



Single Port Robotic Extraperitoneal Distal Ureterectomy and Ureteral Reimplantation via Lower Anterior Approach

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ABSTRACT

Purpose: Single Port (SP) Robotic Extraperitoneal approach enhances maneuverability in the narrow extraperitoneal space while preserving peritoneal integrity (1, 2). First reports show reduced postoperative pain, fewer gastrointestinal complications and shorter hospital stay compared to multiport or open techniques (3-5). Recent experiences with robotic ureteral reconstruction have further supported the feasibility of advanced reconstructive procedures in selected patients (6-8) but literature on SP platform remains limited (9, 10), therefore we present this innovative technique.

Materials and Methods: We report the case of a 44-year-old female (BMI 29.1 kg/m²), with medical history of fibromyalgia, who presented with right-sided back pain and nausea. CT-urogram showed severe right hydronephrosis with a distal ureteral stricture and diffuse ureteral thickening, without a clear obstructing lesion. Diagnostic ureteroscopy revealed luminal narrowing due to wall thickening, without papillary masses. Biopsies and urine cytology were negative for urothelial carcinoma. A double-J stent was placed, and SP robotic distal ureterectomy with ureteral reimplantation was scheduled.

Results: Low Anterior Access (LAA) was obtained through a 4-cm incision at the McBurney point. The retroperitoneal space was bluntly developed to identify the psoas muscle as anatomical landmark; the ureter was dissected caudally and resected at the level of the stricture. The bladder was then reached for cystotomy and ureteral reimplantation. Operative time was 160 minutes. No complications occurred and the patient was discharged on postoperative day 1. Final pathology revealed endometriosis. The ureteral stent was removed after 4 weeks; at 3-month follow-up the patient was asymptomatic, renal function was normal, and CT scan showed no right hydronephrosis.

Conclusion: Robotic SP extraperitoneal approach appears safe, feasible, and promising for ureteral reconstruction, combining retroperitoneal access with SP system dexterity and potentially reducing postoperative morbidity and hospital stay.

CONFLICT OF INTEREST

None declared.

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