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Case Report

Uterine Didelphys in a G4P3+0: A Disturbing Phenomenon at Caesarean Section

Abdibasid Shariff Ali[1], MD; Yakub Mohamud[1], MD; Yakub I. Kune[1], D.Ped; Simon Byonanuwe[2]*, MD

[1]Department of Obstetrics and Gynaecology; Garissa County Referral Hospital, Garissa, Kenya
[2]Department of Obstetrics and Gynaecology, Kampala International University Western Campus, Bushenyi, Uganda

Corresponding author:* Simon Byonanuwe, MD; Lecturer of Obstetrics and Gynaecology, Kampala International University Western Campus, P. O. Box: 71, Bushenyi, Uganda. **Tel: +25 6775730088; **Email:** byonsimon@gmail.com

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Abstract

Introduction: Uterine didelphys is an exceptionally rare Müllerian duct anomaly that, when incidentally discovered, can be profoundly disconcerting for attending clinicians, patients, and their families. In this case report, we described an instance of undiagnosed uterine didelphys in a pregnant woman who was admitted at 39 weeks and 4 days of amenorrhea for her third delivery, wherein the condition was coincidentally identified during an elective cesarean section, resulting in a favorable fetal outcome.
Case Presentation: We presented the case of a 32-year-old gravida 4 para 3+0 patient who was admitted at 39 weeks and 4 days of amenorrhea and had a history of three prior cesarean deliveries. She underwent an elective cesarean section. A second non-gravid uterus with an ipsilateral fallopian tube and ovary was incidentally observed intraoperatively. Furthermore, a contralateral fallopian tube without an ovary was noted within the same uterus. Subsequent exploration revealed that each uterus had one fallopian tube and ovary, and both uteri shared a single cervix.
Conclusion: Vigilant preoperative assessment of all women scheduled for surgery is imperative to prevent such disconcerting, avoidable occurrences.

Keywords: Uterus, Mullerian, Didelphys, Genital

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1. Introduction

Uterus didelphys, a congenital malformation of the female genital tract, arises from the complete failure of the paramesonephric ducts to fuse during embryonic development (1, 2). It continues to haunt a significant number of both young and old females all over the world (3). It is one of the least common Mullerian abnormalities (4). The mean incidence has been reported to be 8.4% globally (5). Following failed fusion of the paramesonephric ducts early in the pregnancy, there is formation of a longitudinal vaginal septum, two vagina, and two hemi-uteri each with its separate ovary and fallopian tube. Also, because of the close proximity of the urinary system and the related genital embryological development, cases with maldevelopments involving the kidneys and the collecting duct system have been reported in some parts of the world (6). Many women do not seek medical attention until symptoms appear (7). While the majority of cases remain asymptomatic and undiagnosed for several years, this anomaly can manifest with severe symptoms, including painful menstruation, discomfort during sexual activity, subfertility, spontaneous early pregnancy losses, preterm labor and delivery, fetal mal presentations, intrauterine growth restriction, premature rupture of the fetal membranes, and an increased incidence of cesarean deliveries, among other complications (8).

In this report, we presented a case of undiagnosed uterus didelphys in a full-term pregnancy. The double uterus was discovered incidentally during the patient's third elective cesarean delivery, and the pregnancy had a favorable fetal outcome.

2. Case Presentation

A 32-year-old gravida 4 para 3+0 at 39 weeks and 4 days of amenorrhea, with three previous cesarean scars, presented at our facility, Garissa County Referral Hospital, for a scheduled elective cesarean section.

