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Complete Septate Uterus- A Rare Occurrence Challenging Pregnancy

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ABSTRACT

A septate uterus is the most common Müllerian anomaly, often linked to reproductive challenges such as infertility and recurrent pregnancy loss. This condition results from incomplete resorption of the embryologic Müllerian ducts. Diagnostic criteria differ across medical organizations: ASRM defines a septate uterus by an indentation depth greater than 15 mm and an angle less than 90°, while ESHRE uses an indentation-to-wall-thickness (I:WT) ratio exceeding 50%. Accurate diagnosis and timely surgical intervention are crucial for improving reproductive outcomes. We present the case of a 24-year-old nulliparous female with primary infertility for three years. Clinical examination revealed a vaginal septum, confirmed by ultrasound to be a complete septate uterus with endovaginal and endocervical duplication. The patient underwent successful hysteroscopic septal resection, resulting in the removal of the uterine and cervical septa. Postoperative care included an intrauterine Foley catheter and estrogen therapy. She conceived naturally nine months post-surgery and had an uneventful recovery. Hysteroscopic septal resection remains the gold standard treatment for symptomatic septate uterus, improving pregnancy rates. Literature reports indicate a 62% pregnancy success rate post-resection. This case underscores the importance of early diagnosis and intervention to prevent adverse reproductive outcomes. Although many patients remain asymptomatic, identifying and managing a septate uterus is essential for those experiencing infertility or recurrent pregnancy loss. This report adds to the growing body of evidence supporting hysteroscopic management as an effective approach to improving reproductive potential in patients with congenital uterine anomalies.

Keywords: *Septate uterus, Müllerian anomaly, Hysteroscopic septal resection, Infertility, Uterine duplication and Reproductive outcomes.*

1. INTRODUCTION

The Müllerian Anomaly Classification System (MAC2021) was revised by The American Society of Reproductive Medicine (ASRM) in 2021. This update aimed to enhance and broaden previous classification systems, ensuring their applicability to healthcare practitioners at all levels and fostering patient empowerment and advocacy. Agenesis of the Müllerian uterus, uterus didelphys, bicornuate uterus, septate uterus, longitudinal vaginal septum, transverse vaginal septum, and complex abnormalities are the nine categories into which Müllerian malformations are classified by MAC2021. [1]

The most often seen Müllerian abnormality is the septate uterus. The ASRM classification characterises a septate uterus as having an indentation depth greater than 15 mm and an indentation angle less than 90°. Conversely, the European Society of Human Reproduction and Embryology (ESHRE) characterises a septate uterus as having an indentation-to-wall-thickness (I:WT) more than 50%, whereas the Congenital Uterine Malformation by Experts (CUME) recommends an indentation depth of less than 1 cm. [2]

The clinical assessment of the necessity for surgical intervention in cases of a septate uterus is difficult and contentious because of the different but generally acknowledged criteria. A septate uterus is a structural abnormality caused by the failure of the embryologic Müllerian, or paramesonephric, ducts to mature properly. The precise aetiology of the abnormality remains unidentified. Numerous efforts have been undertaken to ascertain a genetic origin of Müllerian abnormalities, nevertheless, a definitive genetic connection remains difficult. [3]

A meta-analysis of 2019 found that the prevalence of septate uterus is 2.3% in the general population, but it increases to 3.0–15.4% among high-risk groups.[7]

Outcomes of the complete septate uterus is variable, and most often results in pregnancy loss. Early identification can help in planning pregnancy after corrective surgery. Hence, we present this rare case of complete septate uterus.

2. CASE DISCUSSION

This is the case of a 24-year-old female, married with an obstetric history of nulliparous, that presented to the outpatient department with primary infertility since 3 years. She has no other complaints or co-morbidities.

She has regular menstrual cycles. She has not undergone any surgeries or interventions in the past.

On examination, her vitals were stable, and she was afebrile on examination. There were no abnormalities observed on general and systemic examination.

On per-speculum examination, cervix was not visualized, however, a septum was noted extending to vagina as displayed in fig 1.

