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Case Report

Congenital bicornuate unicollis uterus as a cause of secondary infertility: the role of imaging in the diagnosis in a low resource setting

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ABSTRACT

Variety of congenital uterine anomalies occurs as a result of abnormal fusion of the mullerian duct during embryonic life. Bicornuate unicollis –one of such anomalies is associated with infertility, repeated spontaneous abortions, intrauterine growth retardation and preterm labor among others. We report a case of a 34-year old female para^{2+4} A_1 with habitual abortion in secondary infertility due to bicornuate unicollis uterus that was diagnosed using hysterosalpingography (HSG) and ultrasonography. Uterine anomalies although rare are not uncommon. Imaging such as ultrasonography and HSG plays a pivotal role in the early detection of these anomalies.

Keywords: Bicornuate, Unicollis, Uterus, Imaging

INTRODUCTION

Congenital anomaly of the uterus results from varying degree of failure of fusion of the mullerian ducts as well as occasionally arise due to duplication of the duct.[1] The incidence of congenital uterine malformation has been estimated to be 3-5% of the general population.[2] The true incidence of these congenital anomalies might be understated as many of the women with the anomaly go through their reproductive carrier uneventfully with diagnosis being made incidentally in some cases.[3]

The incomplete fusion of the mullerian ducts is mostly due to common types of uterine malformation such as bicornus unicollis, bicornus bicollis, arcuate uterus, septated uterus, uterus diadelphys among others.[4] Bicornuate uterus, uterus didelphys and septate uterus constitute 80% of uterine anomalies[5]. These conditions are associated with infertility, ectopic pregnancy, fetal malpresentation, high caesarean delivery rate and preterm delivery[5] and spontaneous abortion in the first trimester.[6]

Bicornuate unicollis is that type of uterine anomaly that shows division in the middle of the uterine cavity completely to the internal Os.[6] However, due to the wide variation in the clinical presentation, mullerian ducts anomalies may be difficult to diagnose[2]

We report this case due to its rarity and also to bring to the notice of physicians of the increase detection of uterine anomalies even in fertile women.

CASE REPORT

A case of 34 year old female para^{2+4} one alive. The first pregnancy was carried to term and had spontanoues vaginal delivery while the second pregnancy was a preterm delivery. She presented to the radiology department with a request to do hysterosalpingography

(HSG) on account of secondary infertility for 5 years with history of recurrent abortions due to suspected uterine/cervical factor. She is not a known hypertensive or diabetic and there was no such history.

On physical examination, a middle aged woman is seen not in any respiratory distress, acyanosed, anicteric, not pale and not febrile to torch. The blood pressure (BP) was 110/70 mmHg, pulse rate was 80 bpm. Digital vaginal examination was essentially within normal limits. The high vaginal swab, microscopy sensitivity and full blood count were normal.

Pelvic ultrasound was done and it revealed high suspicion of a bicornuate uterus evidenced by two endometrial plates with an echogenic septum that separate the bulky uterus into two uteri as seen in Figure 1. HSG revealed asymmetrical double uterine cavity that has a common cervical canal as in Figure 2. Each uterine cavity bears a fallopian tube that shows free intra-peritoneal spillage of the contrast media. An impression of bicornuate unicollis uterine anomaly with bilateral patent tubes was made.

On follow-up visit at gynecological clinic, patient was counseled and was to be managed conservatively.

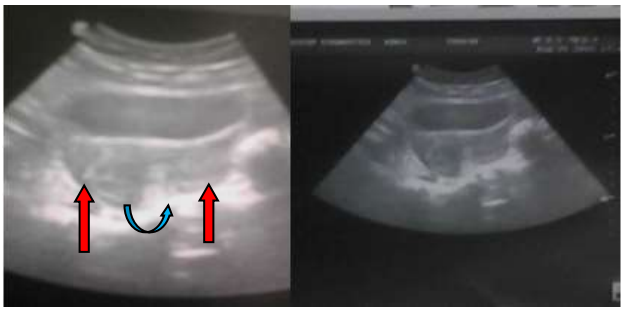

Figure 1: Ultrasonogram of bulky uterus with a midline echogenic septum (curved arrow) separating the bulky uterus into two asymmetrical cavities (double straight arrows).

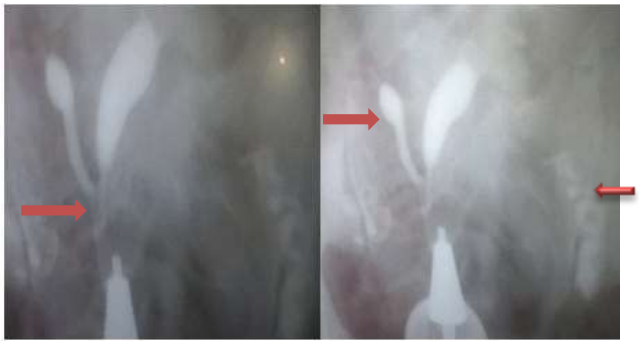

Figure 2: Hysterosalpingogram showing two asymmetrically opacified uterine cavities with a common cervical canal (arrow). Each cavity bear a fallopian tube that show peritoneal spillage of contrast media (arrows).

