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Case Report

Uterine didelphys: an incidental finding during caesarean section

Reena N. R. Pillai[1], Sai L. S. K. Amma[2]*, Sathiamma P. Kutty[2]

[1]Department of Obstetrics and Gynecology, Government Victoria Hospital, Kollam, Kerala, India
[2]Department of Obstetrics and Gynecology, Travancore Medical College Hospital, Kerala University of Health Sciences, Kollam, Kerala, India

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***Correspondence:**
Dr. Sai L. S. K. Amma,
E-mail: saisreemalamel001@gmail.com

ABSTRACT

Mullerian duct anomalies are congenital defects of the female reproductive system resulting from abnormal embryological development. Uterine didelphys occurs due to the failure of embryonic fusion of the Mullerian ducts. This results in the presence of a double uterus with two separate cervices, and often a double vagina; it is extremely rare and can have unpredictable effects on reproductive health and gestation. We report a case of accidental finding of uterine didelphys in a 27-year-old gravida 5 para 4 live 3 with previous three term vaginal deliveries and one caesarean section with history of tubal sterilization, during caesarean section.

Keywords: Mullerian anomalies, Uterine didelphys, Diagnostic challenges

INTRODUCTION

The uterus is embryologically paramesonephric duct (Mullerian duct) in 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 during foetal development results in a spectrum of clinical manifestations.

The most prevalent kind of dysplasia of the female reproductive system is congenital uterine dysplasia, which has an incidence rate of 0.1% to 0.2%.[1]

The most common defects of the reproductive organ are septate uterus (approximately 35%) and bicornuate uterus (approximately 25%).[2] In contrast, uterus didelphys is one of the rarest, accounting for 10% of all Müller's duct anomalies.[3]

Uterine didelphys resulting from a lateral fusion defect, occurring in approximately 1 in 3,000 women and 11% of those with Müllerian anomalies.[4] It is defined by the presence of two uteri, two cervices, and one or two vaginas, due to the complete failure of the bilateral Müllerian ducts to fuse, a process that begins around 6 weeks and continues until 14 weeks of gestation. Most of the uterine congenital anomalies often go undiagnosed or unrecognized. Hence most of the anomalies are diagnosing during caesarean section. Infertility and miscarriage are the most common complications seen in Mullerian anomalies. The prevalence of uterine anomalies was 5.5%, 8.0% seen in infertile women, 13.3% in those with a history of miscarriage and 24.5% in those with miscarriage and infertility.[5]

The clinical course of the uterine didelphys anomaly is asymptomatic in most of the patients, however its diagnosis is being made only at reproductive age. Sometimes it is manifested by dyspareunia and or dysmenorrhea.[6] The presence of a uterine defect increases the risk of obstetric complications, like miscarriages preterm labour, and malpresentations, indicating the need for frequent checks during pregnancy.

The ESHRE/ESGE classification system identifies this congenital anomaly as U3b/C2 (complete bicorporal uterus/double "normal" cervix).[7]

Table 1:

Uterine		Cervical/ vaginal
Main class	**Sub class**	**Co-existent**
U3	Partial, complete, and bicorporeal septate	C3

Empirical studies indicate a higher prevalence of congenital uterine anomalies in certain demographics: approximately 8.0% of women facing infertility, 13.3% of those who have had miscarriages, and as many as 24.5% among individuals with both infertility and miscarriage histories, highlighting the significant effect these anomalies can have on reproductive health and outcomes.[7]

CASE REPORT

A 27-year-old G5P4L3 with previous 3 full term vaginal deliveries, previous one caesarean section with history of early neonatal death at 1 and half years back with history of sterilization. No history of antepartum, intrapartum, postpartum complications in previous pregnancies. No history of fetal growth restriction and congenital anomalies to the children. Now she was diagnosed to be pregnant when she presented with amenorrhea and mass per abdomen. Ultrasound shows single live intrauterine gestation corresponds to 33 weeks, cephalic presentation. Placenta was fundal with grade 2 maturity. Liquor was adequate for the period of gestation. AFI is 9 cm. Estimated fetal weight 2122±310 gms. Spontaneously conceived, single dose of Td taken. Folic acid, iron and calcium not taken. First trimester and anomaly scan not done. Uterine anomaly couldn't be detected during ultrasound evaluation.

