

2025 APAGE Annual Congress YAG Video Abstract

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Title: Optimal excision of cesarean scar defect by needle-guided technique: a modified transvaginal repair to recognize and resect whole defect

Aims and Objectives: Symptomatic cesarean delivery scar defect (CSD) affects 40% to 60% of women, leading to abnormal uterine bleeding and prolonged menstrual cycles. Various surgical approaches, including hysteroscopic excision, laparoscopic repair, and vaginal repair, have been developed to manage these symptoms. This study introduces a modified transvaginal repair using a needle-guided technique for optimal excision of CSD, aiming to improve surgical precision, reduce complications, and enhance patient outcomes.

Settings and Design: This study is a retrospective analysis of patients undergoing needle-guided transvaginal excision of CSD in a hospital setting under general anesthesia.

Materials, setting and methods: Patients were placed in the lithotomy position under general anesthesia. CSD was initially identified by palpation and localized via hysteroscopy, with the thinnest residual myometrial thickness (RMT) marking the defect site.

Hydro-dissection was performed using diluted adrenaline (1ml adrenaline in 1000ml normal saline) to aid hemostasis. A transverse incision was made on the anterior vaginal wall to expose the vesico-cervical space, and the bladder was carefully dissected away from the uterus.

The isthmus of the uterus was identified by palpation, and an 18-22 gauge needle, bent at 90 degrees, was inserted at the CSD site. Hysteroscopy confirmed the optimal excision margin by visualizing the needle tip at the center of the defect. The defect was then resected, and the uterine wound was closed using a double-layer absorbable suture technique.

To prevent and manage complications such as urinary tract injury or bladder perforation, intraoperative cystoscopy was routinely performed after wound closure.

Results: Most patients reported high satisfaction post-procedure, with improvements in prolonged menstrual periods and intermenstrual spotting. Compared to laparoscopic repair, transvaginal excision offered a shorter operative time and allowed direct visualization and palpation of the defect, facilitating a more precise and complete excision.

Conclusion: Symptomatic CSD significantly affects women post-cesarean delivery, necessitating effective surgical intervention. While multiple techniques exist, the optimal approach remains debated.

The transvaginal technique offers a cosmetic advantage by avoiding additional skin incisions, unlike laparoscopic repair. Compared to hysteroscopic excision, double-layer closure ensures better residual myometrial thickness, reducing the risk of recurrence.

Furthermore, intraoperative cystoscopy enhances safety by enabling early detection and management of potential complications. This study proposes a needle-guided transvaginal excision technique as an effective method for complete defect removal, optimizing surgical outcomes, reducing recovery time, and minimizing complications.

Keywords: Symptomatic cesarean scar defect, needle-guided transvaginal excision