



Successful Pregnancy after Hysteroscopic Metroplasty for Congenital T-Shaped Uterus: A Case Report and Review of the Literature

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Abstract

This report highlights the successful pregnancy outcome in a 27-year-old woman with a history of four recurrent miscarriages caused by a T-shaped uterus. Following a diagnosis of uterine anomaly, the patient underwent hysteroscopic metroplasty to reshape the uterine cavity. The procedure was successful, and the patient subsequently conceived and delivered a healthy baby. This case emphasizes the role of hysteroscopic metroplasty in managing congenital uterine anomalies to improve reproductive outcomes in patients with recurrent pregnancy loss.

Introduction

A T-shaped uterus is a congenital uterine anomaly characterized by a narrow endometrial cavity and a thickened or elongated uterine septum. This anomaly is often associated with recurrent pregnancy loss, infertility, and poor obstetric outcomes. Hysteroscopic metroplasty is a minimally invasive surgical intervention designed to correct the anomaly by reshaping the uterine cavity to enhance reproductive potential. This case report demonstrates the utility of hysteroscopic metroplasty in a patient with a T-shaped uterus and recurrent miscarriages, ultimately resulting in a successful pregnancy and live birth.

Case Presentation

A 27-year-old woman presented with a history of four early miscarriages. Comprehensive diagnostic workup, including imaging and hysteroscopy, confirmed the presence of a T-shaped uterus. The uterine anomaly was determined to be the primary cause of her recurrent pregnancy losses. After thorough counseling and review of management options, the patient elected to undergo hysteroscopic metroplasty to optimize her chances of a successful pregnancy.