She was admitted at 36 weeks in view of high BP recording. On admission her BP 196/120 mmHg. Antihypertensives were given. She was taken up for emergency caesarean section at 36 weeks 2 days in view of severe preeclampsia. Delivered a live near-term male baby of birth weight 2.66 kg with APGAR score 7 at 1 min, 9 at 5 min. When abdominal cavity explored and checked for haemostasis, bladder and bowel peritoneum were seen continues, on further examination a non-gravid uterus of 10-weeks size seen lying posterior to the pregnant left hemi-uterus and it was diagnosed as a case of double uterus (uterus didelphys) (Figure 1). Gravid uterus had one healthy looking ovary and fallopian tube on left side, no evidence of sterilization seen on left tube. Sterilization done by modified Pomeroys method. Non-gravid uterus had one ovary and fallopian tube on right with previous evidence of sterilization Two cervices were felt to fingers on per-vaginal examination. Left cervix admitted one finger while right cervix admitted just the tip of finger. Single vagina seen without a longitudinal vaginal septum. Postoperative period was uneventful.

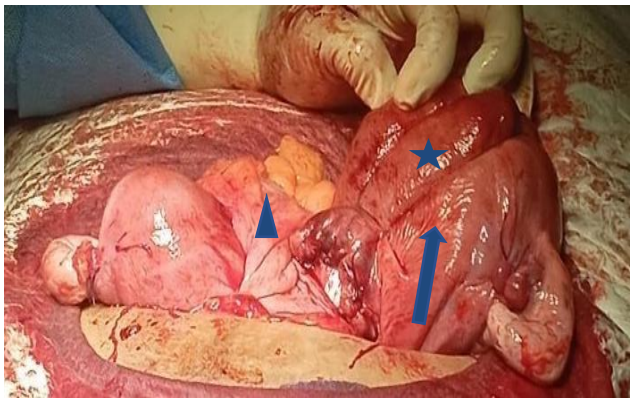

Figure 1: Non gravid uterus with right ovary and fallopian tube (star), gravid uterus where B lynch sutures are applied with left ovary and fallopian tube (arrow), and bowel peritoneum continuous in between the hemiuterus (triangle).

DISCUSSION

Women with congenital uterine anomalies experienced a higher frequency of adverse pregnancy outcomes compared to those with a normal uterus. The prevalence of Mullerian anomalies is exactly not known, but recent studies show it to be 0.1-10%.[8] Incidence of singleton pregnancy in didelphys uterus is 1:3000.[9] Among Müllerian duct anomalies, the didelphys uterus is quite rare, and its reproductive and gestational outcomes vary when compared to other common abnormalities; however, it is not an indication for caesarean delivery.

Didelphys uterus are mostly 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, chance of rupture uterus in comparison to a normal uterus, indicating a poor reproductive performance. Unicornuate uterus was reported to have the poorest foetal survival among Mullerian duct anomalies. Didelphic uterus was believed to have 23% abortion rate and bad obstetrics outcome.[4] Obstructing vaginal septum in didelphys can lead to haematocolpos or hematometrocolpos and patient may present with chronic abdominal pain.

In pregnant women who have a major fusion abnormality, placental implantation is essential. It will result in the functional loss of unilateral uterine artery. This could be the reason for placental insufficiency, foetal growth restriction, gestational hypertension and intrauterine foetal demise.[10] 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]

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. A didelphys uterus is not an indication for elective caesarean delivery and hence vaginal delivery should be considered first.[4] The review by Grimbizis et al conclude that having mullerian duct anomalies may not have negative impact on fertility. The incidence of Mullerian duct anomalies in infertile women is similar to that of general population and or fertile women.[11] A retrospective study report by Raga et al disagrees with that of reports by Grimbizi et al women who had history of infertility had significantly higher incidence of Mullerian ductal anomalies compare to fertile women.[11,12]

This patient had consecutive spontaneous conceptions and they were carried to term, the reason for this might be the development and capacity of uterus. Many patients with this condition have no symptoms and usually discovered during investigated for recurrent pregnancy loss or recurrent preterm labour. Thus, cases of uterine didelphys are largely under reported as its true incidence is not known. In our case uterine didelphys is diagnosed in her second caesarean section. During first caesarean section it was considered to be a case of unicornuate uterus since the other half might be posterior behind the bowel segments.

