Case Report: Effective Pregnancy Management in Uterus Didelphys

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Abstract
Introduction : Uterus didelphys is a rare congenital anomaly resulting from incomplete fusion of the Müllerian ducts, accounting for 10% of such anomalies. It often goes unnoticed until reproductive age, sometimes causing dyspareunia or dysmenorrhea. This anomaly is associated with increased obstetric risks, including higher rates of miscarriages, preterm births, breech presentations, and lower live birth rates. Diagnosis is typically achieved through imaging techniques such as ultrasound, hysterosalpingography, or magnetic resonance imaging.
Case Report : This case study involves a 37-year-old primigravida at 34 weeks gestation presenting with premature contractions. Ultrasound revealed a singleton foetus in the breech position, and speculum examination identified two cervical os. The patient had a history of primary infertility and was diagnosed with uterus didelphysis during fertility assessments. Despite the complexities associated with this condition, she successfully conceived through artificial insemination. Her pregnancy was closely monitored, and due to the presence of labour signs and uterus didelphys condition, a planned Caesarean section was performed, resulting in the delivery of a healthy infant.
Conclusion : This case underscores the importance of individualised care and continuous monitoring in managing pregnancies complicated by uterine anomalies to mitigate associated risks and improve maternal and foetal outcomes.

Key words: Caesarean Section, Congenital Uterine Anomaly, Obstetric Risks, Uterus Didelphys

Laporan Kasus: Managemen Efektif Kehamilan Pada Uterus Didelphys

Abstrak
Pendahuluan : Uterus didelphys merupakan anomali kongenital langka yang disebabkan oleh fusi duktus Müllerian yang tidak sempurna, yang mencakup 10% dari anomali tersebut. Kondisi ini sering tidak disadari hingga usia reproduksi, terkadang menyebabkan dispareunia atau dismenore. Anomali ini dikaitkan dengan peningkatan risiko obstetrik, termasuk tingkat keguguran yang lebih tinggi, kelahiran prematur, presentasi bokong, dan tingkat kelahiran hidup yang lebih rendah. Diagnosis biasanya dicapai melalui teknik pencitraan seperti Ultrasonografi, histerosalpingografi, atau pencitraan resonansi magnetik.
Laporan Kasus : Studi kasus ini melibatkan seorang primigravida berusia 37 tahun dengan usia kehamilan 34 minggu yang mengalami kontraksi prematur. Ultrasonografi menunjukkan janin tunggal dalam presentasi bokong dan pemeriksaan spekulum mengidentifikasi dua ostium serviks. Pasien memiliki riwayat infertilitas primer dan didiagnosis dengan uterus didelphysis selama penilaian kesuburan. Meskipun kondisi ini rumit, ia berhasil hamil melalui inseminasi buatan. Kondisi kehamilan pasien dipantau secara ketat, namun karena adanya tanda-tanda persalinan disertai kondisi uterus didelphys, maka diputuskan untuk dilakukan operasi caesar. Pasca operasi kondisi ibu dan bayi sehat.
Kesimpulan : Kasus ini menggarisbawahi pentingnya perawatan individual dan pemantauan berkelanjutan dalam mengelola kehamilan yang rumit karena anomali uterus untuk mengurangi risiko dan menjaga keselamatan ibu dan bayi.

Kata kunci: Operasi Caesar, Anomali Uterus Kongenital, Risiko Obstetrik, Uterus Didelphys

Introduction

Congenital abnormalities of the uterus, resulting from developmental issues with the Müllerian ducts during foetal growth, impact around 4.3% of women who are fertile and 3.5% of those who are infertile. Among these anomalies, the unicornuate uterus significantly contributes to infertility. More frequently observed are the septate uterus (35%), and the bicornuate uterus (25%).[1,2] Uterus didelphys, making up 10% of Müllerian duct anomalies, arises from an incomplete fusion of the Müllerian ducts. Though often asymptomatic and diagnosed during reproductive age, it can sometimes cause dyspareunia, or painful menstruation.[3] These abnormalities increase obstetric risks, leading to a higher incidence of miscarriages, preterm births (ranging from 17.44% to 33.3% in uterus didelphys cases), breech presentations, and reduced live birth rates. Diagnosis typically involves imaging techniques such as ultrasound, hysterosalpingography (HSG), or magnetic resonance imaging (MRI).[4] A clinical case highlights a patient with uterus didelphys who successfully conceived, carried, and delivered a healthy baby through a caesarean section, showcasing the possibility of overcoming such challenges. Continuous monitoring during pregnancy is crucial due to the elevated risks linked to uterine anomalies.[5]

