UTERINE DIDELPHYS COEXISTING WITH TERM PREGNANCY, AN INCIDENTAL FINDING DURING AN EMERGENCY CAESAREAN SECTION IN A PRIVATE HEALTH CARE FACILITY IN LAGOS, NIGERIA.

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ABSTRACT

It is very difficult to determine the exact prevalence and reproductive implications of congenital uterine anomalies, because majority of the cases are missed, since they are often asymptomatic and the poor accuracy of the diagnostic tools commonly used. Although, many of these women with congenital uterine anomalies carry their pregnancies to term with live deliveries without any complication, some experience pregnancy losses. A 29 year old, $G_3P_0^{+2}$ lady with 2 previous first trimester spontaneous abortions had an emergency caesarean section for cervical stasis at 38 Weeks gestation. Findings at Surgery were consistent with uterine Didelphys. Her Post-operative period was uneventful. Thus, bad obstetric history such as recurrent spontaneous abortions as seen in this patient should be a pointer for proper evaluation to exclude congenital uterine anomalies.

Keywords: Uterine didelphys, Term pregnancy, Emergency caesarean section, private health care facility in Lagos.

INTRODUCTION

Congenital uterine malformations results from the deviation from the normal development of the Mullerian duct during embryogenesis. The results of these may be canalization defects such as septate or subseptate uteri, unification defects such as Unicornuate, bicornuate or didelphys uteri. The malformation may also, presents as an indentation at the uterine fundus referred to as arcuate uterus.

Most of these congenital uterine malformations are asymptomatic, while some presents with amenorrhoea, primary or secondary infertility, recurrent pregnancy losses, preterm deliveries, and abnormal foetal presentations or lie. However the reproductive implication of congenital uterine anomalies has not been fully evaluated.

Many of the cases of congenital uterine malformations were often missed with the common diagnostic tools, such as two or three-dimensional ultrasonography, Hysterosalpingography, Laparoscopy, Sonohysterography and Magnetic resonant imaging.

The management options of these patients ranges from observational to surgical interventions depending on the effects on the patients' reproductive performances to the presented clinical symptoms.

This paper reports a quite rare case of uterine didelphys in a young nulliparous woman with 2

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previous spontaneous abortions and a term viable foetus in a private health care facility in Lagos, Nigeria.

Case Report

She was a booked 29 year old $G_3P_0^{+2}$ lady, with 2 previous first trimester spontaneous abortions. She booked the pregnancy at 15 weeks gestation and had eleven uneventful antenatal clinic visits. The routine antenatal haematological and biochemical investigations were essentially normal. The Obstetric Ultrasound scans at 19 and 36 weeks gestations did not show any abnormality. She menstruates for 4 days in a regular cycle of 27-30 days. The index pregnancy was achieved spontaneously.

She was not a known hypertensive or diabetic, but her father was diabetic and thus had oral glucose tolerant tests at 24 and 32 weeks gestations which were normal. She presented in active phase labour and 4 hours history of liqour drainage at 38 weeks gestation in the emergency room. She was admitted in to the Labour Ward. The progress of labour and the materno-foetal vital signs were closely monitored. She had augmentation of labour with 5 international units of Oxytocin at 4 hours on admission due to poor labour progress, after excluding features of Cephalopelvic disproportion (CPD).

However, a review after 4 hours of augmentation of labour revealed a vaginal defects, about 2cm at 10 0'clock but no active bleeding per vaginam. The cervical dilatation remained 4 cm, despite 4 strong uterine contractions in 10 minutes, each lasing 45 seconds. We made an assessment of poor progress in labour, secondary to cervical stasis. She had an emergency caesarean section after counseling and informed consent. The pre-operative packed cell volume was 38%.

Findings at surgery were; clean pelvis, fundally sited fibroids measuring 4 X 4 cm in size, gravid well developed left uterus with 1, normal fallopian tube, and markedly, dilated vessels on the anterior uterine wall. Non-gravid, well developed, right uterus, approximately 6 weeks in size with 1- normal fallopian tube. Grossly normal left ovary, and a polycystic right ovary (Figures, 1 – 4). Live normal female neonate, cephalic presenting, weighing 3.66 Kg and APGAR scores of 6 and 9 in one and five minutes respectively. The estimated blood loss was 350ml.

She recovered well from the surgery, and her post-operative packed cell volume was 36%. She was discharged with her baby from the hospital on the fourth post-operative day. She was seen at the Post-natal Clinic 2 and 6 weeks after surgery. The findings at surgery were explained to her.

