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Uterine Didelphys with Pregnancy Outcomes: A Case Report

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Abstract
A Uterine Didelphy, also known as a "Double Uterus", is one of the least common variety amongst Mullerian Duct Anomalies where the uterus is present as a paired organ when the embryogenetic fusion of the Mullerian Ducts fail to occur. A 21 years old 4th gravida mother came at Gafargaon Adhunik Hospital at her 6 weeks of pregnancy with previous history of three spontaneous miscarriages probably at her 2nd trimesters which she could not mention clearly. After those she again conceived naturally but Preterm Birth developed at her 32+ weeks and Cesarean Section was done due to breech presentation but the baby died in the early neonatal period. In this pregnancy, TVS at her 7 weeks pregnancy revealed Bicornuate Uterus. She was in routine Antenatal check-up and was treated with weekly injection of 17 alpha hydroxyprogesterone along with other pregnancy supplementation up to 36 weeks. Then Elective Cesarean Section was done at 38 weeks due to Breech presentation. A healthy male baby of 2.6 kg was delivered and its neonatal period was uneventful. However, there is insufficient data on its surgical correction (Metroplasty); though it is usually not indicated. Therefore, more studies are needed to determine the better reproductive and obstetric outcomes, so that Clinicians can properly manage these patients.

Keywords: Uterine Didelphy, Mullerian duct anomaly, pregnancy outcomes

Introduction
Most congenital anomalies go undiagnosed or unrecognized. The incidence of Mullerian duct anomalies of any variety is believed to be under 5% [1]. Endovaginal sonography is one of the primary assessment modalities used to diagnose uterus didelphys, although uterine anomalies may be detected in follow-up to discovery of renal anomalies. The uterus is embryologically paramesonephric duct (Mullerian duct) origin. Mullerian duct anomalies are congenital defects of the female genital system that arise from abnormal embryological development of any degree of failure of fusion of Mullerian ducts or subsequent failure of resorption of the tissue results in a spectrum of clinical manifestations. Incidence of these abnormalities ranges from 0.5-5% in general population [1-3]. Approximately 60% of women with uterus didelphys have successful full-term pregnancies [2]. Uterine development normally occurs between 6 and 22 weeks of gestation. The female genital tracts and urinary tracts are closely related, not only anatomically but also embryologically. About 10% of infants are born with some abnormality of the genitourinary system. A longitudinal vaginal septum is also present that may range from thin and easily displaced to thick and inelastic. Initial suspicion of the condition followed by the diagnosis usually begins with routine speculum examination where visualization of anatomical abnormalities warrants further investigations. Pregnancy in such a uterus causes poor pregnancy outcome, like spontaneous abortion, preterm labor, abnormal presentation and increased incidence of caesarean delivery [1, 2, 4]. Most women with a didelphys uterus are asymptomatic, but some present with dyspareunia or dysmenorrhea in the presence of varying degree of vaginal septum. Rarely, genital neoplasms, hematocolpos /hematometrocolpos, and renal anomalies are reported in association with diadelphys uterus6. Magnetic Resonance Imaging (MRI) is also accurate and valuable in diagnosis MDAs as hysterosalpingogram, hysteroscopy and laparoscopy are even more. So it is noninvasive and can also diagnose associated urinary tract abnormalities at the same time [5].

Sometimes, the shape of the uterus that the fetus has implanted in leads to miscarriage. As well, women with a double uterus generally have smaller uteri, which can lead to preterm labor [3]. While some patients have primary infertility, others are asymptomatic. A normal pregnancy may occur in some cases, but obstetric problems like spontaneous abortion, stillbirth, preterm birth, and malpresentation may also occur [6]. In this case report, we can discuss a rare case didelphys uterus in woman with history of recurrent miscarriage who successfully conceived, carried her pregnancy to 35 weeks and delivered by Lower Segment Caesarean Section (LSCS) due to preterm labor with thick longitudinal vaginal septum.

Case Presentation

A 21 years old 4th gravida mother came at Gafargaon Adhunik Hospital at her 6 weeks of pregnancy with previous history of three spontaneous miscarriages probably at her 2nd trimesters which she could not mention clearly. After those she again conceived naturally but Preterm Birth developed at her 32+ weeks and Cesarean Section was done due to breech presentation but the baby died in the early neonatal period. In this pregnancy, TVS at her 7 weeks. Pregnancy revealed Bicornuate Uterus. She was in routine Antenatal check-up and was treated with weekly injection of 17 alpha hydroxyprogesterone along with other pregnancy supplementation up to 36 weeks. Then Elective Cesarean Section was done at 38 weeks due to Breech presentation. A healthy male baby of 2.6 kg was delivered and its neonatal period was uneventful.

