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Case Report

Site of pregnancy obstetrician's dilemma

Rudrika Chandra[1]*, Sanjay Singh[2]

[1]Department of Obstetrics and Gynaecology, 9 Air Force Hospital, Halwara, Ludhiana, Punjab, India
[2]Department of Obstetrics and Gynaecology, Base Hospital, Delhi Cantt, New Delhi, India

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***Correspondence:**
Dr. Rudrika Chandra,
E-mail: rudrika21@gmail.com

ABSTRACT

A 28-yr-old P2L2 lady, with history of two previous caesarean deliveries and tubal ligation, presented at 6weeks of amenorrhea with pain lower abdomen. The operative notes from her previous caesarean section stated that she had a unicornuate uterus without a rudimentary horn (ASRM Class II D Mullerian anomaly)[5] and only right fallopian tube was visualised, which was ligated by Parkland's method.

On workup, she had a positive urine pregnancy test and ultrasound showed a left adnexal mass without any evidence of intraperitoneal collection, possibly an unruptured left ovarian ectopic pregnancy secondary to failed tubal ligation. Further investigation by MRI revealed an entirely new finding. The suspicious left adnexal mass was the left horn of bicornuate uterus which had an intrauterine gestational sac. Hence, her revised diagnosis was G3P2L2, post LSCS, bicornuate uterus (ASRM class IV B) with 6 weeks of intrauterine left horn pregnancy following failed tubal ligation. She underwent a medical followed by surgical evacuation of intrauterine pregnancy as patient was unwilling to continue the pregnancy.

This case highlights the importance of a comprehensive evaluation, whenever a lady is diagnosed with a Mullerian anomaly, in order to correctly classify the patient and identify associated anomalies of urogenital tract which would avoid such erroneous diagnosis of site of pregnancy as illustrated in our case.

Keywords: American Society of Reproductive Medicine, Bicornuate uterus, Mullerian anomaly, pregnancy, Unicornuate uterus.

INTRODUCTION

Mullerian anomalies result from an abnormal formation, fusion or reabsorption of Mullerian ducts during foetal life. These anomalies are present in 1 to 10% of the unselected population, 2 to 8% of infertile women and 5 to 30% of women with history of miscarriages.[1] Precise diagnosis requires diagnostic modalities like ultrasonography (USG), magnetic resonance imaging, hysterosalpingogram, hysteroscopy and laparoscopy. The most common Mullerian anomalies include bicornuate uterus, septate uterus, unicornuate uterus and uterus didelphys.[2] Uterine structural anomalies are mostly asymptomatic and are often discovered incidentally during pregnancy or at the time of abortion or during evaluation for infertility.[3]

Herein, we report a case of pregnancy in one horn of bicornuate uterus which masqueraded as unicornuate uterus with ovarian ectopic pregnancy.

CASE REPORT

A 28-year-old lady presented with complaints of 6weeks of amenorrhea, morning sickness, dull aching lower abdominal pain and few episodes of syncope. She had 2

live issues; both delivered by caesarean section at term for foetal growth restriction and underwent tubal ligation during previous caesarean 2 years back. The operative notes from her surgery revealed that she had a Unicornuate uterus without a rudimentary horn and absent left fallopian tube. Hence, she underwent right tubal ligation by Parkland's method, confirmed by tissue histopathology.

The patient had stable vital parameters, per abdominally no evidence of guarding/tenderness/ rigidity and no active vaginal bleeding. On pelvic examination, a tender vague mass around 4x4 cm in the left fornix with cervical motion tenderness was felt. With the suspicion of a failed tubal ligation, a urine pregnancy test was carried out which was positive. On transvaginal ultrasound, a well-defined heteroechoic lesion with increased surrounding vascularity equivalent to 52X41X56mm without gestational sac was visualised in left adnexa and no evidence of free fluid in pouch of Douglas.

Provisional diagnosis was G3P2L2, unicornuate uterus without rudimentary horn, previous 2 LSCS, post tubectomy with failed ligation resulting in unruptured left ovarian ectopic pregnancy.

MRI was performed to ascertain the exact size, location and viability of ovarian ectopic pregnancy, which showed a bicornuate uterus (partial) with an intrauterine gestational sac in the left horn of uterus. Right horn had thickened endometrium and a left corpus luteal cyst 2.5X2.5cm (Figure 1).

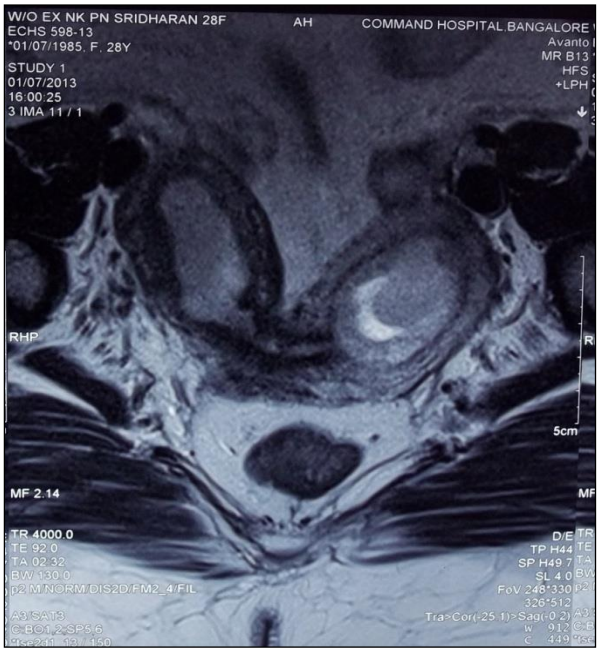

Figure 1: MRI image of pelvis showing Bicornuate uterus with intrauterine gestational sac in left horn.

