VIDEO COMMENTARY

DOI: 10.52054/FVVO.2026.334
Facts Views Vis Obgyn 2026;18(2):151-152

Robotic ureteral reimplantation for endometriosis: the Lich-Gregoir technique. A step-by-step approach

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ABSTRACT

Background: Urinary tract endometriosis affects fewer than 6% of patients with endometriosis, with ureteral involvement representing the second most common site of disease (9–23%). The condition is often asymptomatic, which may result in silent loss of renal function. Surgical intervention is required in cases of ureteral obstruction. Ureteroneocystostomy is indicated for distal ureteral disease, particularly when ureterolysis is insufficient or vascular compromise is present. The Lich-Gregoir technique is an extravesical approach to ureteral reimplantation into the bladder.

Objectives: To present a step-by-step demonstration of robot-assisted ureteral reimplantation using the Lich-Gregoir technique following excision of a parametrial and vaginal endometriosis nodule.

Participant: A 47-year-old nulliparous woman presented with dysuria, deep dyspareunia, and dyschezia. Imaging revealed a left parametrial endometriosis nodule extending to the vagina, causing distal ureteral obstruction and grade III hydronephrosis.

Intervention: This narrated video demonstrates the surgical management of severe ureteral endometriosis, including ureterolysis, safe nodule excision, and ureteral reimplantation using the Lich-Gregoir technique. Reimplantation was preferred to segmental resection or ureterolysis due to distal stenosis, proximity to the bladder, and the depth of disease infiltration. The patient remained asymptomatic at follow-up visits at 1 and 6 months. Retrograde cystography performed 3 weeks postoperatively showed no leakage.

Conclusions: Robot-assisted Lich-Gregoir ureteral reimplantation represents a feasible and reproducible option for distal ureteral endometriosis. The robotic platform may facilitate precise and complex reconstructive procedures.

What is New? The case illustrates the role of robotic surgery in complex pelvic endometriosis, demonstrates the feasibility of integrating ureteroneocystostomy with simultaneous excision of parametrial and vaginal endometriosis.

Keywords: Endometriosis, laparoscopy, reimplantation, robotic surgery, ureter, ureteral obstruction

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Received: 02.02.2026 **Accepted:** 09.03.2026 **Epub:** 20.05.2026 **Publication Date:** 22.06.2026

Cite this article as: Raimondo D, Centini G, Neola D, Giorgi M, Palermo R, Pazzaglia E, et al. Robotic ureteral reimplantation for endometriosis: the Lich-Gregoir technique. A step-by-step approach. Facts Views Vis Obgyn. 2026;18(2):151-152

Acknowledgments: No acknowledge to provide.

Contributors: Surgical and Medical Practices: D.R., Concept: D.R., G.C., M.G., E.Z., R.S., Design: D.R., G.C., E.Z., R.S., Data Collection or Processing: M.G., R.P., Analysis or Interpretation: R.P., Literature Search: D.N., M.G., E.P., Writing: D.R., M.G., E.P.

Funding: The authors have no funding to declare.

Competing interests: Diego Raimondo, MD, serves as Associate Editor for Facts, Views and Vision in ObGyn. He was not involved in the peer-review of this article and had no access to information regarding its peer-review. Gabriele Centini, MD, is a member of the ESGE Editorial Board of the Facts, Views and Vision in ObGyn. He had no involvement in the peer-review of this article and had no access to information regarding its peer-review. The other authors declared that there is no conflict of interest.

Ethical approval: The study obtained approval from the local Ethics Committee of the Azienda Ospedaliero-Universitaria Senese, Siena, Italy (protocol number: 25431, date: 16.10.2023). It was conducted in compliance with the Helsinki Declaration, and patient data were anonymized.

Informed consent: Written informed consent was obtained from the patient for publication of this case report and accompanying images and videos.

Data sharing: The data underlying this article cannot be shared publicly due to the need for privacy of the individual that participated in the study. The data will be shared on reasonable request to the corresponding author.

Transparency: The authors affirm that this manuscript is an honest, accurate, and transparent account of the case being reported; that no important aspects of the case have been omitted; and that any discrepancies from the standard clinical management have been explained.

Video 1. Robotic ureteral reimplantation for endometriosis: the Lich-Gregoir technique. A step-by-step approach: https://youtu.be/INPxHpfSZtk