She had undergone antenatal booking for this

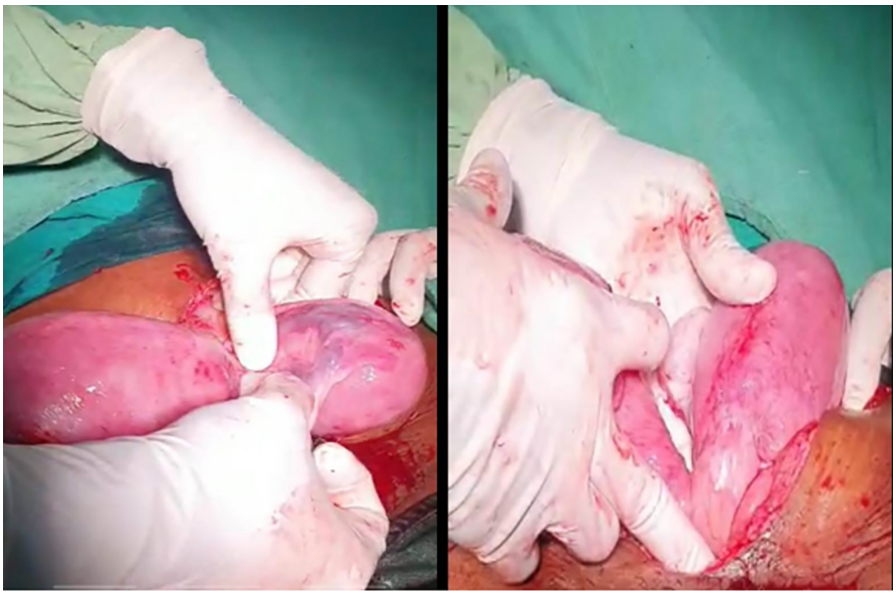

Figure 1: The figure shows the didelphys uterus as noted intraoperatively.

procedure during one of her antenatal clinic visits at this facility. She had previously experienced three pregnancies delivered by cesarean section at term, resulting in babies weighing 2.6 kg, 3.0 kg, and 2.8 kg, respectively.

Upon arrival, she underwent assessment and preparation for the elective surgery, following the hospital's protocol. This protocol includes confirmation of gestational age, patient admission, clinical and ultrasonographic assessment of fetal well-being, and an evaluation of the mother's fitness for surgery and anesthesia by the anesthetic team. The mother was admitted, informed consent was obtained, and blood work-ups were performed, particularly for baseline hemoglobin levels and blood typing.

Under spinal anesthesia, following an aseptic technique, an abdominal incision was made through the previous Pfannenstiel scar. An intact gravid uterus was observed, and a lower segment crescentric incision was made. Subsequently, a single live male fetus weighing 2.7 kg was delivered quickly. The placenta and membranes were also delivered through controlled cord traction. The uterine anatomy was restored at the incision site using polyglactin 2, and hemostasis was achieved.

However, a second non-gravid uterus with an ipsilateral fallopian tube and ovary was observed upon returning to the uterus. A contralateral fallopian tube without an ovary was also appreciated within the same uterus. Exploration revealed that each uterus had one fallopian tube and one ovary, and both uteri were connected at a single cervix, as depicted in Figure 1.

The remainder of the procedure proceeded uneventfully. The mother was discharged home with her baby in stable condition after three days of postoperative management on the ward.

3. Discussion

Müllerian defects are abnormalities that impact the genital and urinary systems, originating from a common embryological source (9). Uterine didelphys falls under Müllerian duct anomaly class III, as defined by the American Society of Reproductive Medicine. This class includes adnexal adhesions and distal tubal occlusions, among others (10). Müllerian defects result from the failure of the Müllerian ducts to fuse, typically occurring around the eighth week of pregnancy (11). The prevalence of congenital uterine anomalies in the general population has been reported to range from 5.5% to 8.0% in women with infertility, 13.3% in women with a history of abortions, and up to 24.5% in patients who have experienced both abortions and infertility (12). The majority of patients with a double uterus are asymptomatic, but a small proportion may experience painful coitus or painful menstrual periods. In some cases, there may be haematocolpos or haematometrocolpos, leading to chronic abdominal pain due to obstructing vaginal septum (13). Genital neoplasms and endometriosis have been reported in a few cases

and the rate of premature deliveries, abnormal fetal presentations, abortions, early rupture of the fetal membranes, cervical incompetence, postpartum haemorrhage, intrauterine growth restriction and cesarean deliveries are generally increased (14). According to Banu and colleagues, this anomaly has been reported in about 3.5 percent in sub fertile couples and about 13 percent in women with history of recurrent abortions (15). Our patient had no such history throughout her life so far. Although she had delivered by cesarean section for all her previous pregnancies so far, it was all due to obstetric indications. Therefore, all her pregnancies had generally been uneventful. And surprisingly, all the previous assessments including ultrasound scan during pregnancy had not reported such an anomalous uterus. This is a clear indication that this anomaly can go uneventfully throughout a woman's reproductive life.

4. Conclusion

A thorough assessment of all women scheduled for surgery is essential to prevent unnecessary complications. Maintaining a high index of suspicion for uterine anomalies is crucial for the early diagnosis of uterine didelphys.

