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Case Report

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Didelphys Uterus: A Reason for Recurrent Breech Presentation and Operative Abdominal Delivery

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Abstract

Background: A didelphys uterus results from failed fusion of the paired Mullerian ducts characterized by the presence of two uteri, two cervixes, with or without a longitudinal vaginal septum. Pregnancies develop in one of the two horns, and of the major uterine malformations, the didelphys uterus has the best reproductive prognosis. Pregnancy is associated with an increased risk of malpresentations and premature labor, although many patients will have no reproductive difficulties.

Case presentation: Here we report a case of a 24 years gravida 4 para 3 who presented at gestational age (GA) of 38 weeks with compliant of urge to bear down of one-hour duration. She had three previous cesarean scars which were done all for breech presentation. The current pregnancy was also breech presentation. Emergency cesarean section (CS) was done to effect female alive neonate weighing 2600 gram with good Apgar score.

Conclusion: Didelphys uterus is one of the major uterine malformations which has best reproductive prognosis.

Keywords: Breech; Previous Caesarean Section; Uterus Didelphys; Longitudinal Vaginal Septum

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Introduction

Uterus didelphys, also known as duplicated uterus, is an embryological abnormality resulting from failure of fusion of Mullerian ducts, causing full uterine development to erroneously occur bilaterally [1]. Most women with a didelphys uterus are asymptomatic, but some present with dyspareunia or dysmenorrhea in the presence of a varying degree of longitudinal vaginal septum [2]. Rarely, genital neoplasms, hematocolpos or hematocolpometra, and renal anomalies are reported in association with didelphys uterus. Regarding the outcome of pregnancy in patients with didelphic uterus, Heinonen reported a 30% of miscarriage, 43% of malpresentation, and 82% of cesarean section and 11% of small for gestational age [3]. Patients with uterus didelphys had a preterm birth risk of 3.58 times higher, with a 3.7-fold increase in malpresentation [4]. Despite some of these complications, there are many cases of women with a didelphys uterus that did not exhibit any reproductive or gestational challenges. In this case report, we discuss a rare case of didelphys uterus in a woman who had three previous cesarean sections which was done for breech presentations, current pregnancy which was also breech and was delivered by cesarean section without any complications.

Case Presentation

A 24 years old Gravida four para three (all alive) mother whose GA 38 weeks calculated from from second trimester ultrasound done at 16 weeks was 38 weeks has presented to labor ward with the compliant of urge to bear down of one-hour duration. She had antenatal care visits at a local health center and told to have no problem. She had three previous cesarean sections at Jimma university medical center which was for thick longitudinal vaginal septum and breech presentation at term, 8 years back, 5 years back and 3 years back, for first, second and third respectively. All had normal birth weight. She was told to have anomaly of uterus during the first surgery but with no detail about it. She has mild discomfort during sexual act but didn't seek treatment. She had no personal or family history of diabetes mellites, hypertension or other chronic medical illnesses. The pregnancy was planned wanted and supported. The patient and her husband decided not have any more children and requested for permanent contraception.

On physical exam she was in labor pain, normotensive, and afebrile. On abdominal examination; the uterus was term sized, longitudinal lie, breech presentation, positive fetal heart beat (FHB=146 beat per minute), there was suprapubic transverse old scar and she had three contractions in ten minutes which lasted for 30 to 40 seconds. On digital pelvic examination; there was a thick longitudinal vaginal septum measured about 1.5 centimeters (Figure 1) and two separate cervixes. The left cervix was 3 centimeters dilated, 60% effaced, fetal part at high station and the membrane was intact while the right cervix was closed. Abdominopelvic ultrasound examination showed two uteri and live fetus in the left uterus which was breech, with an estimated

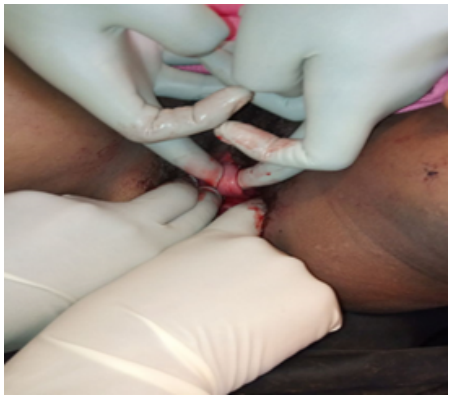

Figure 1: Picture showing thick longitudinal vaginal septum which measured about 1.5 cm.

fetal weight of 2760 grams and fundal posterior placentation. The right uterus was empty but enlarged with thick endometrium. Both kidneys were seen and had normal corticomedullary differentiation and in normal anatomic sites.