DISCUSSION

The uterus, the cervix, the fallopian tubes and part of the vaginal developed from the paramesonephric (Millerian) duct system during the intra-uterine life.[1,2,3,4.] The Cranial part of the paramesonephric ducts forms the fallopian tubes, the horizontal parts fused with each other to form the fundus and most part of the uterus. The caudal parts fused with each other to form the uterovaginal primordium and gives rise to the lower part of the uterus. The Septum between the fused walls dissolves to form a single uterine fundus, cervix and the upper part of the vaginal. The deviation from the normal developmental steps that is, fusion or resorption of the Mullerian ducts may results in Canalization defects such as septate, subseptate uteri, or unification defects such as unicornuate, bicornuate or uterine didelphys (double uterus and cervix) or an indented fundal part of the uterus refered to as the arcuate uterus which in the commonest congenital uterine anomaly.[2,3,4] During development, the genital and the urinary systems are closely related, with developmental overlap of the 2 systems, within the first 12 weeks after fertilization.

Thus congenital malformations of the genital system are often associated with those of urinary system.[4]

The reported incidence of congenital uterine anomalies varies from 1.8 - 3.76%.[4] The wide range reflects the differences in the criteria, the population studied and the techniques used for the diagnosis. Saravelos, Cocksedge and Li reported a prevalence of 6.7% in the general population, 7.3 in the infertile population and 16.7% among those with recurrent miscarriages.[6] Similarly Chan etal reported a prevalence of 5.5% among the general population, 8.0% among the infertile women, 13.3% in those with previous miscarriages and 24.5% among those with previous miscarriages in association with infertility.[7]

The commonest uterine anomaly in the general population and in those with recurrent miscarriages is the arcuate uterus while septate uterus is the commonest anomaly in the infertile population.[6,7] However, Braun etal reported that arcuate uterus is the most common uterine malformation in the study carried out in Spain but Raga etal and Grimbizis reported that the commonest congenital anomaly is the septate uterus.[8,9,10]

The accuracy of the different investigating tools, such as two or three-dimensional ultrasonography, diagnostic Hysteroscopy (DH), Magnetic resonance imaging (MRI), Sonohysterography (SHG), Hysterosalpingography (HSG), Saline Contrast Sonohysterography (SCSHG) were studied by various authors. Unfortunately, the use of some of these investigation tools are restricted because they are invasive and may not be safe in pregnancy since most of the patients present during pregnancy. Some authors reported encouraging improvement in diagnostic accuracy when those investigative tools are combined. Generally three- dimensional ultrasonography has been reported to be the most accurate in the diagnosis of congenital uterine anomalies.[6,11,12,13,14.] In addition to its accuracy, it can also be used during pregnancy.

However, Sonohysterography (SHG) is a non-invasive, cost- effective and accurate method that can be used in out-patient setting to identify uterine anomalies such as septate and bicornuate uterus.[15] Although the combination of Hysteroscopy and Laparoscopy has been reported to be very accurate in the diagnosis of congenital uterine anomalies, the invasiveness of the procedures make health care givers shy away from their use.

In this report, the patient had 2, three-dimensional ultrasonography at 19 and 36 weeks gestations, that could not identify this gross anomaly. Although this depend on the skill and the experience of the sonologist involved. This we could not ascertain.

Researchers all over the world reported different results in reproductive performances of women with uterine anomalies. Most of them reported poor reproductive outcomes, but divergent views in the contributions of the different types of congenital uterine anomalies to reproductive performances.[9,10,16,17,18.] Congenital uterine anomalies are associated with reduced fertility, increased miscarriages, preterm deliveries and foetal malpresentations.[10,16,17,18] However Chan etal reported that unification defects such as unicornuate, bicornuate and uterine didelphys are associated with miscarriages and preterm deliveries but reported that arcuate uterus has a better reproductive outcome.[9] Raga reported in a study in Spain that arcuate uterus has the best reproductive outcome when compared with the other congenital uterine anomalies.[10] Similarly Grimbizis etal reported that uterine unicornuate and dielphys are more associated with low delivery rates.

Although, our reported case had 2 previous first trimester spontaneous abortions, but she was not critically evaluated for congenital uterine anomalies or other possible causes of first trimester spontaneous abortions.

Complete duplication of the uterus and the cervix

(uterine didelphys), may prevent descent of the foetal head later in pregnancy or obstruct labour by the non-pregnant horn.[3] Implantation in a rudimentary horn may also result in the rupture of the rudimentary horn as pregnancy advances with profound bleeding and present like a ruptured ectopic pregnancy.[3]