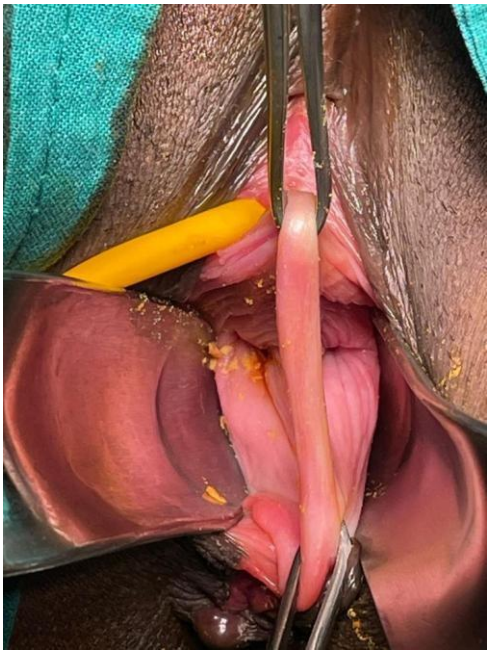

Figure 1 Per speculum examination demonstrating the septum in vagina.

USG abdomen and pelvis was done, which revealed a complete septate uterus with endovaginal and endocervical duplication.

Following this diagnosis, patients underwent hysteroscopic septal resection. Intra-operatively, we noted the endovaginal and endocervical septum, which was divided as seen in fig 2.

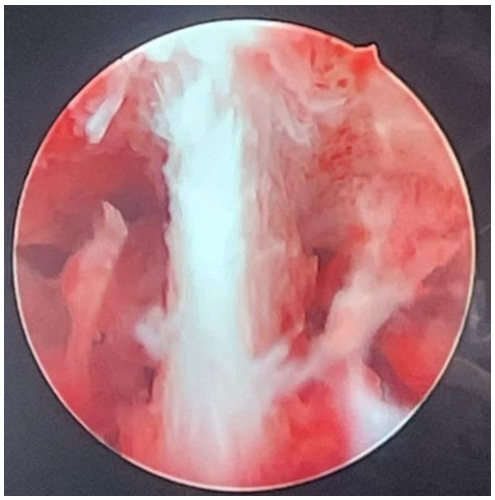

Figure 2 Hysteroscopic visualization of the transverse uterine septum.

Under vision, the uterine septum was divided, and haemostasis was achieved. Patient recovered well post-operatively, and discharged on POD 3. She was on regular follow-up, and conceived naturally 9 months following the corrective surgery.

Post operative intrauterine Foleys catheter [10] was placed and estrogen therapy was given [8]

3. DISCUSSION

The presence of a septate uterus is a congenital Müllerian abnormality that can lead to negative reproductive consequences, including infertility, repeated pregnancy loss, or premature birth. The septate uterus is the predominant Müllerian abnormality seen in clinical settings, however a significant number of people with this condition do not exhibit any symptoms. The existence of several definitions for a septate uterus adds complexity to the process of diagnosing and managing the condition. The prevailing treatment for symptomatic uterine septa is hysteroscopic septal excision. However, the existing information about the improvement of reproductive outcomes by this technique is inconclusive.

Pregnancy in a uterus with a split cavity can result in the release of decidual tissue by vaginal bleeding from the nonpregnant uterine cavity before the delivery of the foetus. Under appropriate management of uterine contractions and bleeding, and confirmation of foetal well-being, the pregnancy can proceed even in situations of significant blood loss.

In our case, patient conceived naturally following the septum resection. These outcomes supported Esmaeilzadeh S et al[9] study which suggested a positive pregnancy outcome of 62% in post hysteroscopic septal resection.

In a case report by Uomoto et al [4], a 31-year-old pregnant female that underwent septal resection at the age of 12, presented with prevaginal bleeding. As the foetal heart rate was normal, patient was allowed to progress in the pregnancy.

Obata et al reported a case of spontaneous discharge of the decidual tissue in a patient during the second trimester, which culminated in the loss of the pregnancy due to heavy bleeding. [5]

Placental previa, placental abruption, persistent abruption-oligohydramnios sequences, and subchorionichaematoma are among the pathologies that can cause vaginal bleeding and uterine contractions during the second trimester. [4]

Ghi et al [6] performed a case series in which they observed the outcomes of pregnancy in those diagnosed with septate uterus incidentally in the first trimester. The overall rate of pregnancy advancement was 33.3%, attributed to the incidence of early losses (≥13 weeks) in 13 cases and late miscarriages (14–22 weeks) in 3 instances.

4. CONCLUSION

Patients with complete septate uterus often suffer from repeated pregnancy losses in the first trimester, or severe vaginal bleeding if the pregnancy continues till the second trimester. However, septal resection helps in improvement of the pregnancy outcome, with a risk of bleeding during the pregnancy at the site of residual septal tissue.

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