

Bicornuate Unicollis Uterus with Left Renal Agenesis

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Abstract:

This is a case report of a 30 year old lady with 8 years history of 2^o Infertility. Radiological findings by Hysterosalpingography (HSG) revealed a Bicornuate Unicollis uterus. This was further confirmed by Ultrasound, which also demonstrated a Left Renal agenesis inclusive. Radiological features, clinical presentation and literature on this rare congenital abnormality have also been reviewed in this paper.

Key Words: Infertility, Bicornuate Unicollis, Ultrasound, Hysterosalpingography, renal Agenesis

Introduction

Uterus bicornuate unicollis is one of the various congenital abnormalities of the female genital tract caused by partial non fusion of the mullerian ducts on both sides¹. In this condition, each half of the uterine cavity is spindle shaped and is oriented in divergent manner from the other to communicate with the corresponding fallopian tube^{1,2}. Mullerian duct anomalies are estimated to occur in 0.1-0.5% of women¹. The true prevalence is unknown because the anomalies usually are discovered in patients presenting with infertility¹. Full-term pregnancies have occurred in patients with forms of bicornuate uterus; therefore, true prevalence may be slightly higher than currently estimated³. Simon et al³ found that in the healthy fertile population, mullerian duct anomalies have a prevalence of 3.2%. A fairly high association exists between mullerian duct anomalies and renal anomalies such as unilateral renal agenesis¹.

The rarity of this congenital abnormality prompted the report of this case.

Case Report

D.A. was a 30 years old lady (para 1^o, 1 alive) who presented at Gynaecology out patient clinic on account of inability to get pregnant for 8 years. Her last pregnancy and delivery was 10 years ago in which she had persistent transverse lie which was diagnosed by routine antenatal ultrasound scan. She had elective lower segment caesarean section at 38th week gestational age because of foetal malpresentation. There were no significant findings on physical examination at presentation.

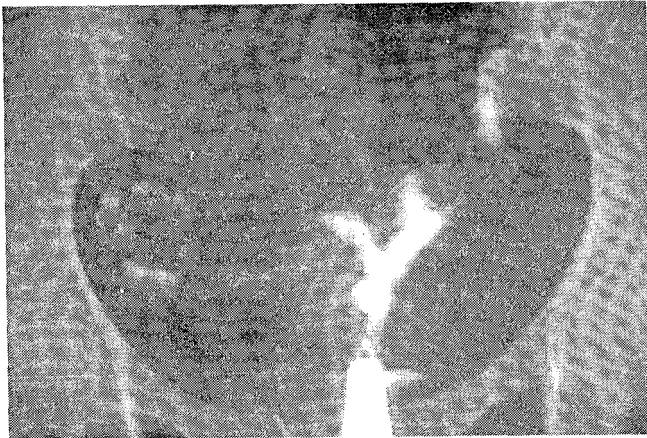
Hysterosalpingography (fig. 1) showed bicornuate unicollis uterus with normal tubes and bilateral normal intraperitoneal spillage. The ultrasound examination of the pelvis confirmed bicornuate unicollis uterus (fig.2). The general abdominal ultrasonography revealed absence of the left kidney (left renal agenesis). However, no other abnormality was noted. The patient was requested to have an intravenous urography (IVU) study, but she did not keep her appointment and she was lost to follow-up.

Discussion

The diagnosis of uterine anomalies is easy to make by a combination of Hysterosalpingography (HSG) and real time B-mode ultrasound⁴. While HSG is of utmost importance in anatomical diagnosis of bicornuate uterus especially in the non-pregnant patient, ultrasonography provides a very safe and non-invasive imaging modality for the pregnant and non-pregnant patient. Real time B mode ultrasonography (USS) has been in use in the assessment of obstetric and gynaecology conditions in Nigeria for over two decades now^{8,9}. The diagnosis of bicornuate uterus can be suggested by hysterosalpingography (HSG) or ultrasound (USS) but the most definitive and most accurate diagnosis is obtained by Magnetic Resonance Imaging¹⁰. On HSG and USS, two endometrial cavities are identified and the angle between the two cavities on HSG should be greater than 90^o¹⁰. However, the measurement of the angle is not a specific finding, and the differentiation between the bicornuate and the septate uterus is often difficult in both studies^{3,10}. MRI provides high resolution images of the uterine body, fundus and internal structure; in addition, it can help evaluate the urinary tract for concomitant anomalies¹³. On MRI scans, the findings of bicornuate uterus are: increased intercornual distance, an outward fundal concavity compared with the normal convexity, normal endometrial and myometrial width and ratio, two uterine cornua and two endometrial cavities are easily identified and the myometrial characteristics of the septum are accurately diagnosed¹⁰. The bicornuate uterus is a more severe anomaly than septate uterus¹⁰. Whereas in septate uterus, there is a soft tissue septum usually from the fundus downwards but not reaching the cervical region, partially dividing the uterine cavity into two, in bicornuate uterus there is complete separation of the two cornua of the uterine body which can either involve the cervix (bicollis) or spare it (unicollis)¹⁰. The importance of differentiation of septum of bicornuate

