

Standardized hysteroscopic management of complete septate uterus with duplicated cervixes and longitudinal vaginal septum: an ultrasound guided procedure

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Objective

The primary aim was to evaluate perioperative and postoperative complications in patients undergoing a standardized ultrasound-guided hysteroscopic treatment for complete septate uterus, duplicated cervixes, and non-obstructive longitudinal vaginal septum. Secondary aims included: (1) changes in operative time over the years; (2) differences in symptoms before and after the procedure; and (3) reproductive outcomes.

Methods

This retrospective observational cohort study was conducted from January 2021 to May 2025 at the Digital Hysteroscopic Clinic, Class Hysteroscopy, Fondazione Policlinico A. Gemelli IRCCS in Rome. The inclusion criteria were the diagnosis of complete septate uterus, duplicated cervixes, and non-obstructive longitudinal vaginal septum obtained through a one-stop diagnosis, combining 2D-3D transvaginal ultrasound and diagnostic hysteroscopy. All patients underwent hysteroscopic resection of the vaginal and uterine septum using a 15 Fr bipolar mini-resectoscope under real-time transrectal or trans abdominal ultrasound guidance, sparing the duplicated cervixes. Peri- and post-operative complications (both minor and major) were investigated. Changes in operative time over the years were evaluated using linear regression analysis, assessing the relationship between case number and procedure duration. Final result was checked by 3D ultrasound. Differences in symptoms before and after the procedure were analyzed descriptively. Reproductive outcomes were descriptively reported as clinical pregnancy rate, live birth rate, miscarriage rate, and pregnancy-related complications.

Results

Surgical correction was successfully completed in all 28 patients with no perioperative or postoperative complications. The median operative time was 61.5 minutes (range: 21–94). Linear regression analysis demonstrated a modest reduction in operative time over successive cases, suggesting a learning curve effect. At follow-up all patients exhibited a regular triangular shaped uterine cavity on 3D ultrasound. The median follow-up time was 24 months (range: 3-54 months). 1 patient (3.5%) continued to experience dyspareunia during follow up. Among the 11 patients who attempted to conceive, the clinical pregnancy rate was 100% (11/11), the live birth rate per pregnancy was 63.6% (7/11), with 2 ongoing pregnancies at the time of last follow-up.

Conclusion

The proposed standardized hysteroscopic technique using a 15 Fr bipolar mini-resectoscope under transrectal or transabdominal ultrasound guidance to treat complete septate uterus, duplicated cervixes, and non-obstructive longitudinal vaginal septum, appears safe, reproducible, and associated with promising clinical and reproductive outcomes. These findings support the integration of minimally invasive surgery and advanced imaging in the management of rare congenital uterine anomalies.

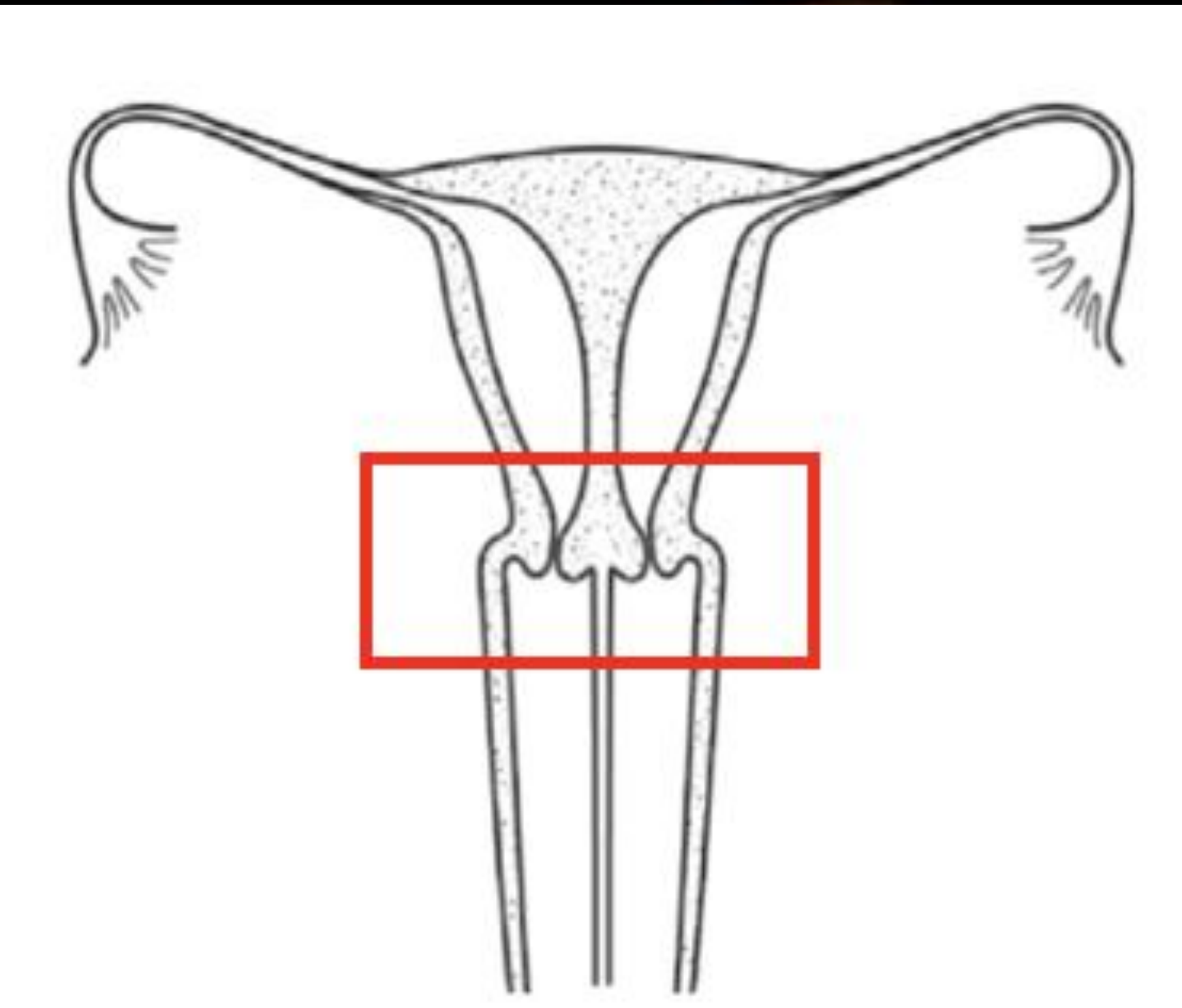


Figure 1. Surgical time of the procedures

