ISSN 2515-8260 Volume 10, Issue 1, Winter 2023

CASE REPORT

Recurrent pregnancy loss in case of malformed uterus didelphys, a case study with review of literature

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Received: 20 November, 2022 Accepted: 25 December, 2022

ABSTRACT

Didelphys uterus is a very rare Mullerian duct anomaly. It is an embryological abnormality resulting from an abnormal fusion of the paramesonephric ducts. It is characterized by complete duplication of uterine horns, cervix, and very often the vagina or the presence of longitudinal vaginal septum. Most women with uterus didelphys are asymptomatic; some cases may present with dyspareunia or dysmenorrhea. The anomaly is associated with a higher risk of miscarriage, preterm labor, breech delivery, and decreased live births. We concluded that uterus didelphys could be asymptomatic, making an early diagnosis difficult. This pregnancy belongs to a high-risk group and requires specialized management. Recurrent pregnancy loss significantly increased in women with uterine anomalies and affected 2%-5% of couples. Many women have more than one possible etiology causes that could contribute to their pregnancy loss. Here, we present a clinical case of a patient with uterus didelphys with previous recurrent four first/second trimester miscarriages who successfully conceived, carried her pregnancy, and gave birth to a healthy infant by cesarean section.

INTRODUCTION

Müllerian duct anomalies are a spectrum of congenital defects arising from the failure of fusion of the Müllerian ducts at 12–16 weeks' embryologic development. Didelphy uterus is a rare mullerian duct anomaly compared to other anomalies [1]. Uterine malformations arise due to abnormal formation, fusion, or resorption of the Müllerian ducts during fetal life. Reproductive organ malformations occur in approximately 4.3% of fertile women and approximately 3.5% of infertile women, and the uterine defect that contributes most to infertility is the unicornuate uterus. The most common defects of the reproductive organ are the septate uterus (approximately 35%) and the bicornuate uterus (approximately 25%) [1].

In contrast, uterus didelphys is one of the rarest, accounting for 10% of all Müller's duct anomalies [2]. Uterus didelphys arises from the incomplete fusion of Müller's ducts between 12 and 16 weeks of fetal life, followed by a dilation of the uterine horns, cervix, and, very often, the vagina [3]. The defect's clinical course is asymptomatic in most patients,

contributing to the diagnosis being made only at reproductive age. However, it is sometimes manifested by dyspareunia or painful menstruation [4]. A uterine defect increases the risk of obstetric complications, indicating the need for frequent checks during pregnancy. Above all, there is an increased risk of spontaneous miscarriage, preterm births, births in the breech position, and a reduced number of live births compared to a normal uterus [5]. Preterm births occur in approximately 17.44% to 33.3% of women with uterus didelphys [6]. The diagnosis is based on imaging studies—ultrasound, HSG, and MRI. Here, we present a clinical case of a patient with uterus didelphys who successfully conceived, carried her pregnancy, and gave birth to a healthy infant by cesarean section.

CASE REPORT

30 yrs old female Gravida 5 para 4 with Recurrent four consecutive spontaneous first/ second trimester pregnancy losses. She was investigated for recurrent pregnancy loss. A complete workup was done .pelvic scan, antiphospholipid antibody syndrome screening, parental chromosomal study, and fetal karyotyping were done. On the pelvic scan, she was initially detected as a bicornuate/septate uterus, later diagnosed as complete uterus didelphys. The patient conceived naturally. She was put on Aspirin and low molecular weight heparin under close follow-up. Because of cervical shortening and recurrent miscarriage, the Mac Donald stitch was applied at 16 weeks of gestation. The patient continued pregnancy till term. She was scheduled for an elective cesarean at 39 weeks because of breech presentation with bad obstetric history. The emergency cesarean was done at 37 weeks +5 days for premature rupture of membranes with breech presentation in labor. She delivered a healthy baby boy with a birth weight of 3.291 kg. Intraoperative findings confirmed uterus didelphys with the fetus in the right horn. Malrotation of the uterus and multiple adhesions were noted with slightly difficult fetal extraction. No intraoperative/postoperative complication was noted. Post delivery period was uneventful.