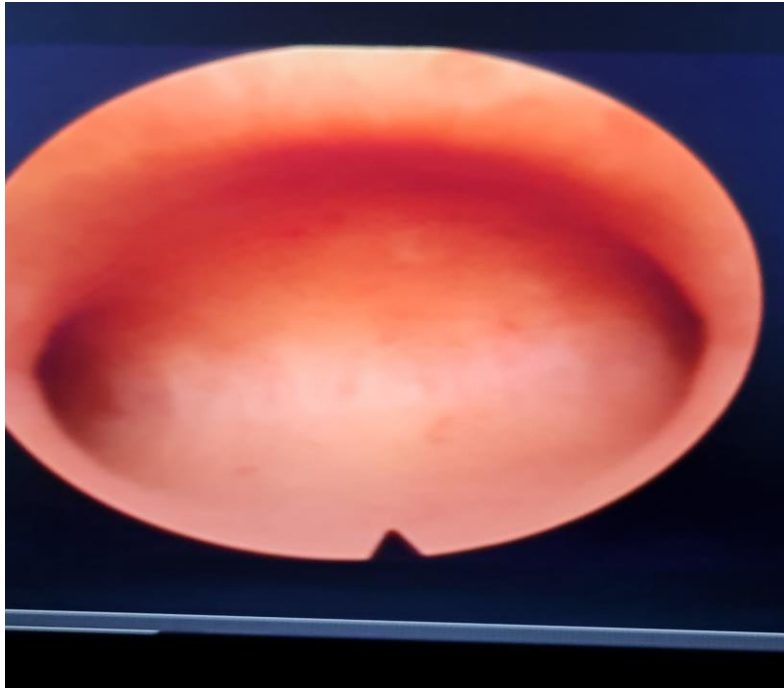


Figure 1

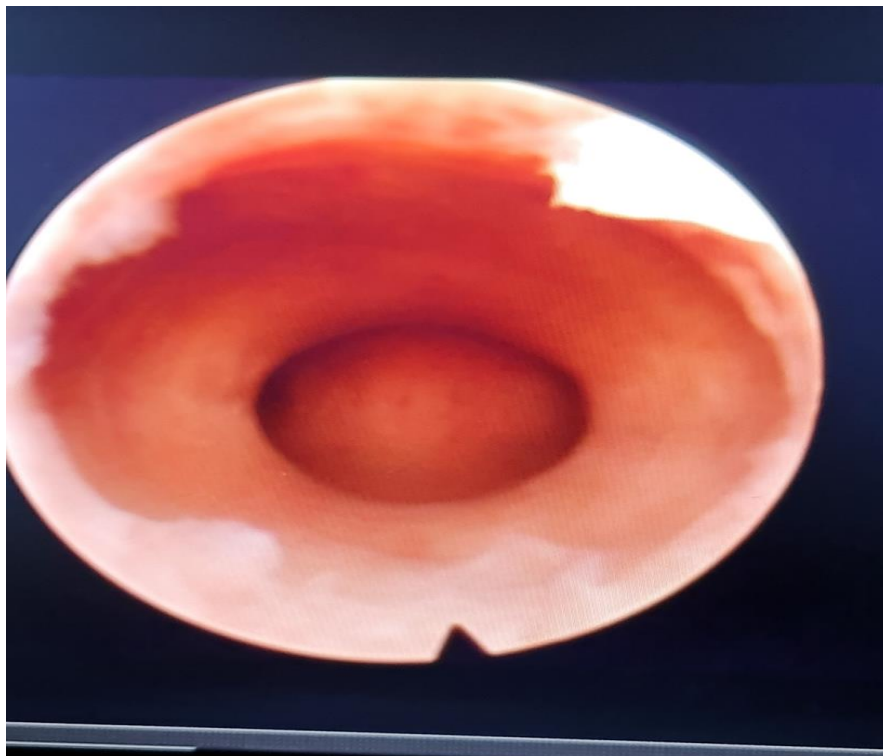


Figure 2

Procedure

The patient underwent hysteroscopic metroplasty under general anesthesia. A hysteroscope was introduced into the uterine cavity to visualize the septum. Using precision surgical instruments, the septum was excised to create a larger and more regular uterine cavity. The procedure was uneventful, with no intraoperative or postoperative complications. The patient was discharged on the same day with appropriate postoperative instructions.

Postoperative Care

The patient was advised to delay conception for 3 to 6 months to allow adequate healing of the uterine lining. During this period, she attended regular follow-up visits to monitor the healing process through imaging and clinical assessments. No complications or abnormalities were observed during the recovery phase.

Pregnancy and Outcome

The patient conceived naturally six months after the procedure. She received routine prenatal care, including close monitoring of uterine and fetal health. Hormonal supplementation was administered during early pregnancy to support implantation and placental development. The pregnancy progressed without any significant complications, culminating in the delivery of a healthy, full-term infant via cesarean section.

Discussion

T-shaped uterus is a rare congenital anomaly associated with adverse reproductive outcomes, including recurrent miscarriage and infertility. Hysteroscopic metroplasty has emerged as the gold standard for treating such anomalies, offering high success rates in improving uterine capacity and reproductive outcomes. Several studies corroborate the effectiveness of metroplasty in enabling successful pregnancies post-procedure. In this case, the patient's four prior miscarriages were likely due to the mechanical and functional limitations imposed by the T-shaped uterus. Corrective surgery resolved these issues, resulting in a favorable reproductive outcome.

Key factors contributing to the success of hysteroscopic metroplasty include precise surgical technique,

appropriate postoperative care, and patient compliance with recommended recovery protocols. However, the timing of conception and the importance of tailored prenatal care also play crucial roles in ensuring successful pregnancies.

Conclusion

Hysteroscopic metroplasty is a safe and effective intervention for patients with congenital uterine anomalies such as a T-shaped uterus. In this case, the procedure significantly improved the patient's reproductive potential, leading to a full-term pregnancy and live birth. This report underscores the importance of early diagnosis, individualized treatment planning, and comprehensive postoperative care in achieving optimal outcomes for patients with recurrent pregnancy loss due to uterine anomalies.

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