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(CASE REPORT)

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Surrogate twin pregnancy and childbirth in uterine didelphys: A report

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Abstract

Didelphic uterus is one of the congenital anomalies of the female genital tract (others include septate, bicornuate and unicornuate uterus). They usually arise when there are abnormalities of formation, fusion or resorption of the mullerian ducts. The significance of didelphic uterus is in its ability to predispose a pregnant mother to increased risk of preterm birth, prematurity, abnormal fetal lie and presentation, intrauterine fetal growth restriction, increased risk of operative delivery, low birth weight and its attendant perinatal morbidity. We present a 30-year-old surrogate mother who had caesarean section on account of preterm prelabour rupture of fetal membranes.

Keywords: Uterine Didelphys; Preterm twins; Invitro fertilization; Surrogate mother.

1. Introduction

The development of female genital tract becomes noticeable with caudal elongation of the mullerian duct as early as six weeks gestation.[1] The uterus, Fallopian tubes, cervix and upper two-thirds of the vagina develop from the paramesonephric ducts on both sides.[1] The fusion of these ducts and subsequent canalization results in the formation of these structures. [1, 2]Failure of fusion or resorption in second trimester leads to the development of these anomalies. The prevalence of congenital uterine anomalies is about 5.5 % in the general population; however, this tends to increase for up to 8% in a cohort of infertile women, and even more (13.3%) in women who have had a miscarriage.[2]

Uterine Didelphys otherwise referred to as double uterus occurs when total duplication of uterus as well as duplication of the cervix. There is usually no communication between the two uterine cavities. It accounts for about 5-11% of Mullerian duct anomalies.[3, 4] Most women with this anomaly are asymptomatic and usually diagnosed as incidental finding during work up for infertility or miscarriage.[3] Symptomatic women present with dyspareunia, chronic pelvic pain, miscarriage, or infertility.[3, 4] It has been associated with renal agenesis and occurrence of vaginal septum.[3, 4]

In non-pregnant women, diagnosis is made radiologically using 3-dimensional transvaginal ultrasound or pelvic ultrasound in prepubertal girls, fluoroscopy (Hysterosalpingography), Saline infusion sonohysterography and or pelvic magnetic resonance imaging.[5] Some authors has also reported the use of laparoscopy and hysteroscopy in the diagnosis of uterine septum.[5]

Nonetheless, it is important to state that there is associated difficulty in trying to distinguish between these different types of mullerian anomalies using various imaging techniques. The difficulty is not only because of the subjectivity of

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these imaging modalities but also due rapidly changing classification systems of different societies such as ASRM or ESHRE.[5]

2. Case

A 30-year-old unbooked now P4 (3A) Togolese surrogate mother with twin gestation conceived via invitro fertilization (Day 5 Blastocyst transfer). She was referred to our hospital from a private health facility on account of preterm prelabour rupture of fetal membranes. Her symptoms started eighteen hours prior to presentation with drainage of liquor and labour pains. Obstetrics ultrasound scan done at the referring hospital showed monochorionic diamniotic twin fetuses at 32 weeks, with estimated fetal weight of 1.46kg and 1.24kg respectively, both Breech presentation with severe oligohydramnios. She had antenatal corticosteroid from the referring facility. Prior to this, her pregnancy had been uneventful, and she was regular on prenatal vitamins. She has no chronic medical condition. Her vital signs were SP02- 98%, PR – 88bpm, BP-128/84mmHg. Abdominal examination revealed uniformly enlarged, gravid uterus, Symphysio fundal height was 38cm, multiple fetal poles were felt, no area of tenderness, one palpable contraction in 10 minutes lasting 20-2secs, Fetal heart rates were 144bpm and 150 bpm. Sterile speculum examination showed grossly healthy-looking vaginal wall and duplicate cervix, no pooling of liquor in the posterior and no egress of liquor on cough reflex. Routine investigations- full blood count, urinalysis, kidney function, and blood borne viruses were requested. She was administered MgS04 for neuroprotection and was subsequently consented for emergency caesarean section.

Intra operative findings include incidental findings of complete duplication of the uterus (uterine didelphys): each having its own fallopian tube and ovary. The bigger uterus was gravid with poorly formed lower uterine segment while the smaller (rudimentary) uterus (on the right) measuring 10x8cm with no fetal implantation.

Twin 1 – was a live preterm female neonate in footling breech presentation, delivered by breech extraction with APGAR scores 7 at 1 minute and 8 at 5th minutes weighing 1.5kg and Twin 2 was a live preterm female neonate also in breech presentation with APGAR scores of 7 at 1 minute and 8 at 5th minutes. Estimated Blood loss was 500mls. Babies were admitted to neonatal intensive care units for surfactant administration and subsequent care. Mother did well clinically and was discharged on 3rd post operative day. She was counselled for detailed assessment at six weeks postpartum for other associated anomalies.