Authors' Contributions

Abdibasid Shariff Ali: Case diagnosis and management, drafting the manuscript. Yakub Mohamud: Substantial contribution during case management, reviewing the manuscript critically for important intellectual content. Yakub I. Kune: Substantial contribution during case diagnosis and management, reviewing the manuscript critically for important intellectual content. Simon Byonanuwe: Reviewing the case, drafting the final manuscript. All authors approved of the final version to be published, and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Conflict of Interest: None declared.

References

1. Goulios C, McCuaig R, Hobson L, White S. Management of a twin pregnancy in a didelphys uterus: one fetus in each uterine cavity. BMJ Case Rep. 2020;13(8):e235256. PubMed PMID: 32843451; PubMed Central PMCID: PMC7449565.
2. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, et al. Williams Obstetrics. 25th ed. New York: McGraw-Hill Education; 2018.
3. Okafor I, Odugu B, Ugwu I, Oko D, Onyekpa IJ, Enyinna PK, et al. Undiagnosed Uterus Didelphys in a Term Pregnancy with Adverse Fetal Outcome: A Case Report. Diversity and Equality in Health and Care. 2016;13(2):177–179.
4. Shahanaj S, Didarul A, Farzana R. Uterine Didelphys with Pregnancy Outcomes: A Case Report. Chattagram Maa-O-Shishu Hospital Medical College Journal. 2018;17(2):53–55. doi: 10.3329/cmoshmcj.v17i2.39779.
5. Dorji N, Tshering S, Wangden T. Uterus didelphys with double vagina diagnosed during third cesarean section: A case report. SAGE Open Med Case Reports. 2022;10:2050313X211072967. doi: 10.1177/2050313X211072967. PubMed PMID: 35070320; PubMed Central PMCID: PMC8777336.
6. Ekanem E, Lalrinawmi L, Sinha A, Abdelrazik T. Pregnancy in a didelphic uterus: a case report of an unusual phenomenon and review of literature. Int J Reprod Contracept Obstet Gynecol. 2021;10(3):1162–1168. doi: 10.18203/2320-1770.ijrcog20210753.
7. Maki Y, Furukawa S, Sameshima H, Ikenoue T. Independent uterine contractions in simultaneous twin pregnancy in each horn of the uterus didelphys. J Obs Gynaecol Res. 2014;40(3):836–9. doi: 10.1111/jog.12219. PubMed PMID: 24245492.
8. Slavchev S, Kostov S, Yordanov A. Pregnancy and Childbirth in Uterus Didelphys: A Report of Three Cases. Medicina. 2020;56(4):198. doi: 10.3390/medicina56040198. PubMed PMID: 32340393; PubMed Central PMCID: PMC7231278.
9. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, et al. Williams Obstetrics. 24th ed. New York: McGraw-Hill; 2014. p. 683-685.
10. Crowley CM, Botros K, Hegazy IF, Donnell

EO. Uterine didelphys: diagnosis, management and pregnancy outcome. BMJ Case Rep. 2021;14(3):e242233. doi: 10.1136/bcr-2021-242233. PubMed PMID: 33782076; PubMed Central PMCID: PMC8009243.
11. Dutta DC. DC Dutta's Textbook of Obstetrics including Perinatology and Contraception. 8th ed. Jaypee Brothers Medical Publishers; 2015.
12. Linscheid C, Holoch K, Moran HK, Spoozak L. Case Report: Uterine Didelphys and Cervical Agenesis in an 18 Year-Old Woman Presenting with a Pelvic Mass. J Pediatr Adolesc Gynecol. 2021;34(5):758–760. doi: 10.1016/j.jpag.2021.02.100. PubMed PMID: 33601069.
13. Arnold KC, Thai TC, Craig LB. Uterine Didelphys with Bilateral Cervical Agenesis in a 15-Year-Old Girl. J Pediatr Adolesc Gynecol. 2018;31(1):64–66. doi: 10.1016/j.jpag.2017.08.001. PubMed PMID: 28807736.
14. Ćwiertnia A, Borzyszkowska D, Golara A, Tuczyńska N, Kozłowski M, Kwiatkowski S, e al. The Impact of Uterus Didelphys on Fertility and Pregnancy. Int J Environ Res Public Health. 2022;19(17):10571. doi: 10.3390/ijerph191710571. PubMed PMID: 36078286; PubMed Central PMCID: PMC9518538.
15. Öndeş B. 8th Term pregnancy in uterus didelphys: a rare case report. Case Reports in Perinatal Medicine. 2017;6(1):1–4. doi: 10.1515/crpm-2016-0025.