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Case report

Management of Pregnancy in Non-Communicating Rudimentary Horn of Bicornuate Uterus: A Case Report

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Abstract:

A pregnancy in a non-communicant rudimentary horn is a rare but serious complication. Patients with bicornuate uterus non-communicating have an increased risk of obstetrical complications, such as abortion, intrauterine growth restriction, and fetal demise. Uterus bicornuate non-communicant rudimentary horn (UBNCRH) is a rare malformation of the uterus. The presence of uterus bicornuate non-communicant rudimentary horn poses a great challenge for a gynecologist because that occurs due to the transperitoneal migration of the sperm or the zygote during the implantation period and the Mullerian anomalies are often asymptomatic. We report a case of 29-year-old female with primigravida singleton pregnancy with pain and vaginal bleeding in the 19 weeks 3 days of gestation with a UBNCRH.

Keywords: Mullerian duct abnormality, Uterus bicornuate non-communicant rudimentary horn.

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Introduction

Bicornuate uterus is a Mullerian anomaly that is produced due to impairment in fusion of two Mullerian ducts. Accounts for 25% of uterine anomalies. Overall incidence is 3% to 5%.

The mullerian anomalies are often asymptomatic. Bicornuate uterus can be diagnosed by:1)

On Ultrasound: Uterine duplication with invagination of fundus. 'V' sign is spacing between the horn and urinary bladder.2)

On HSG: Intercornual angle more than 105 degrees suggest bicornuate uterus.3)

On MRI: Fundal invagination more than 1 cm.

Successful pregnancy outcome is 62.5%. Other complications are Preterm delivery, Abortion, IUGR and malpresentation.

Unification operation (Strassman technique) is indicated with good outcome in women with multiple spontaneous abortions with bicornuate uterus in absence of other cause. Caesarean section is indicated following metroplasty. [1]

A pregnancy in the non-communicating horn of bicornuate uterus is a rare form of gestation that occurs due to the transperitoneal migration of the sperm or the zygote during the implantation period. Its incidence is of approximately 1/100,000 to 1/140,000 pregnancies [2]. 75–80% of pregnancies occur in the non-communicant rudimentary horn and is often associated with ectopic pregnancies [3]. The risk of uterine rupture is up to 90% and occur by the end of the second trimester [4]. The maternal and fetal prognosis in unrecognized rudimentary horn ectopic pregnancies is poor, with an average neonatal survival rate of 6% and the rate of uterine rupture close to 80%.

Case Report

A 29-year-old primigravida 19-week 3-day pregnant women came to the Gynecology department, SIR T hospital with chief complaint of lower abdominal pain and spotting per vagina since one day. Patient came with USG fetus suggestive of IUFD in right horn in bicornuate uterus. (Figure1)

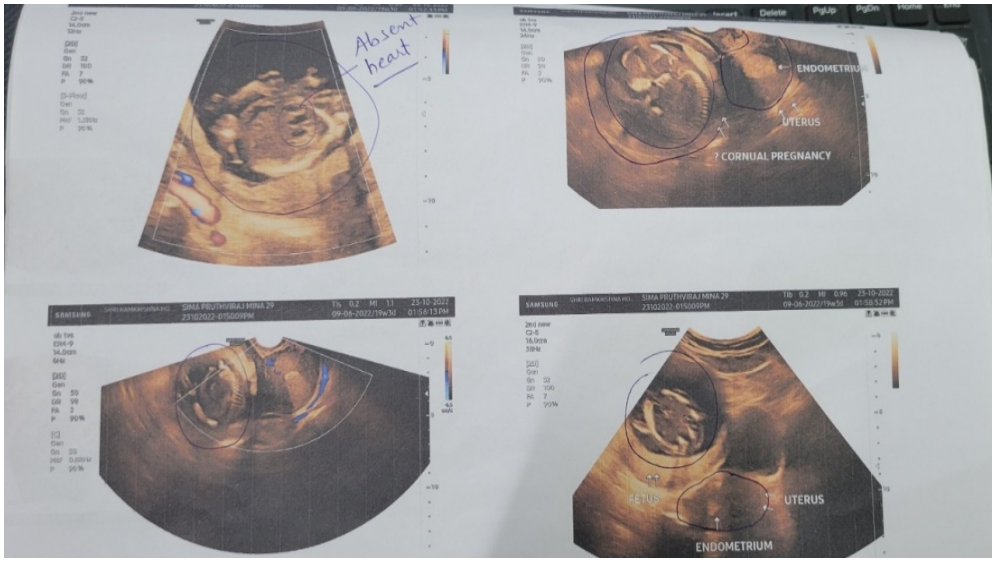

Figure 1:

On general examination: patient was vitally stable with 96/min pulse and 110/80mmHg BP. Abdomen was soft and non-tender. Uterus was found 14 weeks size. On per vaginal examination: uterus was 14-16 weeks size, on right side approx. 4*3 cm mass was felt. Cervix was soft and cervical os admitted 1 finger. Single cervix with no bleeding was found on speculum examination.