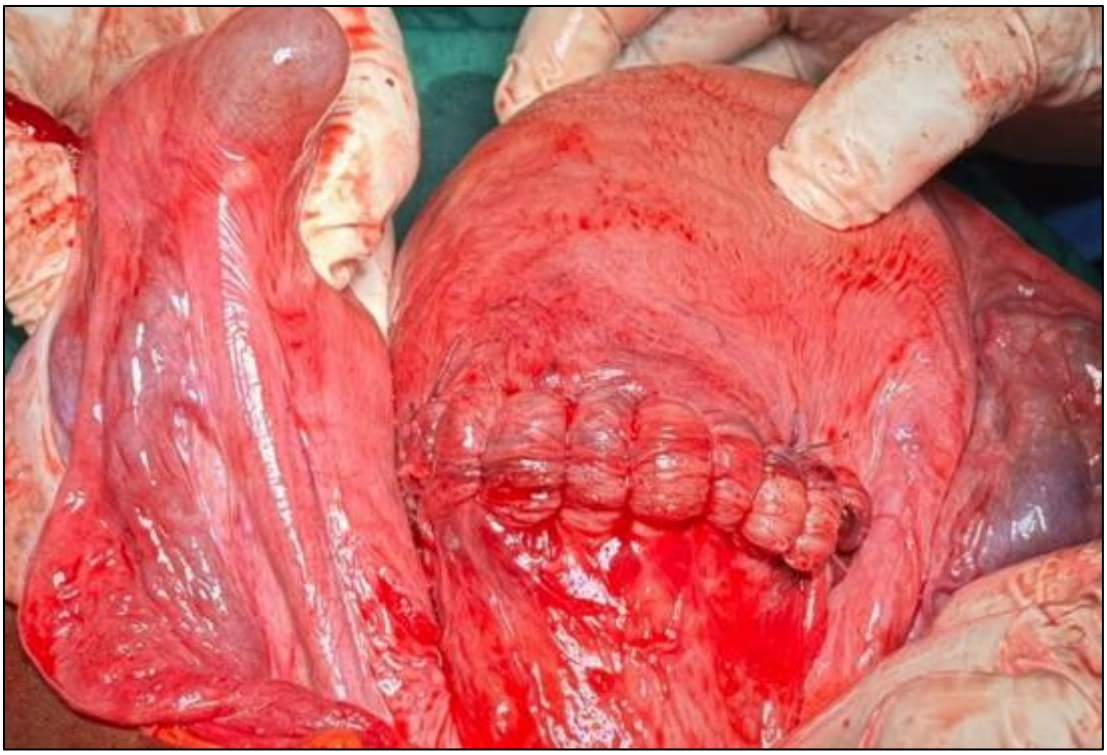

Figure 1 Uterine Didelphys seen intra operatively

3. Discussion

This case report highlights a rare presentation of IVF twin pregnancy occupying one uterine cavity in a surrogate woman with didelphic uterus. Most women with uterine didelphys are asymptomatic just as the index case. However, in non-pregnant states some can present with different symptoms such as cyclical or chronic pelvic pain, abnormal uterine bleeding, haematocolpos, hematometra, retrograde menstruation, dyspareunia, and recurrent vaginal discharge.[6] During pregnancy, women with uterine didelphys can present with recurrent pregnancy loss, preterm delivery, prelabour rupture of fetal membranes, antepartum haemorrhage, postpartum haemorrhage, cervical insufficiency, abnormal lie, malpresentation, intrauterine growth restriction, abnormalities of placentation, hypertensive disorders in pregnancy.[6] Our patient did not have any of the above pre-pregnancy symptoms, however, she presented with preterm prelabour rupture of fetal membranes and fetal malpresentation.

Congenital uterine anomalies have been fingered to be associated with several other anomalies such as renal, skeletal, cardiac, vaginal septum, abdominal wall abnormalities, and. inguinal hernia.[7] The most common of these anomalies in Renal anomalies (agenesis, pelvic kidney, duplex collecting system, horseshoe kidney) with a prevalence of about 20-30%.[7] The index patient has no clinical manifestation of any of these anomalies at the time of presentation. Although further assessment will be done during postpartum follow-up.

Putting it all together, ideally mode of delivery for women with pre-diagnosed uterine didelphys should be made and discussed antenatally. Important factors to consider include previous vaginal birth or caesarean section, singleton or multiple gestation, fetal lie and presentation, pre-existing chronic medical condition and associated pregnancy complications.[8] Overall, caesarean section seems to be the popular mode of delivery in women with congenital uterine anomalies. This is because of associated malpresentation, preterm labour and abnormal placentation.[9] Our patient had caesarean section on account of prelabour preterm rupture of fetal membranes, oligohydramnios, and malpresentation.

4. Conclusion

The prevalence of congenital uterine anomalies in the general population of reproductive age women may be underreported. This may be because of the poor health seeking behaviour of women in our subregion. Obstetricians led antenatal care, and the use of different imaging modalities may help in early diagnosis and proper management.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

This study was approved by ethics committee of Lagos Island Maternity Hospital, Lagos Nigeria.

Statement of informed consent

Our patient consented for her anonymized data to be used in publication to improve medical knowledge.

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