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Fig.1:
HSG showing Bicornuate unicollis uterus with normal fallopian tubes and bilateral free intraperitoneal spillage of contrast.



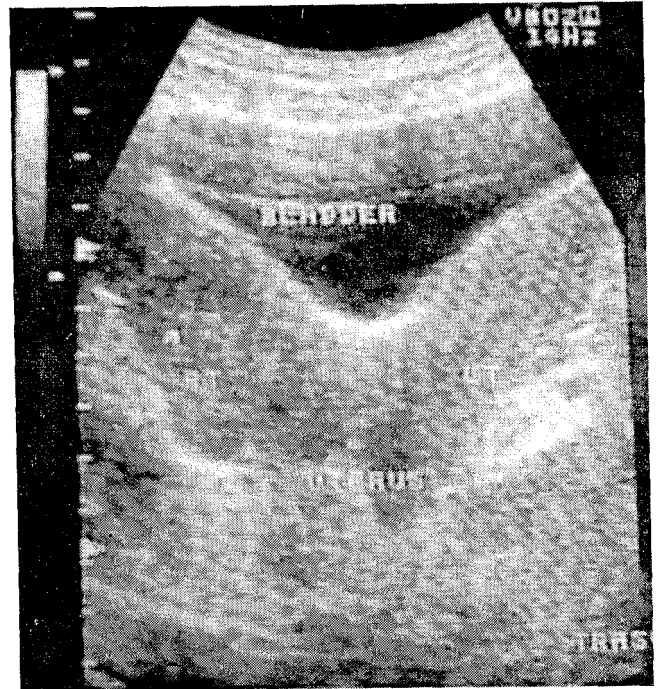
from septate uterus is in the treatment planning¹⁰. In bicornuate uterus, because the septum is composed of myometrium, open metroplasty is required while in septate uterus, because the septum is collagen, dissection can be through the hysteroscope¹⁰. The case presented was not evaluated with MRI because of non availability of the equipment, but was however differentiated from septate uterus by Ultrasound and HSG.

Although uterine anomalies occur in only 0.1% to 0.5% of females in general, the incidence is from 48% to 70% in women with congenital renal abnormalities^{11,12}. Thus when a major renal abnormality is seen at sonography, especially agenesis of the kidney as seen in this case report, the uterus should be evaluated as well and vice versa^{11,12}. There is a group of findings often seen with unilateral renal agenesis in the female with which the sonographer should be familiar^{13,15}. This is the combination of bicornuate uterus with communication between the uterine cavities at a level just above the cervix. There is also an incomplete vaginal septum with blind hemivaginal. As this latter structure accumulates material it bulges into the vagina and may become infected, which is often the reason that the patient seeks

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Fig 2
Transverse ultrasound scan of the pelvis in the same patient with bicornuate uterus showing the cornual ends



treatment. This complex is thought to be the most common uterine-vaginal anomaly associated with renal agenesis in the female¹⁴. This case report presented has its communication above the cervix with demonstrable bicornuate unicollis uterus with associated left renal agenesis.

Several obstetric complications are attributed to uterine anomalies such as spontaneous abortion, retained placenta, abruptio placenta and fetal malpresentation especially breech presentation and transverse lie leading to a high incidence of Surgical intervention, as demonstrated by the patient in this case report. However, there have been reports of patients with varying degree of uterine septa successfully carrying pregnancy to term and having normal vaginal delivery especially when the placenta is not located on the septum, or even when it is¹⁰.

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