

Laparoscopy for ureteral endometriosis: surgical details, long-term follow-up, and fertility outcomes

Stefano Uccella, M.D., Ph.D., Antonella Cromi, M.D., Ph.D., Jvan Casarin, M.D., Giorgio Bogani, M.D.,
Ciro Pinelli, M.D., Maurizio Serati, M.D., and Fabio Ghezzi, M.D.

Department of Obstetrics and Gynecology, University of Insubria, Del Ponte Hospital, Varese, Italy

Objective: To evaluate perioperative details, long-term outcomes, and postsurgical fertility in case of laparoscopic ureterolysis for deep endometriosis.

Design: Retrospective analysis of prospectively collected data.

Setting: Academic research center.

Patient(s): One hundred nine consecutive women who underwent laparoscopic ureterolysis for deep endometriosis.

Intervention(s): Laparoscopic excision of ureteral endometriosis (ureteral shaving was attempted in all cases).

Main Outcome Measure(s): Perioperative details, long-term outcomes, fertility rates, and need for secondary surgery, stratifying on presence/absence of hydronephrosis. Predictors of longer operative time, pain recurrence, and fertility were also investigated.

Result(s): No conversion to open surgery was necessary. Intraoperative ureteral injury occurred in one case (0.9%). Nine women (8.3%) underwent ureteral stenting. Eight cases (7.3%) of mild postoperative complications were registered; no case of severe complications or postoperative ureteral fistula occurred. An increase was observed in the risk of short-/long-term adverse outcomes, according to the grade of preoperative hydronephrosis. Of the 80 women with available follow-up data, secondary ureteral procedures were necessary in 5 women (6.3%), whereas 22 patients (27.5%) had recurrence of endometriosis symptoms. Among the 36 women who wished to conceive, a total of 26 pregnancies were registered in 20 women (55.6%). The miscarriage rate was 15.6%. Hydronephrosis grade ≥ 2 was independently associated with longer operative time and higher rate of symptoms recurrence. Adjuvant hormonal therapy after ureterolysis was the only independent factor associated with lower fertility rates.

Conclusion(s): Laparoscopic ureterolysis is a safe procedure, with encouraging pregnancy rates and satisfactory long-term results. However, hydronephrosis grade ≥ 2 is associated with worse outcomes. (Fertil Steril® 2014; ■:■-■. ©2014 by American Society for Reproductive Medicine.)

Key Words: Laparoscopy, ureterolysis, deep endometriosis, fertility, hydronephrosis

Discuss: You can discuss this article with its authors and with other ASRM members at <http://fertilityforum.com/uccellas-patients-laparoscopy-ureteral-endometriosis/>



Use your smartphone to scan this QR code and connect to the discussion forum for this article now.*

* Download a free QR code scanner by searching for "QR scanner" in your smartphone's app store or app marketplace.

Endometriosis is a common gynecologic disorder characterized by ectopic growth of endometrial glands and stroma; a large population-based study has estimated that this disease affects approximately 11% of premenopausal women (1), but

this percentage rises considerably among women with pelvic pain or infertility (2). Historical data published in the 1960s suggest that the involvement of the urinary tract is a quite rare condition, affecting 1% to 2% of women with symptomatic endometri-

osis (3). Recently it has been reported that these figures underestimate the real incidence of the problem and that suspicion of ureteral involvement should be always raised in women affected by deep infiltrating endometriosis (4). To investigate the presence of ureteral involvement, a large variety of imaging evaluations, such as magnetic resonance, computed tomography scan, and intravenous or retrograde pielography, have been proposed (5, 6). However, at present ureteral localization can be confirmed only by laparoscopic inspection

Received November 27, 2013; revised March 26, 2014; accepted March 29, 2014.

S.U. has nothing to disclose. A.C. has nothing to disclose. J.C. has nothing to disclose. G.B. has nothing to disclose. C.P. has nothing to disclose. M.S. has nothing to disclose. F.G. has nothing to disclose.

Reprint requests: Stefano Uccella, M.D., Ph.D., University of Insubria, Department of Obstetrics and Gynecology, Piazza Biroldi 1, Varese 21100, Italy (E-mail: stefucc@libero.it).

Fertility and Sterility® Vol. ■, No. ■, ■ 2014 0015-0282/\$36.00

Copyright ©2014 American Society for Reproductive Medicine, Published by Elsevier Inc.

<http://dx.doi.org/10.1016/j.fertnstert.2014.03.055>

with histologic confirmation of endometriotic lesions around the ureter (7).