Case Presentation

A 37-year-old woman, who is pregnant for the first time at 34 weeks gestation with premature contractions, was brought to the Obstetrics Emergency Department with complaints of lower abdominal pain that began suddenly and intermittently over the past day. Her menstrual cycle was regular, and she confirmed her pregnancy after missing her period for one month. She is in good health, with a normal BMI, no history of surgery, a non-smoking status, and no allergies. She reported no history of dyspareunia, dysmenorrhea, or chronic abdominal pain. Her menstrual cycles were regular, with the last period starting on November 5, 2023, confirming her 34-week gestational age. Ultrasound showed a single foetus in breech position with an estimated weight of 2600 grammes, and the placenta was located at the uterine fundus. Cardiotocography indicated a category 1 foetal status with uterine contractions.

A vaginal speculum examination revealed two cervical ostium, right and left, livid in colour, without any discharge. She had a history of primary infertility for three years and was diagnosed with a double uterus during a fertility check-up, followed by artificial insemination. One month post-procedure, a positive pregnancy test was confirmed by ultrasound at 3 weeks gestation. During her hospital stay, she experienced mild uterine contractions with stable vital signs (Blood Pressure = 110/70 mmHg, pulse = 76 beats/minutes, respiratory rate = 16 breaths/minutes, foetal heart rate = 142 beats/minutes). She was monitored closely, receiving daily intravenous dexamethasone (12 mg) and isoxsuprine drips of 1 ampoule every 8 hours. After three days, signs of labour were present, and a vaginal examination showed the right cervix dilated to 2 cm while the left remained closed, leading to a planned Caesarean section. Initially, expectant management was planned, but as contractions increased in frequency and she entered latent phase of labour, it was decided to terminate the pregnancy via Caesarean section. Intraoperative findings included uterus didelphys without a connecting septum and a single vagina without a longitudinal septum. The preoperative diagnosis of uterus didelphys was confirmed during surgery. The lower segment of the uterus was incised, revealing that the uterus was divided into right

