

Hugo RAS robot-assisted radical cystectomy with urethrectomy and ileal conduit for muscle invasive bladder neck cancer in the female

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Introduction & Objectives: To date, the indication for robotic-assisted radical cystectomy has expanded to increasingly complex and advanced cases. We present the case of a 76-year-old woman with no smoking history and episodes of recurrent hematuria. The patient was fit for robotic surgery. Physical examination revealed occasional discomfort in the left flank. Cystoscopy discovered a neoformation at the level of the bladder neck and trigone, with the ureteral orifices not visible bilaterally. TURB-T confirmed a grade 3 papillary urothelial cell carcinoma infiltrating the muscle layer (pT2). A CT scan was performed and showed no evidence of distant disease.

Materials & Methods: The patient underwent surgery using the Hugo RAS robotic system. The robotic trocars were placed according to the standard setup guides from Medtronic, with two additional trocars (12 mm AirSeal and 5 mm) for the assistant. The reserve arm robotic trocar was placed inside a 12 mm trocar to allow the use of the laparoscopic stapler. The robotic instruments used for the procedure included a needle driver, Cadiere forceps, monopolar scissors, and Maryland bipolar forceps. The assistant instruments included an endo-GIA stapler and a LigaSure. The first step of the procedure was the isolation of both ureters, followed by the colpotomy and the lateral dissection of the bladder. The ureters were then sectioned, and a frozen section from the distal margins was sent to pathology to exclude the presence of disease. The bladder pedicles were sectioned, and the urethra was completely isolated intracorporeally and excised up to the orifice. A bilateral iliac-obturator lymphadenectomy was performed. After transposing the left ureter to the right side, the ideal ileal loop was chosen and isolated from the transit. After restoring intestinal continuity and placing JJ stents inside the ureters, we performed uretero-ileal anastomosis according to Wallace's technique, using Monocryl 5-0 for the ureteral plate and 4-0 for the anastomosis with the ileum. Console operative time was 294 minutes. Recorded blood loss was 100cc.

Results: Definitive histopathology showed a pT2a R0 high-grade transitional cell carcinoma with extension to the urethra and both ureters. The lymph nodes were negative for cancerous spread. No complications at 30- or 90- days were reported. Three months post-surgery, renal function was stable (serum creatinine was 0.9 mg/dL vs. 1.0 mg/dL pre-surgery), and no locoregional recurrence was delineable.

Conclusions: In this video, we demonstrate an approach to managing challenging cases by performing a cystectomy with complete intracorporeal urethrectomy using the Hugo RAS robotic system.