With the final diagnosis of early term pregnancy, latent first stage of labor and three previous cesarean scars she was prepared for emergency cesarean section. Upon entry into the abdomen, there was moderate adhesion between anterior abdominal wall and right and left uteri which was sharply dissected. The intraoperative finding showed that two uteri with their own ovary and fallopian tube, the fetus was in the left uterus, the previous cesarean scars were seen on both uterus which were transverse over the lower uterine segment (Figure 2 and Figure 3), lower uterine segment transverse cesarean section was done to effect the delivery of a female alive neonate weighing 2600 grams with an Apgar score of 7 and 9 on the first and fifth minutes respectively. Bilateral tubal ligation was done using modified pomeroy technique. The patient had no complication in the postoperative period and discharged on her third postoperative day. Ultrasound scanning was done 12 weeks after delivery and showed two uteri with endometrial slits seen clearly (Figure 4).

Discussion

A uterus didelphys results when bilateral Mullerian ducts do not fuse, but develop side by side. It is a very rare Mullerian duct anomaly in comparison to other anomalies described in the Buttram and Gibbons classification. Most of the data on the clinical significance and outcomes

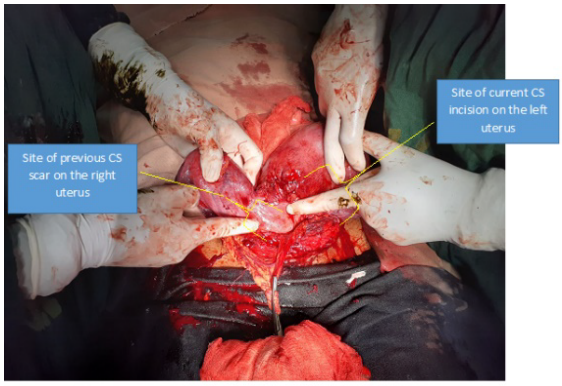

Figure 2: Picture showing two uterus and the pregnancy was in the left uterus and lower uterine segment cesarean section was done over the left uterus to deliver the fetus which was finally repaired in two layers. The two index fingers point to the cervixes of both uteri which were both appreciated on digital examination.

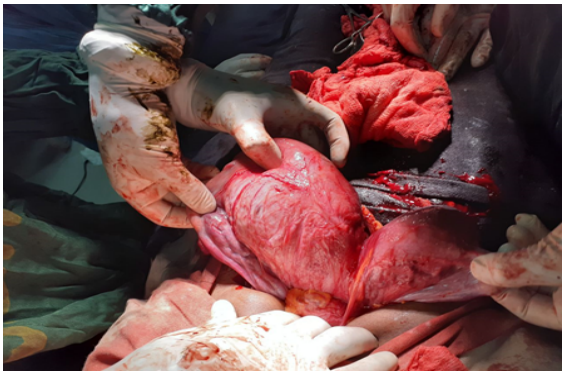

Figure 3: Picture showing the posterior walls of both uteri with their ovaries and fallopian tubes (the fingers showing the ovaries and tubes).

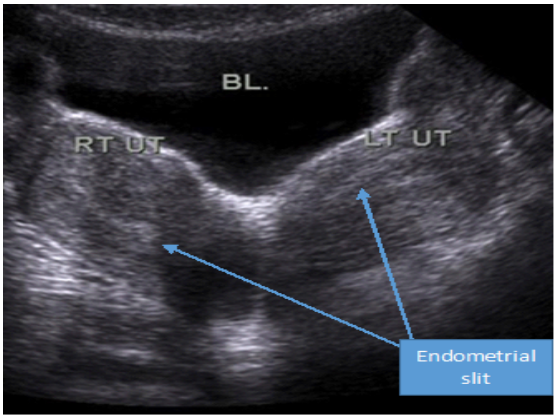

Figure 4: Ultrasound picture showing right and left uteri with clearly visible endometrial slits which was done 12 weeks after delivery. The size of right uterus is 54mmx43mmx45mm and its endometrial slit thickness is 11mm. The size of left uterus is 55mmx62mmx46mm and its endometrial slit thickness is 13mm.
Where: mm-millimeter, RT-right, LT-left, UT-uterus, BL-bladder.

of this uterine anomaly are based on small retrospective, observational, or case studies. But it is estimated to be found in the frequency of 1 in 1000-30,000 women [5]. Most women with a didelphys uterus are asymptomatic but may present with dyspareunia or dysmenorrhea in the presence of a thick, sometimes obstructing, vagina septum. This obstructing vaginal septum can lead to hematocolpos or hematocolpometra and thus present as chronic abdominal pain as well. Rarely, genital neoplasms and endometriosis are reported in association with cases of didelphys uterus [6]. In our case, the patient was complaining dyspareunia but didn't seek for treatment.