Revised diagnosis for this patient's perplexing presentation now was G3P2L2, bicornuate uterus (partial), previous 2 LSCS with failed tubectomy and an intrauterine pregnancy in left horn of uterus.

The couple was unwilling to continue the pregnancy and therefore was given Tab Mifepristone followed by Tab Misoprostol for medical termination of pregnancy. A suction evacuation was carried out under ultrasound guidance to remove the retained products of conception. The patient was discharged 2 days later after a check ultrasound which ruled out any retained products.

A post evacuation MRI was performed after 6 weeks, which confirmed the Mullerian anomaly as Partial Bicornuate uterus (Figure 2) and no associated urogenital anomalies could be detected.

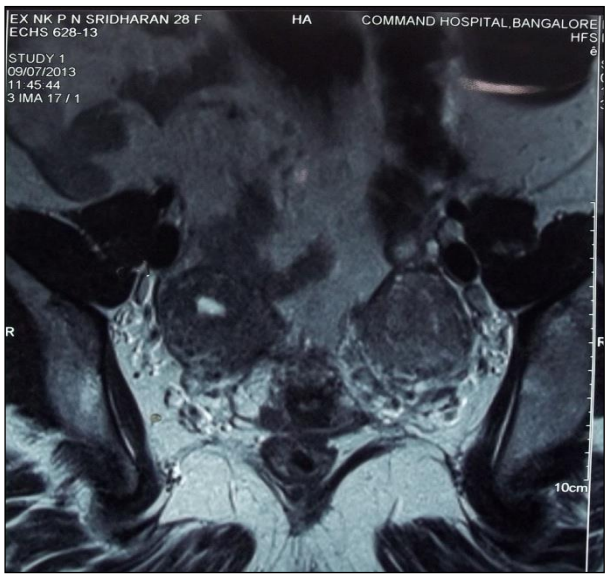

Figure 2: MRI image of pelvis (post MTP) confirming Partial Bicornuate uterus.

In order to complete the sterilization procedure, the husband agreed to undergo vasectomy.

DISCUSSION

The Mullerian ducts originate from the coelomic epithelium at 5 weeks of embryonic age and fuse with the urogenital sinus at 8 weeks. Abnormalities in the formation and fusion of Mullerian ducts can result in a variety of abnormalities of uterus and vagina. Failure of development of Mullerian duct is associated with failure of development of ureteric bud from the caudal end of the Wolffian duct. Thus, an entire kidney can be absent on the side ipsilateral to the agenesis of a Mullerian duct.[4]

It is important to classify Mullerian anomaly properly because the associated risks of poor pregnancy outcome and treatment can vary widely between the anomalies.

The most common classification system is that developed by the American Society of Reproductive Medicine (ASRM).[5]

A Unicornuate uterus is ASRM Type II classification, with unilateral hypoplasia or agenesis, that can be further subclassified into (a) communicating rudimentary horn (b) non communicating horn (c) no endometrial cavity and (d) no rudimentary horn.[6] A rudimentary horn with unicornuate uterus results from failure of complete development of one of the Müllerian ducts associated with the incomplete fusion of the contralateral one. A bicornuate uterus results from the failure of the embryologic lateral fusion of the Mullerian ducts thereby the uterus has two horns linked to its own fallopian tube and ovary. Bicornuate uterus is classified as ASRM Type IV and subclassified (a) complete and (b) partial. Bicornuate uterus is known to be associated with several obstetric complications; some of them include recurrent pregnancy loss, foetal malpresentation, intrauterine growth restriction, preterm labour and increased need for operative intervention including caesarean section.[7-9]

We retrospectively analysed our patient and it is possible that at the time of her caesarean section the pregnancy was in the right horn of the uterus and due to the physiological hypertrophy of the gravid horn, the left horn along with the left fallopian tube being underdeveloped was not apparent to the operating surgeon, thereby mislabelling the patient as Class II D ASRM, Unicornuate Uterus without rudimentary horn. This case highlights the importance of a detailed abdominal and pelvic exploration in case of an incidentally detected Mullerian anomaly during caesarean section in order to correctly classify the anomaly which may have a bearing on the future Gynaecological and obstetric outcome of patients. Further workup of such patients with radiological investigations like 3D USG, MRI, Sono-salpingo-hysterography is also warranted in order to completely evaluate the patient and rule out any associated renal anomalies.[10-12] Whenever there is difficulty in identification of both the tubes, the sterilization should be confirmed by a post tubectomy hysterosalpingography before labelling the patient as sterile in order to avoid emotional and physical distress to patient.

CONCLUSION

Congenital uterine malformations are relatively common and often asymptomatic. Clinicians must suspect uterine malformations in cases with recurrent miscarriages and adverse obstetric outcomes and should utilize the opportunity to inspect the uterus comprehensively at the time of caesarean section. A Unicornuate uterus without rudimentary horn should be differentiated from a bicornuate uterus and a possibility of an enigmatically hidden horn should always be kept in mind. Urinary tract imaging should also be performed because of frequent associated anomalies.

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