Figure 1: Clinical Picture

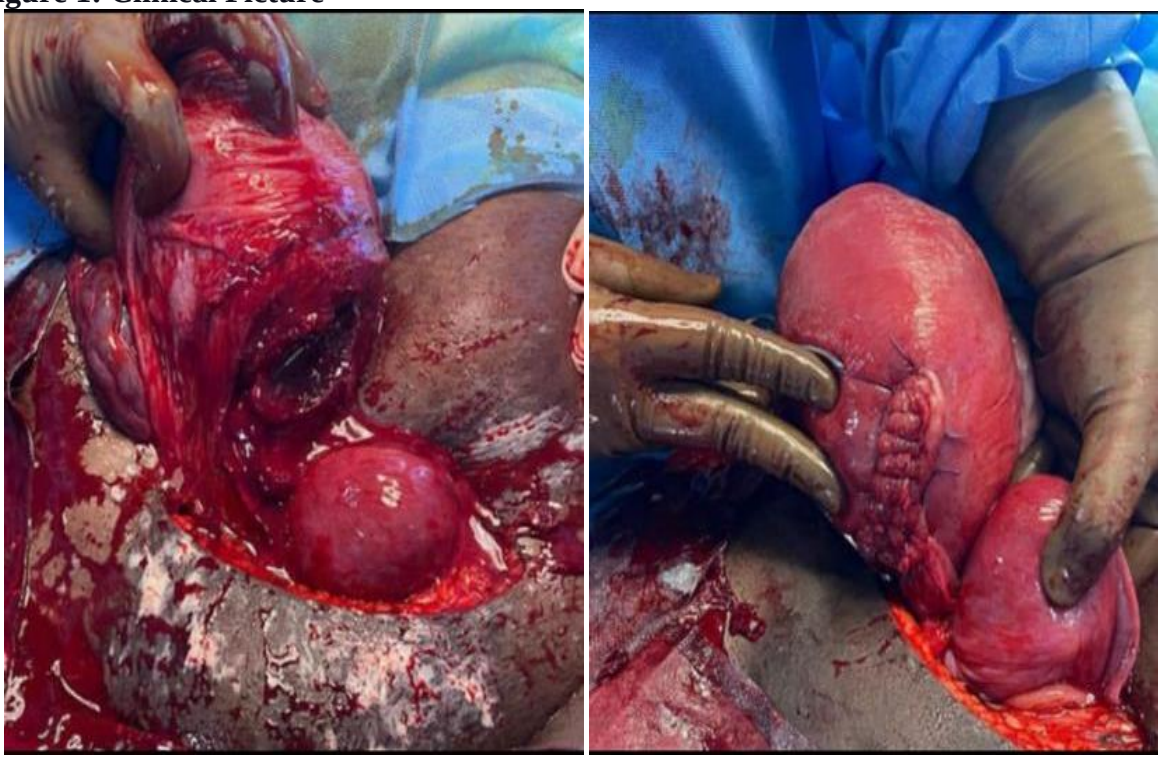
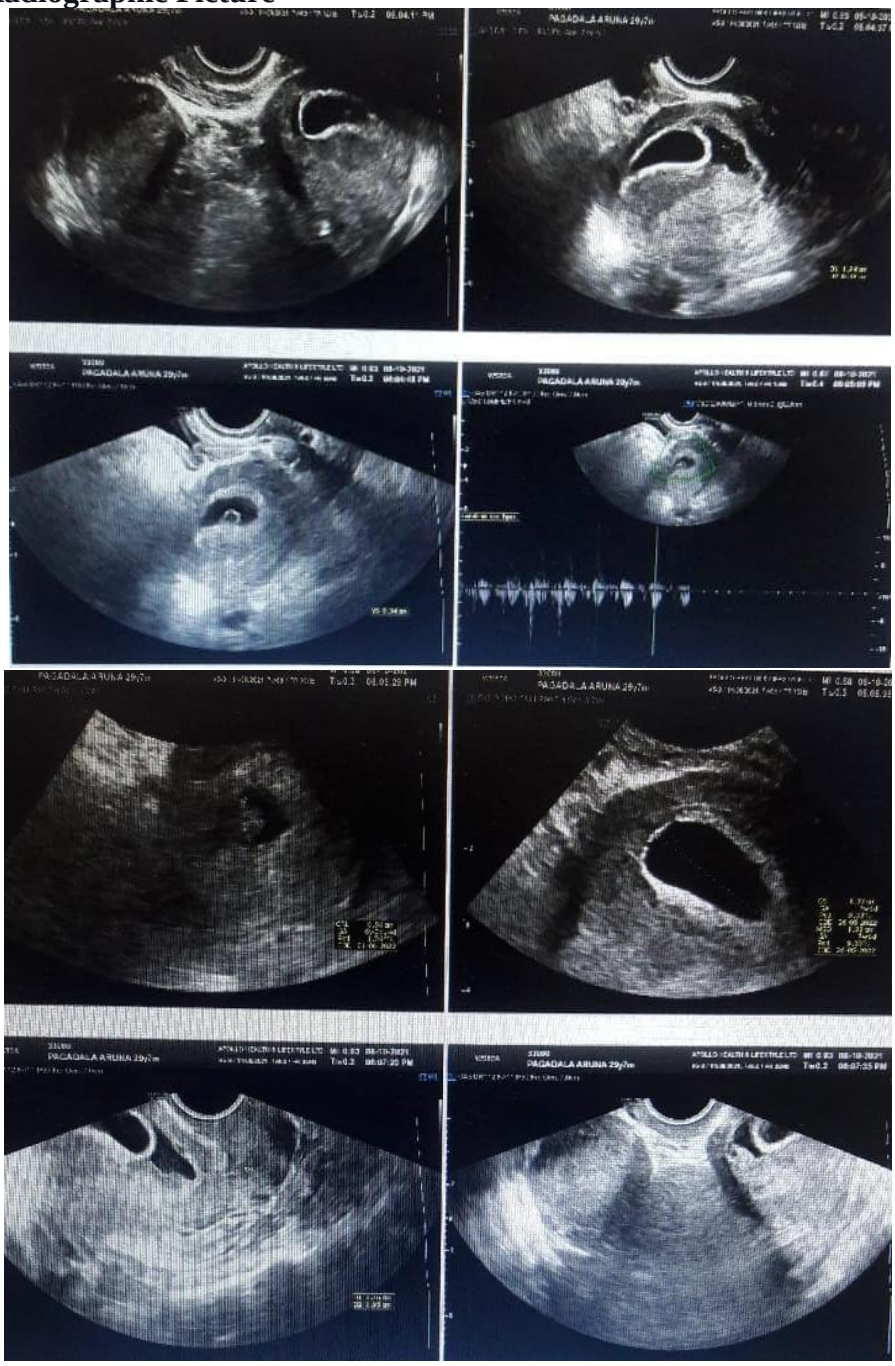