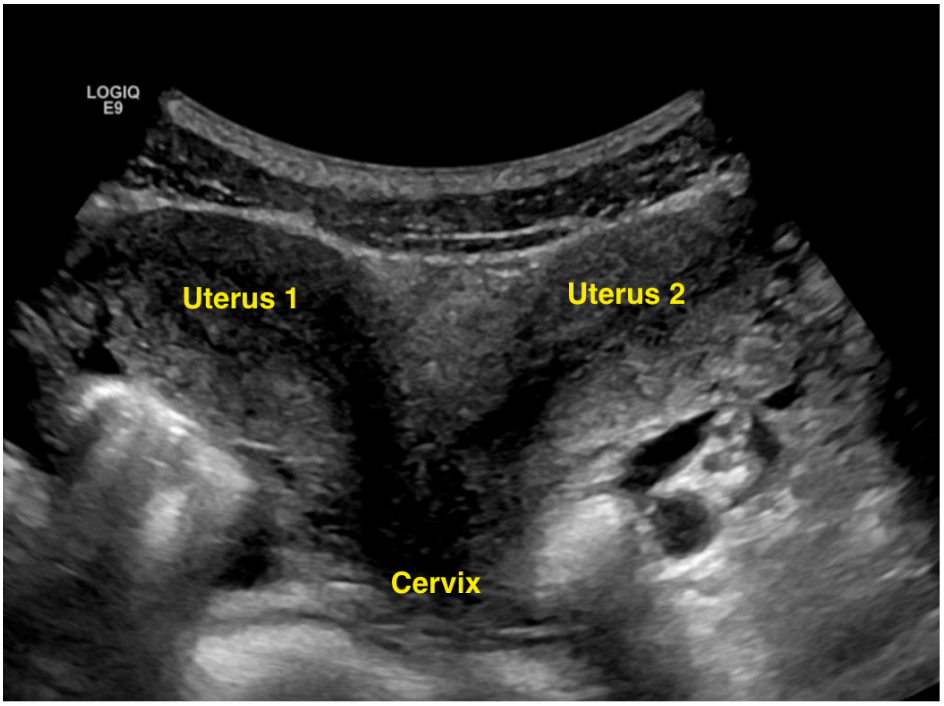

Figure 1 Ultrasound Examination before Pregnancy Shows 2 Uterus

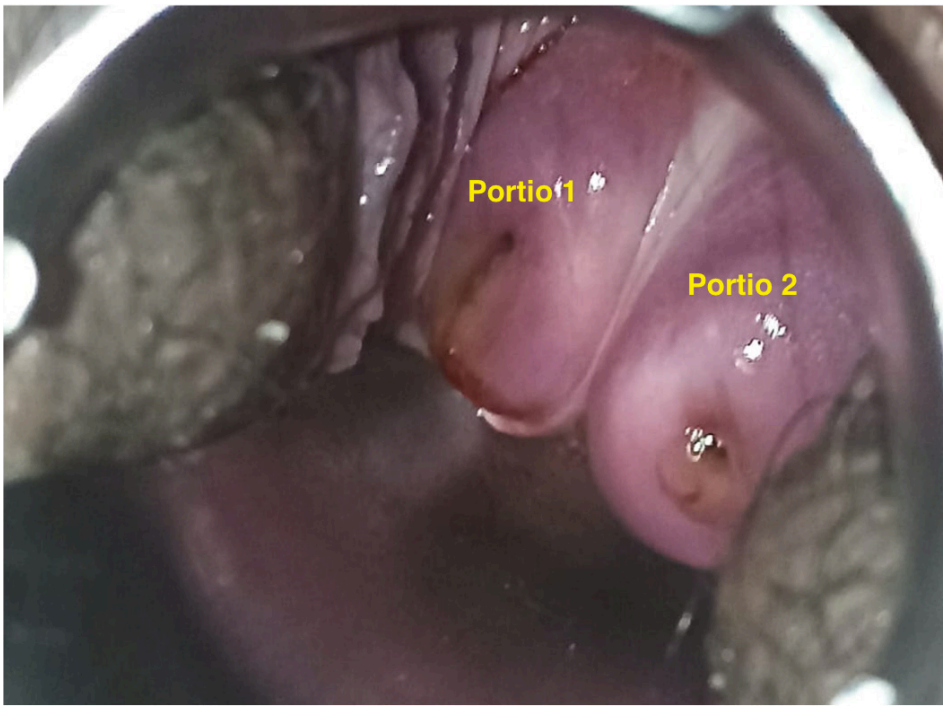

Figure 2 Speculum Examination Shows 2 Right and Left Portions

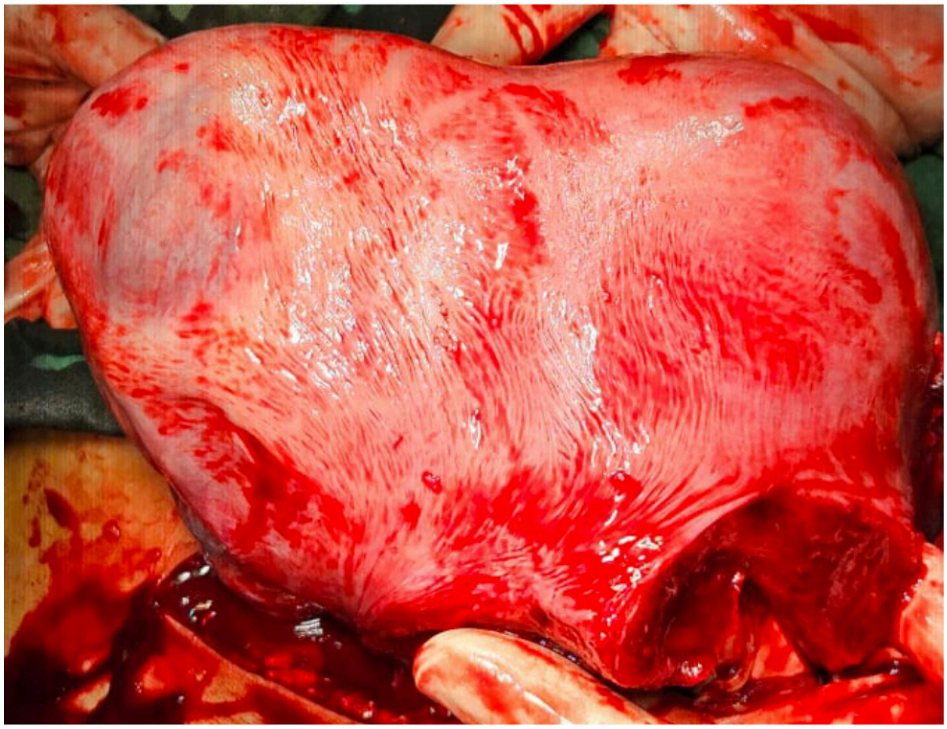

Figure 3 During Surgery it Appeared that the Patient Had 2 Uteruses.

