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Case Report

A rare case of coexistence of bicornuate and septate uterine malformation

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ABSTRACT

Congenital uterine anomalies result from defects in the formation, fusion, or resorption of the Müllerian ducts during embryogenesis. Patients commonly present with infertility, recurrent pregnancy loss, preterm labor, or abnormal fetal presentation, though some anomalies are detected incidentally on imaging. The most frequent congenital anomaly is septate uterus. We report an unusual case of coexistence of septate uterus with bicornuate morphology in a woman presenting with primary infertility.

Keywords: Congenital uterine anomalies, Bicornuate uterus, Septate uterus, Infertility, Hysteroscopy, Laparoscopy

INTRODUCTION

Congenital uterine malformations are developmental anomalies of the Müllerian ducts, with a prevalence ranging from 0.1% to 10% of women of reproductive age.[1] Clinical presentations vary and include infertility, recurrent miscarriage, and obstetric complications.[2] Diagnostic hysteroscopy combined with laparoscopy is considered the gold standard for diagnosis and management. While septate uterus is the most common anomaly, the coexistence of septate and bicornuate morphology is rare.

CASE REPORT

A 32-year-old woman, married for four years, presented with primary infertility. She had undergone three cycles of ovulation induction with letrozole and folliculometry at a private clinic without conception. She had a history of hypothyroidism managed with levothyroxine 25 mcg daily for one year. No significant surgical or medical history was reported for her or her partner, and semen analysis was normal. On examination, a longitudinal vaginal septum with two cervices was observed. Per vaginum examination revealed a normal-sized, mobile uterus with free fornices. Pelvic ultrasound demonstrated a septate uterus with extension of the septum into the vagina, which was confirmed on MRI. Hysterosalpingography was attempted but abandoned after two failed cannulations. Renal ultrasound was normal. Anti-Müllerian hormone levels were low.

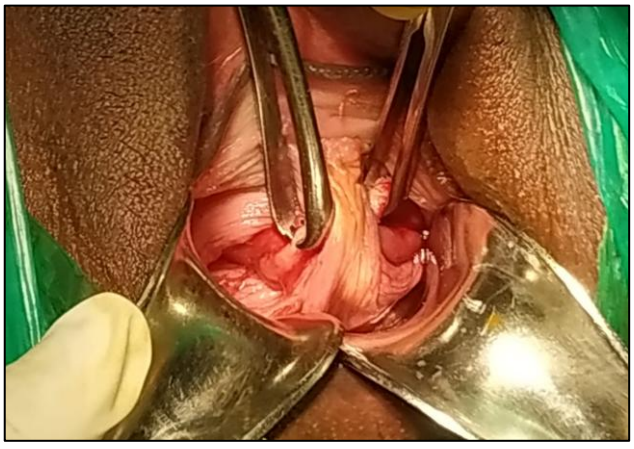

Figure 1: Speculum examination-showing two cervix.

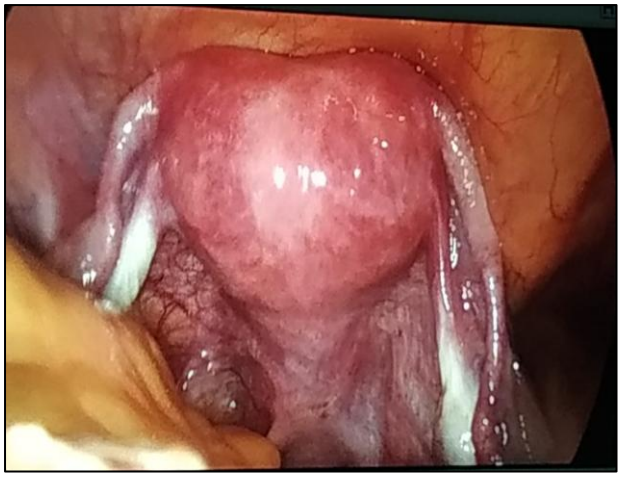

Figure 2: Laparoscopy finding showing indentation on the top.

The patient underwent diagnostic hysterolaparoscopy with chromopertubation. Intraoperatively, a longitudinal vaginal septum was confirmed. On hysteroscopy, two small uterine cavities were visualized, each partially obstructed by septal tissue. Laparoscopy revealed a normal-sized uterus with fundal indentation consistent with bicornuate morphology. Chromopertubation showed left-sided tubal patency with right-sided block. Both ovaries appeared normal. The postoperative course was uneventful, and the patient was discharged on day three.

DISCUSSION

Müllerian anomalies that do not fit standard classification are termed atypical malformations. Multiple classification systems exist, including Jones, American Fertility Society (AFS), EAC, and the more recent ESHRE/ESGE system.[3-6] Proper understanding of embryology is critical, as these anomalies result from disrupted fusion of the paramesonephric ducts or incomplete resorption of the septum.[3] Bicornuate uterus arises from incomplete fusion of the ducts, whereas septate uterus is due to failure of resorption. The coexistence of both reflects a rare combination of developmental defects. Associated renal and skeletal anomalies are common, thus screening is recommended.[4]

Hysterosalpingography may assist in diagnosis but cannot reliably distinguish septate from bicornuate uterus. Hysterolaparoscopy remains the gold standard.[7] These anomalies contribute to infertility and recurrent pregnancy loss due to inadequate vascularization of the septum and abnormal implantation.[8] Surgical management with septal resection (metroplasty) has shown improvement in fertility outcomes. The TRUST trial demonstrated live birth rates improving from 35% without surgery to 70% following resection.

CONCLUSION

Congenital uterine malformations significantly affect fertility and pregnancy outcomes. Coexistence of bicornuate and septate uterus is rare and requires accurate diagnosis with hysterolaparoscopy. Surgical correction, particularly metroplasty, improves pregnancy and live birth rates in women presenting with infertility.

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