The fertility of women with untreated didelphys uterus has been shown by some sources to be better than those with other Mullerian duct abnormalities but still less than women with normal uterine anatomy.

Didelphys uteri have the best pregnancy outcomes of the uterine anomalies and have best prognosis so surgery is rarely necessary. It has the best chance for a successful pregnancy which is about 57% [7] with 64% fetal survival rate [8]. But still at high risk of obstetrics complications like malpresentation which occurs in about 43% of cases [8]. In our case, she delivered all at term and all were breech presentations and all are alive. Even if pregnancy outcome of women with uterus didelphys is comparatively good, they still belong to a high-risk group. The presence of a uterus didelphys carries a higher likelihood of cesarean delivery for malpresentation or for labor dystocia reasons.

Table 1: Review of cases of didelphys uterus.

Ref no	Age	G-P-A	GA at time of delivery	Past obstetrics history	Number of fetus and presentation	MOD	Out come	Associated anomalies
2	29	G2A1	38 weeks + 4 days	-	Singleton Cephalic	vaginally	Male neonate weighing 2660 gram	noncommunicating, thick vaginal septum
10	35	G1	38 weeks + 6 days	-	Twins with both cephalic	C-section	Twin A weighed 3195 g Twin B weighed 2705 g (sixth percentile for gestational age)	absent left kidney the left cervical canal appeared to be incomplete without any communication to the vagina
6	21	G1	39 weeks	-	Singleton breech	C-section	Male neonate 2500 gram	Longitudinal vaginal septum
11	32	G2P1	35 weeks	Has one delivery by C-section	Singleton breech	C-section	Male neonate 3100 gram	longitudinal vaginal septum
12	21	G1	39 weeks	-	Cephalic singelton	C-section for fetal bradycardia	Male neonate 2240 gram	longitudinal vaginal septum
13	Mid 20s	G1	38 weeks	-	Singleton breech	C- section	Neonate weighing 3650 grams	transverse vaginal septum
14	24	G1	8 and1/2 months amenorrhoea	-	Twins with both cephalic	C- section	1st twin 1920 grams and 2nd twin 2012 grams	Complete Vertical vaginal septum
Our case	24	G4P3	38 weeks	Three previous cesarean deliveries all were for breech presentation and all are alive	Singleton breech	C- section	female alive neonate weighing 2600 gram	longitudinal vaginal septum

Breech presentation and the fact that the nonpregnant uterus may block the pelvic inlet and cause dystocia are two of the major reasons for a high rate of cesarean sections of patients with uterus didelphys [9]. In our case, all the deliveries were by Cesarean section for thick longitudinal vaginal septum and breech presentation. Longitudinal vaginal septum excision is considered if the woman is symptomatic, complaining of dyspareunia or pain from hematocolpometra due to obstruction [2]. However, in our case, the patient had only mild discomfort and didn't need treatment for the longitudinal vaginal septum. the patient and her husband claimed they didn't need any more children and requested for permanent contraception and bilateral tubal ligation was done. Comparisons of this case with other case reports published previously are summarized in table 1 below. Uterus didelphys is a reason for recurrent fetal malpresentation and hence operative abdominal delivery. Thus, meticulous evaluation of a patient suspected of congenital uterine anomaly is essential to diagnose the specific class and counsel for better sexual and reproductive health outcomes.

Conclusion

The pregnancy outcome of women with uterus didelphys is comparatively good, but they still belong to a high-risk group and need strict prenatal care.

Competing Interests

The authors declare that they have no competing interest.

Consent

Written informed consent was obtained from the patient 's next of kin for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Authors' Contributions

TD did the literature review and prepared the manuscript, DA was involved in the literature review and manuscript preparation, made the final corrections and approved the manuscript. Both authors read and approved the final manuscript.

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