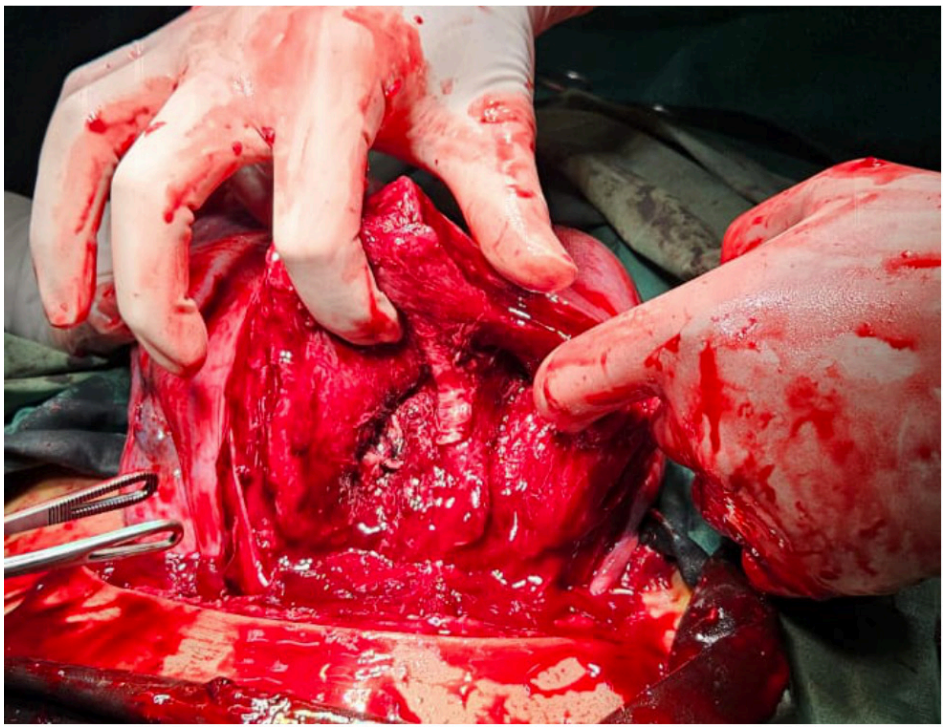

Figure 4 During surgery, the incision was extended, revealing a uterus with two cavities, two cervices, and one vagina, confirming the diagnosis of uterus didelphys.

and left sides. Initially, the left uterine cavity was opened, but the incision was extended to the pregnant right uterus. The first visible structure during surgery was the left uterus. A live female infant, with an Apgar score of 6/7 and a Ballard score corresponding to 34-36 weeks was delivered. The baby was admitted to the perinatology unit for one day for observation and then reunited with the mother, with both being discharged together on the fourth day of care. The patient had not undergone any renal examinations, but it was concluded that the condition was not Herlyn-Werner-Wunderlich (HWW) syndrome, as there was no pelvic pain caused by the accumulation of menstrual blood in a blocked hemivagina (hematocolpos).

Investigation

The patient, a 37-year-old primigravida, was diagnosed with uterus didelphys, a congenital uterine anomaly where the uterus is divided into two separate cavities. In this case, there was no connecting septum within the vagina, resulting in a single vagina without a longitudinal septum. The condition was first identified during a fertility checkup following three years of primary infertility. During the Caesarean section, the uterus was found to be divided into two distinct halves, with the foetus located in the right uterine cavity. The left uterine cavity was empty. The diagnosis of uterus didelphys, which was made preoperatively, was confirmed during surgery. No renal examinations were performed, but the absence of Herlyn-Werner-Wunderlich syndrome was inferred, as the patient did not experience pelvic pain caused by hematocolpos, which is typical of this syndrome. The surgical procedure involved incising the lower segment of the uterus, initially opening the left uterine cavity, but it was extended to include the right, pregnant uterine cavity. The first visible structure during surgery was the left uterus. The baby was delivered from the right uterus and was subsequently observed in the perinatology unit before being discharged with the mother on the fourth day.