This case highlights the critical need for a thorough evaluation of congenital uterine anomalies especially in cases of unicornuate uterus as chances of having a communicating rudimentary horn and didelphys uterus during caesarean section. Also, this case highlights the need for evaluation of both tubes and ovaries during routine caesarean section, so as to identify Mullerian duct anomalies and the need for proper identification and documentation of sterilization if it is done.

CONCLUSION

The impact of common congenital anomalies of the female genital tract is highly variable; while some Müllerian anomalies are easily diagnosed, others present in unusual ways that complicate both diagnosis and treatment. The didelphys uterus is a rare Müllerian duct anomaly with reproductive and gestational outcomes. Therefore, more studies are needed to determine the better reproductive and obstetric outcomes, so that Clinicians can properly manage these patients. A solid understanding of basic embryology is essential for grasping the pathogenesis and clinical features of these anomalies. Even though difficult to diagnosis during a pregnancy, MDA should be kept in mind if any abnormal anatomy is seen intraoperatively or during vaginal examination and all gynecologists should be familiar with these conditions and their potential clinical presentations.

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REFERENCES

1. Nouri K, Ott J, Huber JC, Fischer EM, Stögbauer L, Tempfer CB. Reproductive outcome after hysteroscopic septoplasty in patients with septate uterus-a retrospective cohort study and systematic review of the literature. Reprod Biol Endocrinol. 2010;8:52.
2. Slavchev S, Kostov S, Yordanov A. Pregnancy and childbirth in uterus didelphys: a report of three cases. Medicina. 2020;56(4):198.
3. Wang Q, Zhang H, Yang W, Liang X, Fan Y. A Rare Case Report of Uterine Didelphys, in Which One Uterus Carried a Pregnancy While the Other Carried Twice, with a Successful Pregnancy Outcome Resulting in an Alive-Term Delivery. Open Access Library J. 2023;10(11):1-6.
4. Rezai S, Bisram P, Lora Alcantara I, Upadhyay R, Lara C, Elmadjian M. Didelphys uterus: a case report and review of the literature. Case Rep Obstet Gynecol. 2015;2015(1):865821.
5. Chan YY, Jayaprakasan K, Zamora J, Thornton JG, Raine-Fenning N, Coomarasamy A. The prevalence of congenital uterine anomalies in unselected and high-risk populations: a systematic review. Hum Reprod Update. 2011;17(6):761-71.
6. Acién P, Acién M. The presentation and management of complex female genital malformations. Hum Reprod Update. 2016;22(1):48-69.
7. Grimbizis GF, Gordts S, Di Spiezio Sardo A, Brucker S, De Angelis C, Gergolet M, et al. The ESHRE/ESGE consensus on the classification of female genital tract congenital anomalies. Hum Reprod. 2013;28(8):2032-44.
8. Braun P, Grau FV, Pons RM, Enguix DP. Is hysterosalpingography able to diagnose all uterine malformations correctly? A retrospective study. Eur J Radiol. 2005;53(2):274-9.
9. Yayna AA, Ayza A, Dana WW, Desalegn A, Kassaye G, Yemaneh A, et al. A rare case report of uterine didelphys, in which one uterus carried a pregnancy while the other prolapsed, with a successful pregnancy outcome resulting in an alive-term delivery. SAGE Open Med Case Rep. 2023;11:2050313X231159505.
10. Sharmin S, Alam D, Rahman F. Uterine didelphys with pregnancy outcomes: a case report. Chattagram Maa-O-Shishu Hosp Med Coll J. 2018;17(2):53-5.
11. Grimbizis GF, Camus M, Tarlatzis BC, Bontis JN, Devroey P. Clinical implications of uterine malformations and hysteroscopic treatment results. Hum Reprod Update. 2001;7(2):161-74.
12. Raga F, Bauset C, Remohi J, Bonilla-Musoles F, Simón C, Pellicer A. Reproductive impact of congenital Müllerian anomalies. Hum Reprod (Oxford, England). 1997;12(10):2277-81.

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