Figure 2: Radiographic Picture



DISCUSSION

The rate of spontaneous abortion was significantly higher in women with uterine anomalies compared to those with normal uteri [7-9]. Another study by a different author found obstetric complications, such as recurrent pregnancy loss, high in women with uterine anomalies. Women with uterine didelphys have a high fetal loss rate, with approximately 43% of pregnancies ending in spontaneous abortion [10]. The same report of a large retrospective longitudinal study of 3181 patients demonstrated poor reproductive performance in women with didelphys uteri with a higher rate of preterm delivery, spontaneous abortion, and the lowest chance of having a term delivery than the other MDAs. In contrast, a study on Uterine anomalies and pregnancy outcomes following resectoscope metroplasty showed women with didelphys uterus had a low rate of spontaneous abortion and

a high rate of term deliveries [11-13]. The two pooled analysis studies investigated no difference in clinical pregnancy rates and no significant difference in first-trimester miscarriage in women with unification defects (unicornuate, bicornuate, and didelphic uteri) when compared with women with a normal uterus [14]. A case we have reported had a poor reproductive performance. The highest incidence of first-trimester miscarriage and poor reproductive performance was noted among women with canalization defects, such as the septate uterus [15]. The same report by Several authors [10-14] That in agreement, recurrent pregnancy loss is highest in patients with a septate uterus.

In contrast, in a recent study on the reproductive performance of women with uterine anomalies: an evaluation of 182 cases, a complete septate uterus had the best fetal survival rate [16]. More than one possible risk factor can cause recurrent pregnancy loss, and women with more than one possible etiology cause of pregnancy loss were at higher risk. For all women presenting for recurrent pregnancy loss evaluation, it is good to assess for metabolic disorders and other contributing factors for miscarriage. The highest incidence of preterm labor was noted among women with an arcuate uterus. The arcuate uterus relatively has the highest live birth rate.

In contrast, septate and bicornuate uterus have significantly reduced live birth. The Septate uterus is the most common type of uterine anomaly and is noted to have the highest incidence of early spontaneous abortion. The abortion rate for septate uterus patients is about double that for bicornuate. Unicornuate and didelphys uterus seem to have a similar effect on reproduction since the didelphy uterus is seen as asymmetrical duplication of the unicornuate uterus [16]. All uterine anomalies increase the chance of fetal malpresentation at delivery.

CONCLUSION

Congenital and acquired uterine abnormalities are associated with recurrent pregnancy loss in the first and second trimesters. Müllerian duct anomalies are seen in approximately 0.5% of the general population. Didelphys uterus is among the rarest of these anomalies.[3] The absence or scanty clinical signs of uterine didelphys make early diagnosis difficult. Infertility is not caused by uterus didelphys directly. Therefore diagnostics should not be limited to visualizing the defect. It is worth looking at the couple holistically, so the diagnostics of both the woman and the man should be expanded. Focusing only on the uterine defect as a possible cause of infertility may obscure a true genesis. A cesarean section should be considered if uterus didelphys coexist with other medical factors, such as a septum in the vagina or the patient's concerns. Decision-making emphasizes the priority of proper communication between the medical team and the patient, especially when making critical decisions regarding the course of pregnancy and childbirth. Congenital uterine anomalies are associated with poor reproductive outcomes. More than one possible risk factor can cause recurrent pregnancy loss, and women with more than one possible etiology cause of pregnancy loss were at higher risk. For all women presenting for recurrent pregnancy loss evaluation, it is good to assess for metabolic disorders and other contributing factors for miscarriage. A case we had reported had more than one possible cause for her pregnancy loss.

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