Differential Diagnosis of Uterine Didelphys

1. **Bicornuate Uterus**:

   A bicornuate uterus is a congenital anomaly where the uterus is divided into two horns, but there is usually a single cervix. This can be distinguished from uterine didelphys by imaging studies, such as hysterosalpingography (HSG) or MRI, which show a single uterine cavity with a deep indentation or division rather than two completely separate uterine cavities.[6–8]

2. **Septate Uterus**:

   A septate uterus involves a fibrous or muscular septum dividing a single uterine cavity, but the external contour of the uterus is normal. Imaging techniques, including HSG and MRI, can differentiate a septate uterus from a uterine didelphys by demonstrating a single external contour with an internal septum rather than two separate uterine structures.[6–8]

3. **Unicornuate Uterus**:

   This condition features a single uterine horn and is often associated with a rudimentary horn or the absence of one side of the uterus. An MRI or HSG will show a single, normally shaped uterine cavity, contrasting with the presence of two distinct uterine cavities in uterine didelphys.[6–8]

Treatment

During hospitalisation, the patient was managed to stabilise her condition and

prevent preterm labor. She received 12 mg of dexamethasone intravenously daily to enhance foetal lung maturity and isoxsuprine 1 ampoule intravenously every 8 hours to suppress uterine contractions. Initially, expectant management was planned, but as contractions increased in frequency and she entered active labour, a vaginal examination revealed the right cervix dilated to 2 cm while the left cervix remained closed. This led to the decision for a planned Caesarean section.

Outcome and Follow-Up

Intraoperative findings included uterus didelphys without a connecting septum and a single vagina without a longitudinal septum. The preoperative diagnosis of uterus didelphys was confirmed during surgery. The lower segment of the uterus was incised, revealing that the uterus was divided into right and left sides. Initially, the left uterine cavity was opened, but the incision was extended to the pregnant right uterus. The first visible structure during surgery was the left uterus. A live female infant, weighing 2500 grammes with an Apgar score of 6/7 and a Ballard score corresponding to 34-36 weeks, was delivered. The estimated blood loss was around 500 mL. The baby was admitted to the perinatology unit for one day for observation and then reunited with the mother, with both being discharged together on the fourth day of care. Post-discharge follow-up included routine check-ups to ensure proper recovery and to monitor the health of both the mother and the infant, along with support during the post-delivery adaptation period.

Discussion

Uterine malformations, often asymptomatic, present diagnostic challenges even with advanced techniques such as ultrasound, HSG, and MRI. The American Society for Reproductive Medicine (ASRM) and the European Society of Human Reproduction (ESHRE) have classification systems that highlight the varied presentations of uterus didelphys. Typically identified during reproductive age due to fertility issues, 2–8% of infertile women and 5–30% of those with recurrent miscarriages may have uterine anomalies. These anomalies are linked to obstetric complications; septate and subseptate uteri, in particular, increase the risks of miscarriage, preterm birth, and abnormal foetal positions.[6,7] Often undiagnosed for years, caesarean sections can provide a unique diagnostic opportunity, mitigating additional risks. The stress of potential pregnancy complications is significant. A case study highlights a 37-year-old woman with uterus didelphys who presented with a history of infertility and is now 34 weeks pregnant. Complications such as cholelithiasis exacerbated her distress, underscoring the need for careful monitoring and differentiation of symptoms to prevent misdiagnoses like uterine rupture, which can be life-threatening. The placenta plays a crucial role in pregnancies with uterine defects. Histological evaluations show links between placental abnormalities and neonatal pathologies, emphasising the need for meticulous monitoring. Preterm births, more common with uterine defects, require heightened vigilance. Managing pregnancies with uterine dysplasia requires individualised approaches.[9,10]

The risk of preterm birth varies among different uterine anomalies, influencing decisions about delivery methods. While vaginal delivery is possible in some cases, concerns about complications often lead to caesarean sections. Anxiety disorders may necessitate caesarean deliveries, and medical teams must balance clinical recommendations with maternal preferences.[11,12] Complications such as breech presentations often lead to caesarean sections to minimise perinatal mortality risks. Though successful vaginal

deliveries are possible, they are cautiously evaluated due to potential risks.[13] In this specific case, despite initial plans for vaginal delivery, the presence of a vaginal septum and the patient's anxiety led to a caesarean section. Individualised approaches and collaborative decision-making between medical teams and patients are essential in managing such pregnancies. Ongoing research and detailed observations, as seen in studies linking placental abnormalities to neonatal outcomes, are crucial for understanding the complexities of pregnancies with uterine anomalies.[7,8]

Conclusions

Uterus didelphys, affecting 10% of Müllerian anomalies, raises obstetric risks, including preterm births, breech presentations, and reduced live birth rates, necessitating continuous monitoring during pregnancy.

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