

Video can be found at <https://ceju.online/journal/2023/simple-prostatectomy-SinglePort-bladder-diverticulum-2306.php>

## Transperitoneal single-port robotic Firefly-guided bladder diverticulectomy and simple prostatectomy

Eugenio Bologna, Antonio Franco, Leslie Claire Licari, Francesco Ditunno, Celeste Manfredi, Jacob T Emerson, Edward E Cherullo, Riccardo Autorino

Department of Urology, Rush University Medical Center, Chicago, IL, United States of America

### Article history

Submitted: Dec. 5, 2023

Accepted: Dec. 19, 2023

Published online: Jan. 6, 2024

**Citation:** Bologna E, Franco A, Licari LC, et al. Transperitoneal single-port robotic Firefly-guided bladder diverticulectomy and simple prostatectomy. Cent European J Urol. 2024; 77: 161-162.

**Key Words:** simple prostatectomy ◊ Single-Port ◊ bladder diverticulum

Single-port (SP) robotic assisted simple prostatectomy (RASP) is preferably performed via a trans-vesical approach which allows avoiding breach into the peritoneal cavity, reducing bowel-associated surgical morbidity, while simultaneously providing immediate access to the prostatic adenoma. Nonetheless, in specific surgical scenarios, a transperitoneal approach can be preferred.

We present a case of a 76-year-old man who underwent transperitoneal SP-RASP and Firefly-guided Diverticulectomy at Rush University medical center in August 2023. Pre-operative computer tomography (CT) imaging revealed an indwelling Foley catheter and an enlarged prostate with an estimated volume of 85cc. Additionally, a diverticulum measuring 3.5 cm in diameter was observed on the upper left aspect of the bladder wall, accompanied by moderate bilateral hydronephrosis. In this specific case, the trans-vesical approach was deemed to be suboptimal due to the location of the diverticulum which was thought to increase the likelihood of potential adhesions of the diverticulum with intestinal loops, thereby raising the risk of associated bowel injury during a diverticulectomy via a trans-vesical approach. Thus, in this specific scenario, we opted for the transperitoneal approach. A 4 cm midline incision just

above the umbilicus which offered safer and more immediate surgical access to the diverticulum, as well as an optimal working angle to address both operative targets: the diverticulum and the adenoma. During the surgery, the camera was typically positioned at twelve o'clock with monopolar curved scissors at three o'clock, fenestrated bipolar forceps at nine o'clock, and Cadieere forceps at six o'clock. Intraoperative flexible transurethral cystoscopy facilitated – switching to da Vinci Firefly® vision modality – accurate localization of the diverticulum and enabled faster and more efficient isolation, reducing the risk of its premature opening. The ROSI device plays a key role during adenoma enucleation, allowing for suction and countertraction. The procedure was successfully completed without intraoperative complications: Operative time was 300 minutes, Estimated Blood Loss was 50 ml. No drain was placed and no continuous bladder irrigation was needed post-operatively. The hospital stay was 36 hours. The catheter was removed on the 9<sup>th</sup> postoperative day, without a cystogram.

SP-RASP is a safe, effective, and reproducible procedure for the treatment of large prostate gland, especially in presence of concomitant bladder pathologies. While a trans-vesical approach is usu-

ally preferred to perform the procedure, in specific scenario the surgeon can adopt a different surgical strategy. In case of large diverticula located in the upper part of the bladder, a transperitoneal approach might minimize the risk of injuring intraabdominal organs.

**CONFLICTS OF INTEREST**

The authors declare no conflicts of interest.

**Corresponding author**

Riccardo Autorino  
ricautor@gmail.com