Ureteral endometriosis is usually unilateral and is associated with retroperitoneal fibrosis and periureteral desmoplastic reaction (8). Few or even no symptoms can accompany this condition, with potentially severe consequences: if left untreated, ureteral stricture can occur with high-grade hydronephrosis and, in the worst cases, loss of homolateral renal function (9, 10). Therefore, surgical treatment should include isolation and mobilization of the ureter, freeing it from the endometriotic lesions that could cause its obstruction (4). A number of articles published since 1992 (11) have suggested that in experienced hands ureterolysis can be effectively accomplished by laparoscopy, with a complication rate ranging in the literature between 0 and 31% and a risk of recurrence of 0 to 12% (12–16). Some authors have suggested that the presence of hydronephrosis represents a major risk factor for perioperative complications and in particular for intraoperative ureteral injuries (17), but the best surgical option for women with dilatation of the renal pelvis or of the ureter (i.e., whether surgery should include shaving and preservation of the ureter or ureteral resection and reimplantation/reanastomosis) still represents a matter of debate, and no clear recommendations have been provided on this specific issue.

We here present a large series of cases of ureteral endometriosis treated by laparoscopy. The aim of the present study has been to investigate perioperative outcomes of this type of operation (with stratification for presence or absence of hydronephrosis) and long-term follow-up (in terms of likelihood of reintervention, symptoms recurrence, and reproductive function).

MATERIALS AND METHODS

Data of women who undergo laparoscopy for benign conditions at the Obstetrics and Gynecology Department of the University of Insubria are systematically collected in a prospective surgical database. This is a research-quality dataset that is regularly updated by trained residents. Information about patients include details on age, parity, body mass index (BMI), previous abdominal surgery, and operative parameters (operative time, estimated blood loss, conversion to laparotomy), as well as intra- and postoperative complications and reoperations.

For the purposes of the present analysis the database was queried to include in this study all women who underwent laparoscopy for ureteral involvement by deep endometriosis, in the period between January 2004 and February 2013. Patients with a positive history for renal disease or those who had already undergone surgery for deep endometriosis of the ureter were excluded.

Institutional review board approvals were obtained for the prospective collection of data, their retrospective analysis, and collection of follow-up information.

Before having surgery, all women had an accurate physical and imaging examination. Patients underwent Papanicolaou smear preoperatively, and diagnostic hysteroscopy was scheduled in all patients complaining of abnormal uterine

bleeding. A detailed history of endometriosis symptoms was collected, by paying specific attention to urinary symptoms, defined in accordance with the standards jointly recommended by the International Continence Society and International Urogynaecological Association (18). A bilateral Giordano maneuver was carried out to provoke/increase pain in latent renal dilatation. Abdominal and pelvic ultrasound scans were accomplished before surgery, and a specific evaluation of the urinary district was performed with renal ultrasound and multislice computed tomography scan or, as an alternative, abdominal magnetic resonance imaging (both with intravenous injection of contrast medium and late-phase acquisitions to investigate the entire urinary tract), to rule out renal or ureteral dilatation. Hydronephrosis was defined as any degree of renal calyx or pelvis dilatation. The severity of hydronephrosis was graded according to the classification provided by Fembach et al. (19) (grade 0: no calyx or pelvic dilatation; grade 1: pelvic dilatation; grade 2: mild calyx dilatation; grade 3: severe calyx dilatation; grade 4: calyx dilatation accompanied by renal parenchymal atrophy). Ureteral stents were placed before surgery only in case of grade 3–4 hydronephrosis.

All surgical procedures were performed by a skilled surgeon with extensive background in laparoscopic procedures, with the aid of one or two assistants. Ureterolysis was performed with the same steps in all cases. There were no substantial differences in patients' pre- and postoperative care, clinical protocols, surgical technique, and attending medical staff during the entire study period. Severity of endometriosis was ascertained intraoperatively using the revised American Fertility Society (rAFS) score system (20). All women received a single dose of prophylactic antibiotic 1 hour before the intervention; antithrombotic prophylaxis was administered with low-molecular-weight heparin (7 days) and compression stockings (until full mobilization). An indwelling Foley urinary catheter was placed before the beginning of surgery and removed 24 hours after surgery.

The same group of physicians performed follow-up evaluations, with vaginal inspection and ultrasound examination, 1–3 months after surgery. All patients underwent ultrasound scan of the urinary tract. The majority of the patients then performed annual checks afterwards.

In the period between April and August 2013 we tried a telephone follow-up of all women. In case of response, patients were asked to participate in a follow-up visit with pelvic examination (including transvaginal scans) and transabdominal ultrasound of the kidneys, and detailed information was obtained regarding medical therapy after surgery, late postoperative complications, recurrence of symptoms, reinterventions, fertility, and pregnancy rate. An analysis of the obtained data was made by comparing women who became pregnant after surgery with those who did not.

Technique of Ureterolysis

Retroperitoneal laparoscopic identification and inspection of both ureters were performed in all women with deep

Download English Version:

<https://daneshyari.com/en/article/6180197>

Download Persian Version:

<https://daneshyari.com/article/6180197>

[Daneshyari.com](https://daneshyari.com)