Title: Robotic-assisted laparoscopic ureteroplasty using a non-transecting side-to-side technique for distal ureteral strictures.

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Objective: To report our initial experience with robotic-assisted laparoscopic (RAL) ureteroplasty using a non-transecting side-to-side anastomosis to manage distal ureteral strictures and demonstrate our surgical technique.
Patients and surgical procedure: We retrospectively reviewed patients who underwent RAL ureteroplasty using a non-transecting side-to-side anastomosis between 2020 and 2023. The primary outcome measure was clinical success, defined as freedom from additional surgical intervention for ureteral stricture recurrence at the last follow-up. The secondary outcome measure was radiologic success, defined as lack of evidence of hydronephrosis on post-operative renal ultrasound (RUS).
Results: Nine patients were included in our study, with 78 % female (n =7) and a median age of 50 years (IQR 45–66). The median stricture length repaired was 4 cm (IQR 2–8). The etiology of stricture disease included iatrogenic, radiation, endometriosis, and idiopathic. The median operative time and estimated blood loss were 228 min (IQR 211–333) and 50 mL (IQR 40–75). There were no intraoperative complications. Post-operatively, one patient had a Clavien-Dindo grade ≥3 complication due to stent displacement on postoperative day one, which was repositioned endoscopically the same day. The median length of stay was 2 days (IQR 2–3), and the median follow-up time was 4 months (IQR 1–13). 100 % (n =9) of patients met our clinical and radiologic success definition.
Conclusions: RAL ureteroplasty via a non-transecting side-to-side anastomosis is a safe and effective treatment option for distal ureteral strictures.