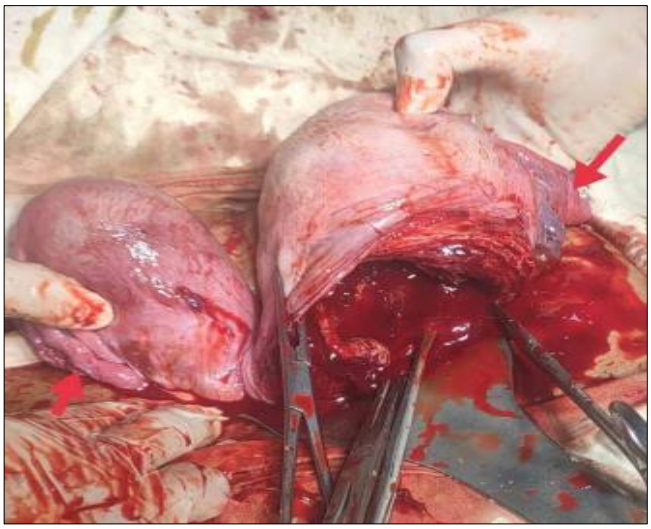

Fig 1: Uterine Didelphys.

Discussion

Among the mullerian duct anomaly the didelphys uterus is very rare. The reproductive and gestational outcomes in comparison to other common abnormalities are varied. Didelphys uterus is not an indication for caesarean delivery unless the vaginal septum is thick and inelastic resulting in an increased risk for vaginal dystocia. When a didelphys uterus is diagnosed, renal anomalies should also be investigated. A didelphys Uterus remains a rare mullerian duct anomaly in comparison to other anomalies. Most women with a Didelphys uterus are asymptomatic but dyspareunia, dysmenorrhea, infertility may complicate in non-pregnant women but there is an increased risk of spontaneous miscarriage, Fetal Growth Restriction, Preterm Birth with an 45% or lower chance of carrying a pregnancy to term in comparison to a normal uterus, indicating a poor reproductive performance. Unicornuate uterus was reported to have the poorest fetal survival, the didelphic uterus was believed to have 23% abortion rate and bad obstetrics outcome [4]. Most woman with didelphys uterus are asymptomatic, but may present with dyspareunia or dysmenorrhea in the presence of a thick, sometimes obstructing vaginal septum. This obstructing vaginal septum can lead to hematocolpos or hematometrocolpos and patient present with chronic abdominal pain. Rarely genital neoplasms and endometriosis are reported in association with cases of didelphys uterus [2, 7]. A retrospective study on fertility and obstetric outcome done by Zhang et al in China demonstrated that women with didelphys uterus more frequently required infertility treatment than other anomalies to conceive [8]. Some measures may be undertaken to increase fertility, decrease chances of prematurity and improve the quality of life. Surgical correction of a didelphys uterus (Metroplasty) is not usually indicated and the literature on women with didelphys uterus who underwent Metroplasty is very limited. Observational studies women with septate or bicornuate uteri worth a history of repeated anomalies and infertility demonstrating improvement in reproduction and gestational outcome after metroplasty [9]. Longitudinal vaginal septum excision is considered if the women is symptomatic complaining of dyspareunia or pain from hematometrocolpos due to obstruction. Some septa can be easily displaced to the side to facilitate vaginal birth and others may be thick and inelastic, increasing the risk of vaginal dystocia and requiring excision. A didelphys uterus is not an indication for cesarean delivery and this vaginal delivery should be considered first [10, 11, 12]. One case report identified this syndrome in a newborn who was diagnosed with renal agenesis in utero and born with a protruding vaginal mass and a hydrocolpos was found on imaging [13]. It is a very rare congenital anomaly of urogenital tract involving mullerian and wolffian duct. It is characterized by a triad of didelphys uterus, obstructed hemi-vagina and ipsilateral renal agenesis. In case of single pregnancy in uterus didelphys, literature shows the right hemi uterus having pregnancy predominantly [14, 15]. In uterus didelphys, non-pregnant hemi uterus is also subjected to hormonal influences as the pregnant hemi uterus and it remains as a pelvic organ posterior to the pregnant hemi uterus and hampers delivery of the fetus [7]. The case report describes a single successful pregnancy in left hemi uterus, which is very rare. At present, there are very few case reports on uterine didelphys, therefore more studies are needed in order to better determine the reproductive and gestational outcomes. At present, literature regarding didelphys uterus are limited. So, to determine the reproductive and gestational outcomes more studies are needed. As a result, the clinicians can adequately advise and care for their parents.

Conclusions

The didelphys uterus is a very rare mullerian duct anomaly with varying reproductive and obstetric outcomes in comparison to other more common anomalies. However, there is insufficient data on its surgical correction (Metroplasty); though it is usually not indicated. Therefore, more studies are needed to determine the better reproductive and obstetric outcomes, so that Clinicians can properly manage these patients.

Conflict of Interest
Not available

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Not available

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