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CASE REPORT OPEN ACCESS

Breaking Barriers: Successful Pregnancy Outcome Post Septal Resection in A Woman with RPL With Septate Uterus - A Case Report

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A B S T R A C T

Recurrent pregnancy loss (RPL) is often associated with congenital uterine anomalies, with septate uterus being the most common. We report the case of a 32-year-old woman with four consecutive first-trimester miscarriages and a confirmed diagnosis of septate uterus. She underwent successful hysteroscopic septal resection. Three months post-surgery, she conceived spontaneously and had an uneventful antenatal course. A healthy term infant was delivered via elective cesarean section. This case underscores the importance of early diagnosis and minimally invasive surgical correction in women with RPL and uterine anomalies. Hysteroscopic septal resection is a safe and effective treatment that can significantly improve pregnancy outcomes.

Keywords: Recurrent Pregnancy Loss, Hysteroscopy, Septate uterus, Septal Resection

INTRODUCTION

Recurrent Pregnancy Loss (RPL) poses a significant emotional and physical burden on affected women and their families. Uterine anomalies, such as the septate uterus, are identifiable causes of RPL.[1] A septate uterus is the most common congenital uterine anomaly, characterized by a septum that divides the uterus into two cavities.[2] Uterine septa are associated with poor reproductive outcomes, including recurrent pregnancy loss and preterm delivery.[1] Although there is conflicting evidence regarding the association between uterine septa and infertility, observational studies suggest that surgical septum resection can improve clinical pregnancy rates in infertile couples and improve pregnancy outcomes in those with prior miscarriages or preterm deliveries.[3] For each pregnancy that develops within a septate uterus, there is a 26% to 94% chance of miscarriage and a 6% to 16% chance of preterm labor.[4]

CASE REPORT

A 32-year-old woman with a normal body mass index (BMI: 22.4 kg/m²) presented to our outpatient department with a history of four consecutive first-trimester miscarriages over the past three years. The patient had regular menstrual cycles, no significant past medical or surgical history, and no known exposure to teratogens or endocrine disorders. There was no family history of congenital anomalies or thrombophilic disorders.

A detailed evaluation for recurrent pregnancy loss was initiated. Baseline laboratory investigations—including complete blood count, thyroid function tests, fasting blood glucose, antiphospholipid antibody panel (including lupus anticoagulant, anticardiolipin antibody, and β2 glycoprotein I), and serum prolactin—were all within normal limits. Genetic counselling and karyotyping of both partners revealed normal chromosomal profiles. Pelvic examination was unremarkable.

Transvaginal ultrasonography revealed a uterus with a thin echogenic midline band suggestive of a uterine septum. To further evaluate uterine anatomy, a hysterosalpingography (HSG) was performed, revealing a narrowed endometrial cavity with a midline filling defect and bilateral tubal spillage of contrast, suggesting a septate uterus with patent fallopian tubes. Magnetic resonance imaging (MRI) confirmed the presence of a complete uterine septum with a normal external uterine contour, distinguishing it from a bicornuate uterus.

After thorough counselling regarding surgical options, benefits, risks, and expected outcomes, the patient elected to undergo hysteroscopic septal resection. The procedure was scheduled in the early proliferative phase of her menstrual cycle. Under general anaesthesia, a diagnostic hysteroscopy was initially performed using normal saline as the distension medium, which revealed a fibrous longitudinal midline septum extending from the fundus toward the internal os, separating the endometrial cavity into two narrow hemicavities. Bilateral tubal ostia were visualized at the lateral ends of each hemicavity.

A 26 Fr resectoscope with monopolar energy was introduced, and the septum was gradually resected in a stepwise manner from base to apex under direct visualization, using a loop electrode. Care was taken to avoid perforation and to preserve the surrounding endometrial tissue. Methylene blue dye was used intraoperatively to confirm cavity patency and symmetry. The resection was considered complete once a unified uterine cavity with both ostia in normal anterolateral positions was visualized. The procedure was uneventful with minimal blood loss. Postoperative recovery was uneventful, and the patient was discharged 2 days later. Three months post-surgery, she conceived spontaneously.

A first-trimester ultrasound confirmed a single intrauterine gestational sac with cardiac activity. Serial ultrasounds throughout pregnancy showed normal fetal growth and anatomy. Antenatal care was provided with emphasis on monitoring for cervical insufficiency, preterm labor, and placental location. The patient remained asymptomatic throughout gestation.

At 38 weeks of gestation, she underwent an elective lower-segment caesarean section (LSCS) due to obstetric preference. A healthy female infant weighing 3.1 kg was delivered with Apgar scores of 7 and 9 at one and five minutes, respectively. The postoperative period was uneventful, and both mother and baby were discharged in stable condition on POD 4.

Figure 1: Laparoscopic image showing bilateral tubal patency with free spillage of methylene blue dye from the fimbrial end of the fallopian tube (arrow). This confirms tubal patency as part of the infertility and recurrent pregnancy loss evaluation

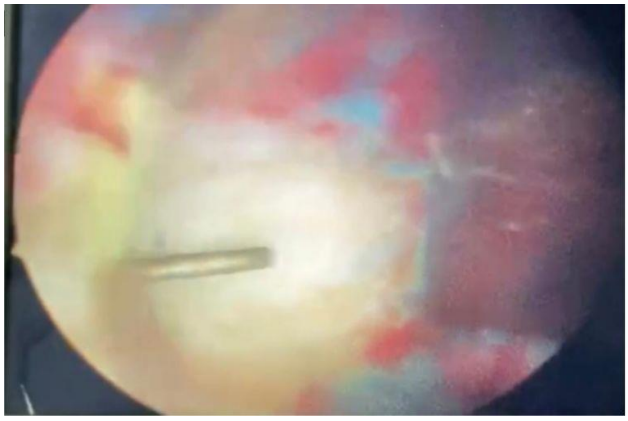

Figure 2: Hysteroscopic view showing resection of the uterine septum using a resectoscope. The image captures the precise incision of the fibrous septum to restore a single uterine cavity.

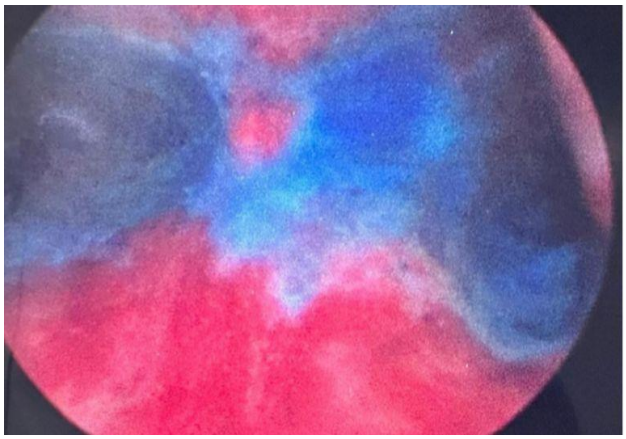

Figure 3: Hysteroscopic view of the uterine cavity with methylene blue dye infiltration, demonstrating the resected uterine septum and visible bilateral tubal ostia.

DISCUSSION

Septate uterus is a known cause of RPL, with hysteroscopic septal resection being the preferred approach due to its minimally invasive nature and high success rates. As stated above, the benefit of surgical septum resection is widely agreed upon for patients with recurrent pregnancy loss and poor obstetrical outcomes.[5]

CONCLUSION

This case illustrates the successful outcome in women with septate uterus following septal resection. Early diagnosis, personalized counseling, and multidisciplinary care are essential in achieving positive pregnancy outcomes in women with RPL and uterine anomalies

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