DISCUSSION

Bicornuate unicollis uterus is a type of uterine duplication anomaly where the division in the middle of the uterine cavity is complete to the internal Os.[6] It is classified as a class IV mullerian duct anomaly.[7] Bicornuate unicollis represent 25% of mullerian duct anomalies.[7] In most cases, it is incidentally discovered when radiological investigations such as ultrasonography, HSG and magnetic resonance imaging are used.[2]

Patient with bicornuate unicollis are known to have high incidence of infertility, repeated first trimester abortion, intra-uterine growth restriction, foetal malposition, preterm labor, retained placenta as well as preterm delivery as seen in our patient.[2,8] Studies have shown that about 3.2% of fertile women have bicornuate uterus while only 25% of women with uterine anomalies have problems related to reproduction.[9,6]

Pregnancy occurs despite these anomalies, but only few advances to term due to complications.[8] However, very few cases of mothers with bicornuate uterus have been reported with successful term delivery.[2] The different ways in which uterine anomalies present themselves makes diagnosis very tasking.[8]

In low resource settings like ours, HSG remains a very useful radiological tool in the diagnosis of uterine anomalies.[10] HSG is of utmost importance in the diagnosis of bicornuate uterus especially in non-pregnant women while ultrasonography provide a very safe and non-invasive imaging modality for pregnant and non-pregnant women.[2] Magnetic resonance imaging has demonstrated high level of specificity in detecting uterine anomalies.[9]

Surgical intervention is usually not indicated in the absence of reproductive difficulties. However, a woman with history of recurrent pregnancy loss and with no other infertility issues can have Strassman metroplasty.[11] Also in patients with cervical incompetence; placement of cervical cerclage may increase fetal survival rate.[9]

It is important that clinicians be aware that women with bicornuate uterus could have a successful reproductive carrier contrary to the widely thought view.

CONCLUSION

Uterine anomalies are rare, but not uncommon. Thus, we have presented here a 34-year old female para^{2+4} A_1 with habitual abortion and secondary infertility due to bicornuate unicollis uterus that was diagnosed using HSG and ultrasonography. Early detection of such obstetrics and gynecological anomalies will go a long way in reducing the morbidity and/or mortality of mother or the foetus.

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REFERENCES

1. Matthys VW, Nasreen M, Mala M. MRI of a twin pregnancy in a uterus bicornis unicollis. SAMJ. 2011;101(2):103.
2. Omokanya LO, Saludeen AG, Balogun OR, Saidu R, Olatinwo AWO. Missed diagnosed bicornuate unicollis uterus presenting as acute abdomen. West Afr J Med. 2014;33(3):222-4.
3. Simon C, Martinex I, Pardo F, Tartajada M, Lellicor A. Mullerian defects in women with normal reproductive outcome. Fertil Steril. 1991;56:1192-3.
4. Channareddy S, Sajana G, Sravanthi M. A successful pregnancy outcome in a bicornuate bicollis uterus. IOSR-J Dental Med Sci. 2013;5(4):15-7.
5. James DK, Steer PJ, Weiner CP, Gonik B. High Risk Pregnancy Management Options. 3rd edition. London: Elsevier; 2005: 107-108
6. Saidu SA. Habitual abortion due to bicornuate uterus. Sahel Med J. 2003;6(4):132-3.
7. Nahum GG. Uterine anomalies. How common are they and what is their distribution among subtypes? J Reprod Med. 1998;43(10):877-87.
8. Morhason-Bello IO, Ojoko IE, Owonikoko KM, Olayemi O, Omigbodun OA. Uterus bicornis unicollis; Occurrence of consecutive viable pregnancies in separate horns. Ann Ib Postgrad Med. 2007;5(2):80-2.
9. Abiodun OA, Paul OI. Bicornuate Unicollis Uterus with Renal Agenesis. Trop J Obstet Gynaecol. 2006;23(1):72-4.
10. Danfulani M, Yunusa GH, Sa'idu SA, Ma'aji SM, Musa MA. Tubal Abnormalities on Hysteros-alpingography in primary and secondary infertility in Sokoto, Northwestern Nigeria. Asian J Med Sci. 2015;6(2):47–50.
11. Strassman EL. Fertility and Unification of double uterus. Fertil Steril. 1966;17:165-9.

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