



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

A STUDY ON A RARE CASE OF INFERTILITY WITH CONGENITAL UTERINE ANAMOLY

KEY WORDS: Congenital Uterine Malformation, Unicornuate Uterus, Primary Infertility.

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ABSTRACT

Abnormal fusion of Mullerian duct in embryonic life results in variety of malformations & adverse pregnancy outcome. Prevalence of congenital uterine malformation ranges from 0.4% to 10% . A couple of 23 year old wife and 35 year old husband resident of yadagiri presented to OBG out patient department. The couple were Married for five years with normal marital relationship anxious to conceive. Trans-vaginal sonography revealed a congenital uterine anomaly suggestive of Unicornuate Uterus and further evaluated with HSG and Diagnostic laparoscopy with chromopertubation. Unicornuate uterus result from the failure in the development of one of the paramesonephric ducts either partially or completely. It emphasizes the significance of early detection of the condition and timely treatment to avoid any future consequences like Hematometra, Urinary tract anomalies, Infertility, Abortions, Preterm deliveries, Fetal Malpresentations, Endometriosis related to the condition.

INTRODUCTION

Primary Infertility is defined as the inability to conceive even after one year of regular unprotected intercourse of reasonable frequency in a couple . About 90% of couples should conceive within 12 months of unprotected intercourse. Overall prevalence of Primary infertility in India is estimated between 3.9-16.8%.¹

Abnormal fusion of Mullerian duct in embryonic life results in variety of malformations and adverse pregnancy outcome. Depending on the defect, Mullerian Anomalies ranges from mullerian agenesis to arcuate uterus. Prevalence of congenital uterine malformation ranges from 0.4% to 10% .²

Incidence of unicornuate uterus (Class II) is 1 in 4000 women .³

These anomalies are present in 1 in 10% of the unselected population, 2 to 8% of infertile women and 5 to 30% of women with history of miscarriages.⁴

A 65% cases of unicornuate uterus is associated with rudimentary horn, this is difficult to recognize sonographically, 40% of affected women will have renal anomalies.⁵

Although approximately 50% to 70% of women with a unicornuate uterus are able to conceive, they face a significantly higher risk of pregnancy complications with Live birth rate of 29.2%, Premature delivery of 44%.⁶ First-trimester miscarriage of 24.3%, Second-trimester miscarriage of 9.7%, Ectopic pregnancy of 4% , Intrauterine fetal demise of 10.5%.⁷

Clinically ,Unicornuate uterus range from a incidental and symptomless finding to the complex pathology of the reproductive system often leading to infertility and abortions.⁸

A Unicornuate uterus is associated with urinary tract abnormalities and gynecological complications such as endometriosis, infertility, hematometra and obstetric complications like abnormal presentations, miscarriages, ectopic pregnancies & preterm deliveries are also attributed to abnormal uterine blood flow, incompetence of cervix and decreased muscle mass.⁹

The true prevalence of congenital uterine anomalies is difficult to assess as general population is not often screened and partly because there are no universally standardized classification systems and partly because the best

diagnostics techniques are invasive.

Case Report

A couple of 23 year old wife and 35 year old husband resident of yadagiri, presented to OBG out patient department. The couple were Married for five years with normal marital relationship, living together & engaging in regular unprotected sexual intercourse throughout this period, Despite this, they have not achieved a pregnancy, indicating primary infertility anxious to conceive.

The wife also reported irregular menstrual cycles for the past 5 years, with bleeding lasting 5-6 days every 40-45 days, changes one pad per day, with no history of passage of clots or no history of dysmenorrhea.

Husband gives history of Tobacco chewing since 10 years .

General and systemic examination of both husband and wife was uneventful & Local Examination of husband was uneventful.

On Per Speculum Examination (Figure- A):

The vagina and cervix looked healthy, with a pinhole os noted.

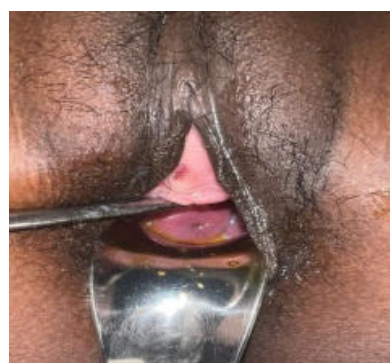


Figure -A: Pinhole Os

Bimanual Examination:

A small nodular uterus was palpated, and the cervix was small and deviated to the right. Bilateral free fornices were non-tender & there was no cervical motion tenderness.

