septum dividing the uterine cavities during caesarean section. Baby born female / 2800 g/ 48 cm/AS 7-8, BS 38 weeks, LS p25-50. A third umbilical cord twist was found. A bicornuate uterus with a complete uterine septum could deform the uterine cavity and impede cord growth.

CONCLUSION

Pregnant women with uterine anomalies require early diagnosis and treatment to enhance pregnancy outcomes. Antenatal care must evaluate for every potential risk of uterine anatomical defects, such as cervical incompetence causing spontaneous abortion and premature birth. Routine ultrasounds are crucial for evaluating fetal well-being because of deformity of the uterus.

CONFLICT OF INTEREST

Authors have no conflict of interest to declare.

ETHICAL STATEMENT

Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

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AUTHORS' CONTRIBUTION

All authors have participated in this study in some capacity, including conception, interpretation, article drafting, and critical revision for significant intellectual content, and final approval.

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