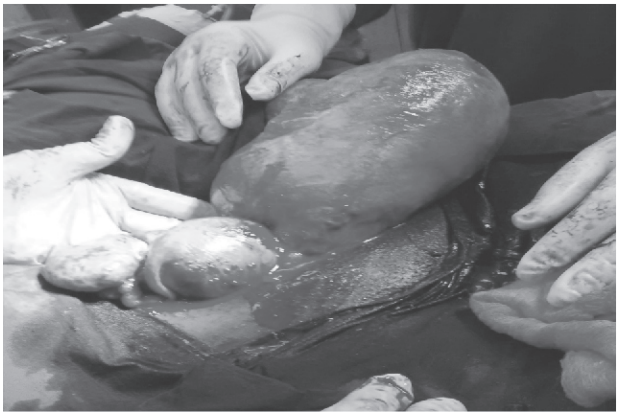
In our reported case, which was a case of uterine didelphys, the antenatal period was uneventful with normal foetal presentation and lie, no antepartum haemorrhage or preterm labour. However the progress of labour remained stagnated at 4cm cervical dilatation for 4 hours despite adequate uterine contractions with oxytocin augmentation. The uterine anomaly was an incidental finding during an emergency ceasarean section, and the defect felt at 10 O' clock was the second cervical Os.

Interestingly, metroplasty has been reported to show significant improvement in foetal survival rate and fecundity.[9,19,20] The question however was, will uterine surgery improve or have an adverse effect on her future reproductive life? We therefore decided to counsel her adequately and to observe her closely in her next pregnancy since this pregnancy was asymptomatic.

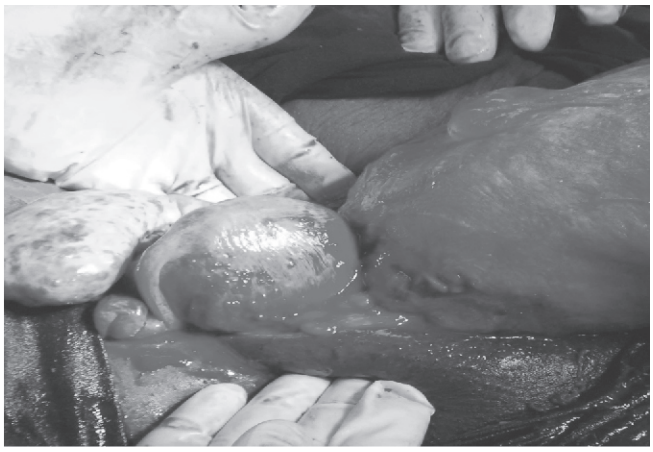
CONCLUSION

Patients with recurrent pregnancy losses and preterm deliveries should be properly evaluated for congenital uterine anomalies to improve on their future reproductive performances.

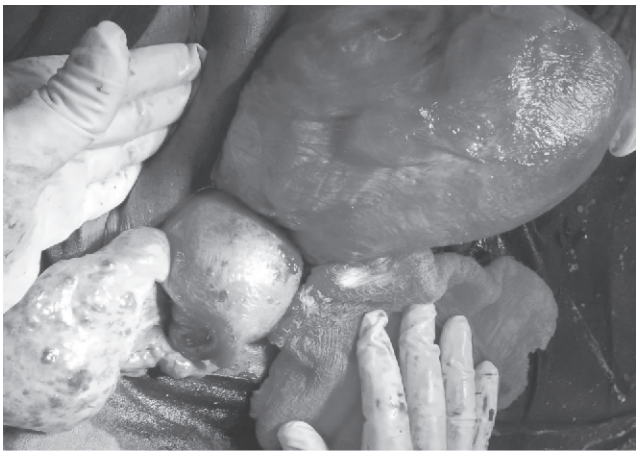
Repaired lower segment transverse uterine incision on the left gravid uterus and the right non-gravid uterus, with a tube and ovary each. (After foetal delivery)



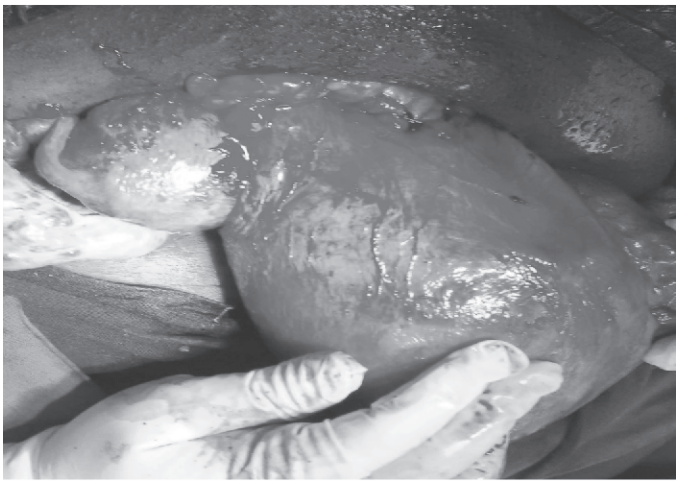
The left gravid and right non -gravid uteri with a tube each, and the polycystic right ovary.



The left gravid and right non-gravid uteri with a tube each, the polycystic right ovary and adhesions on the posterior wall of the left gravid uterus.



Repaired lower segment transverse uterine incision on the left gravid uterus with the right non-gravid uterus, tube and ovary.



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