Right cornu containing Single intrauterine fetus 15-week 3-day maturity with no cardiac activity was found in transvaginal sonography. Left cornu was normal.

After informed consent, the patient opted for induction of labour by 30 cc intracervical catheter and 0.5 mg cerviprime gel. After single induction, a uterus bicornus with cornus rudimentarius was suspected. Vaginal access to the right uterine horn which was containing pregnancy could not be achieved. It was only possible in the left empty uterine horn with Hegar dilator. So, patient was prepared for laprotomy.

During intraoperative period, uterus was found bicornuate uterus. An incision was made on the anterior wall of Right horn, fetus and placenta parts were removed (figure 2). No internal cervix or access to the cervix could be visualized or palpated. Overall, a bicornuate uterus with unilateral right horn atresia was assumed, in which the pregnancy was caused by sperm migration through the abdominal cavity through the contralateral tube. Resection of the obliterated horn was done to avoid recurrence.

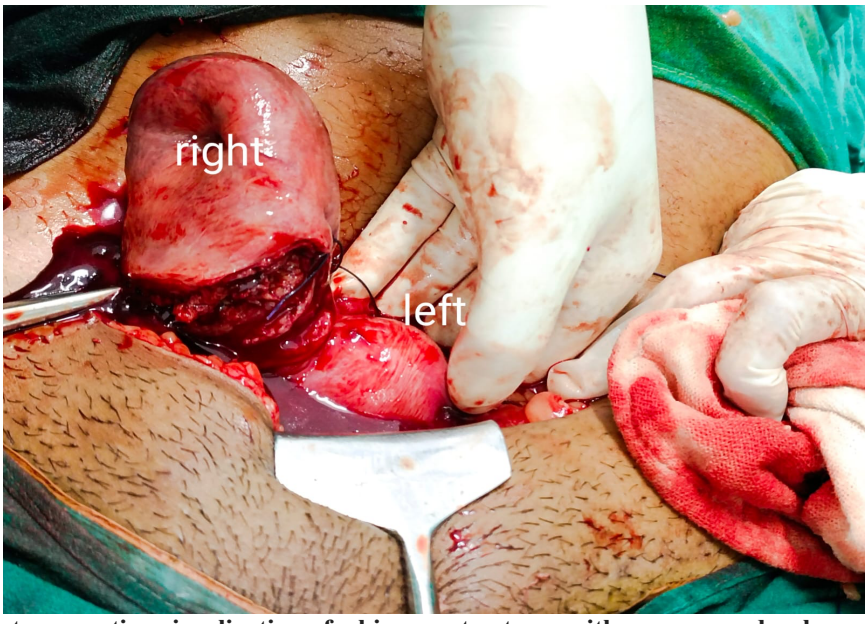

Figure 2: An intraoperative visualization of a bicornuate uterus with pregnancy development in the right horn that does not communicate with the vagina. The left rudimentary horn is empty.

Patient was stable in postoperative period and counselled regarding caesarean section in next pregnancy.

Discussion

Mullerian duct anomalies are generally rare and often associated with increase perinatal morbidity and mortality. These abnormalities occur in 0.1–3% of women and are often associated with reproductive problems such as miscarriages, premature labour, premature rupture, or malpresentation. Early diagnosis is difficult, which is why pregnancy in a rudimentary horn is often only revealed by rupture of the rudimentary horn [2]. The time of rupture varies between the 5th and 35th week of gestation, depending on the strength of the myometrium. Pregnancy in a rudimentary horn has a poor reproductive potential and requires close monitoring. In asymptomatic women, the presence of bicornuate uterus may not be detected until during pregnancy or delivery. The sensitivity of sonography reaches approximately up to 26%. Obstetrical outcomes are generally reported to be better in cases of bicornuate uterus in comparison to unicornuate uterus. Ultrasound in early pregnancy has a major rule in the early diagnosis. Magnetic resonance imaging (MRI) can be a useful non-invasive diagnostic tool. The wide reported range of the incidence of rudimentary horn pregnancies reflects the rarity of the condition. Only 14% of cases are diagnosed prior to clinical manifestation, usually in the second trimester because rudimentary horns are frequently not diagnosed prior to pregnancy. The low diagnostic suspicion may be attributed to the absence of clinical symptoms in pregnancy. When symptoms such as retrograde menstruation, abdominal pain, dysmenorrhea and fertility are present, a non-rudimentary horn can be suspect. Transvaginal sonography, although the method to investigate adnexal pathology, has a low sensitivity (26–33%) for the diagnosis of a rudimentary horn even before pregnancy. Three-dimensional ultrasound and pelvic MRI scan have become standard imaging modalities for the characterization of Mullerian anomalies. The standard treatment consists of immediate excision of the pregnant rudimentary horn due to the high risk of rupture.

Conclusion

The presence of uterus bicornuate non-communicant rudimentary horn poses a great challenge for a gynecologist because that occurs due to the transperitoneal migration of the sperm or the zygote during the implantation period and the Mullerian anomalies are often asymptomatic.

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