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Uterine Didelphys with Twin Pregnancies - A Rare Case Report

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ABSTRACT

Mullerian duct anomalies (MDAs) are congenital malformations arising from abnormal embryological development of mullerian ducts, with uterine didelphys representing a rare subtype. Uterine didelphys, characterized by two separate uterine cavities, accounts for approximately 11% of all MDAs and is often asymptomatic. Pregnancies in MDAs are usually associated with high risk especially in rare occurrence of twin pregnancies with one fetus in each cavity reported at an incidence of about 1 in 1,000,000 pregnancies. We report a rare case of a 23-year-old gravida 3, para 1 woman at 17weeks of gestation who presented with acute abdomen. During surgery for suspected appendicitis, a ruptured right uterus was discovered with a nonviable fetus: the left uterus remained intact with viable fetus. Postoperative recovery went uneventful. However, diagnosis of MDAs in pregnant women requires imaging such as ultrasound or MRI and a careful obstetric examination and planning.

INTRODUCTION

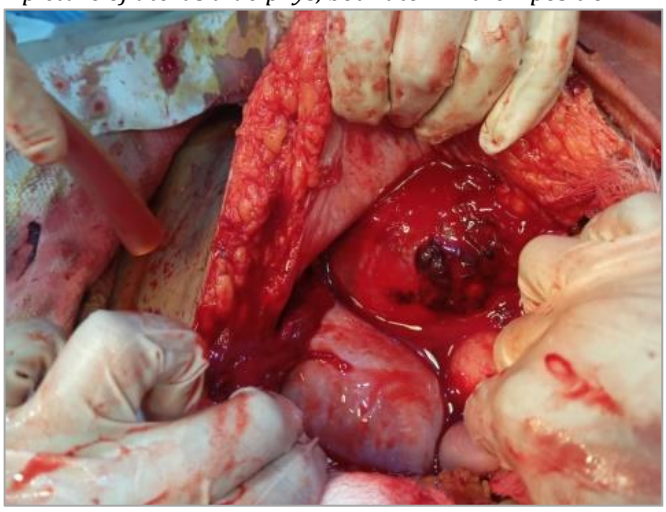
Mullerian duct anomalies (MDAs) are congenital defects resulting from abnormal embryological development of the mullerian ducts during the 6th to 22nd week of fetal life. These developmental abnormalities can include failure of development, fusion, canalization or reabsorption, leading to various form of MDAs such as the septate uterus, bicornuate uterus, arcuate uterus , unicornuate uterus, didelphy uterus, and complete agenesis. The overall incidence of MDAs is estimated to be up to 7% in the general population, and up to 25% in those with a history of both infertility and miscarriage[1-5]. Uterine didelphys is characterized by the presence of two uteri. In addition there may or may not be two cervices, longitudinal vaginal septum.[6] This arrives from a lack of fusion of mullerian ducts[7] in some instances, it may coexist with obstructed hemivagina and renal agenesis, also known as herlyn-werner-wunderlich (HWW) syndrome [1,7,8]. Uterus didelphys is a rare form of MDAs accounting for 11% of all MDAs.[3,7,8] Pregnancies occurring in uteri with MDAs are associated with an increased risk of complications [2,8,9].This risk is further seen more in cases of twin pregnancies with both cavities which is extremely rare, occurring at a rate of approximately 1 in 1,000,000 pregnancies. There are only a few documented case reports detailing such occurrences.[6,10] This case reports a mother with twin pregnancies one fetus in each cavity discovered incidentally during laparotomy for acute abdomen suspected for cute appendicitis.

Case Representation

A 23-year-old woman, Para 1 gravida 3, presented at a gestational age of 17 weeks with pain in the right iliac fossa, pain increased gradually with the onset of fever and nausea. After appropriate investigations and physical examination patient was shifted to the operating room for appendectomy. Incidentally it was found out patient had 2 uteri [fig .1] and both fetus were in separate cavity however, the right uterus was ruptured and one fetus couldn't survive. Right uterus was primary repaired using continuous sutures in double layers. A vaginal and cervical examination revealed a single vagina and cervix. An abdominal ultrasound was performed to check for renal agenesis, which showed normal findings with both kidneys in normal size and shape. This patient was scheduled for follow up visit and discharged in stable and improving condition.

Figure 1

A picture of uterus didelphys, both uteri in their position



The patients' menarche began at the age of 24, with regular menstrual cycles. She never experienced dysmenorrhea. Additionally she had one healthy baby delivered via caesarian section 2.5 years ago.

DISCUSSION

Uterine didelphys is a typically asymptomatic, but when symptoms do occur they may include dysmenorrhea, dyspareunia, and, in rare cases, hematocolpos or hermetracolpos. [1, 4,7,10] In this patient she did not report any symptoms. The diagnosis of didelphys uterus and other Mullerian duct anomalies (MDAs) relies on both clinical evaluation and imaging studies, often supplemented by additional procedures. Abdominopelvic ultrasound is usually the first imaging modality. Magnetic resonance imaging (MRI) is a key imaging modality because it can delineate pelvic structure and identify concomitant anomalies. Other diagnostic options include hysteroscopy, hysterosalpingography (HSG) and laparoscopy. [1,3,4,6]

Fertility outcomes in women with a didelphys uterus are generally better than those with other types of MDAs but still inferior to those with normal uterus.[1, 8] Some studies have indicated that outcomes may be comparable to those of other MDAs [1,8] Some studies have indicated that outcomes may be comparable to those of other MDAs [1.] Women with MDAs face an increased risk of spontaneous abortion. [1,2,11] Pregnancies occurring in utero with MDAs are complicated with miscarriage, premature birth, malpresentation, fetal growth restriction, ectopic pregnancy, and a heightened risk of caesarian section (CS). The increased CS rate if primarily attributed to malpresentation and labor dystocia rather than being a direct indication for surgical delivery.[1, 2,6,12,13] Twin pregnancies in a uterus didelphys where each fetus occupies separate cavity are exceedingly rare, occurring at an estimated rate of 1 in 1,000,000 pregnancies. This scenario presents unique challenges for obstetricians for limited number of cases. While a didelphys uterus does not inherently necessitate cesarean delivery, vaginal delivery should be considered first based on several factors like: the number of pregnancies, fetal presentation, previous delivery methods, and maternal preferences.

CONCLUSION

Didelphys is a rare uterine anomaly and dicavitary twin pregnancy is extremely rare occurrence. Delivery planning in uterus didelphys must be individualized, taking into account fetal presentation and maternal preferences, with consideration given to Normal Vaginal Delivery when appropriate.

Patient Consent

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

Ethical Approval

Ethical approval is exempted for case reports by Shaheed Mohtarma Benazir Bhutto Medical University provenance and peer review. This article was not commissioned and was peer-reviewed.

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