Per Rectal Examination: Nothing abnormality detected.

Investigations:

1. Hemoglobin-13.5g/dl
2. Blood group & Rh Typing - O Positive

Tests Done On Day 2 Of Menstrual Cycles:

3. FSH-13.05 mIU/ml (Increased)
4. LH-13.40 mIU/ml (Increased)
5. Prolactin-13.69 mIU/ml (Normal level)
6. AMH-1.6ng/ml (Normal level)
7. TSH-1.56uIU/ml
8. Semen analysis - Normal study

Trans-Vaginal-Sonography (Figure-B):

Uterus appears banana shaped with predominant tilt towards right adnexa S/o Right Unicornuate uterus, ET-6mm, Bilateral ovaries are normal in size and echotexture.



Figure-B : Trans-vaginal sonography: Unicornuate Uterus

Hystero-Salpingography (Figure-C) :

HSG study conducted on early proliferative phase on Day 10 of menstrual cycle demonstrated a right unicornuate uterus with a single elongated endometrial cavity, suggestive of a hypoplastic or absent contra-lateral horn consistent with a Class II Müllerian anomaly, often associated with reproductive challenges.



Figure-C: Hysterosalpingography: Right Unicornuate Uterus.

The patient was informed and consented for Further evaluation through Diagnostic Laparoscopy With Chromopertubation (Figure- D):

- 1) Small Atrophic uterus consistent with a Right uicornuate uterus
- 2) Right fallopian tube was normal & patent.
- 3) Absent Left fallopian tube with a fibrous band
- 4) Both the ovaries are present & are normal.

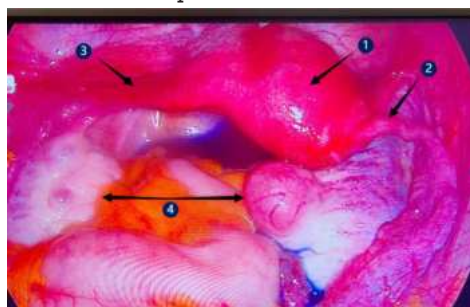


Fig-D: Diagnostic laparoscopy with chromopertubation

DISCUSSION:

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In 1998, the American Fertility Society described congenital uterine anomalies associated with Müllerian duct development. A Unicornuate uterus is classified as Type II, characterized by unilateral hypoplasia or agenesis, and can be further divided into four subcategories : IIA- communicating rudimentary horn, IIB- Non-communicating horn, IIC- No endometrial cavity, IID- No rudimentary horn. In present case there is no rudimentary horn, Hence it is categorized as Type IID A.¹⁰

Unicornuate uterus is a type of congenital uterine anomaly that can result in obstetric complications. However, in this instance, the primary issue leading the patient to seek hospital evaluation was primary infertility While there is often a correlation between urinary tract anomalies and uterine anomalies, As in this case no urinary tract issues were identified in this patient. Also it is critical to maintain a high degree of concern for vulnerable patients, especially women with renal, spinal, cloacal and vertebra/anus/cardiac/trachea/esophagus/radius/renal/limb (VACTERAL) abnormalities, and it is important to carefully analyze the radiological images obtained from various radiological investigations. But Hysteroscopy and laparoscopy remains as the gold standard procedures for diagnosing congenital uterine anomalies.¹¹

CONCLUSIONS

A Unicornuate uterus results from the incomplete development of one of the paramesonephric ducts, either partially or completely. This rare anomaly is often identified during infertility evaluations, emphasizing the importance of early diagnosis and timely treatment to prevent complications

Individuals with a unicornuate uterus can generally maintain a normal sexual life, as this congenital anomaly affects the uterine structure and does not affect Vagina or External genitalia, Hormonal system. As a result sexual desire (libido), arousal and overall sexual function is typically unaffected .

Unicornuate uterus have lower successful pregnancy and live birth rate of only 29.2% compared to women with normal uterine morphology due to structural abnormalities and the limited uterine capacity. There are no surgical procedures available to expand the cavity of a unicornuate uterus.

For individuals facing challenges in carrying a pregnancy to term, the selection of a gestational surrogate may also be a necessary option.

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