**47. Nomogram for predicting a complex ureteral procedure in pelvic endometriosis surgery**

**Lou Donval 1, Julien Niro 2, Thomas Gaillard 3, Sarah Amari 2, Carmen Chis 2, Clothilde Poupon 4, Anne Gauthier 2, Pierre Panel 2  
J Minim Invasive Gynecol. 2022 Jan 18;S1553-4650(22)00027-9.doi: 10.1016/j.jmig.2022.01.003. Online ahead of print.**

Abstract

Study objective: To develop a nomogram for predicting the type of ureteral procedure in pelvic DE surgery (1) and to describe the factors and complications associated with the ureteral procedure (2).

Design: Retrospective monocentric study of 920 patients who underwent surgery for pelvic DE between June 2009 and March 2020 in the gynecological surgery department of the Versailles Hospital Center. The main criterion was evaluation of the ureteral procedure, classified as simple (isolation of the ureter) or complex (dissection of the ureter, segmental ureteral resection, or nephroureterectomy). Postoperative complications, including ureteral stenosis and fistula formation, were tabulated.

Setting: Tertiary referral hospital and expert center in endometriosis.

Patients: Nine hundred and twenty patients with DE.

Interventions: Ureteral procedure during surgery for DE.

Measurements and main results: In total, 724 patients (79%) underwent a ureteral procedure, of which 307 (33%) were complex, including 17 (1.8%) segmental ureteral resections. In multivariate analysis, the predictive variables for a complex ureteral procedure were age (p = 0.036), a previous surgery for endometriosis (p < 0.01), and ureteral dilatation on MRI (p < 0.001). The AUC for the model predicting a complex ureteral procedure was 0.68 (95%CI: 0.60-0.71). A complex ureteral procedure was associated with a 3.5% rate of ureteral fistula (n = 15).

Conclusion: Age, a previous surgery for endometriosis, a rectovaginal nodule size ≥ 30 mm, endometriotic involvement of the rectum or sigmoid, and ureteral dilatation are significantly associated with a complex ureteral procedure. Our results allowed us to build a nomogram that can be used to better inform patients, anticipate the therapeutic strategy, and optimize the modalities of postoperative surveillance.

Keywords: complications; endometriosis; predictive model; risk factors; ureter.