Intermediate Clinical Outcomes of Robot-Assisted Laparoscopic Prostatectomy (RALP)

Introduction and Objective: We review our experience of RALP with a minimum follow-up duration of 24 months.
Materials and Methods: The hospital records of consecutive patients who underwent transperitoneal RALP by a single surgeon (CW) were reviewed. A bladder neck sparing dissection was preferentially performed and the urethrovesical anastomosis was completed using a running double-armed 3-0 Monocryl suture. On postoperative day 5 or 6 (clinic logistics), the urethral catheter was removed following a normal cystography. Clinical outcomes and adverse events are presented.
Results: There were 233 patients who had a mean age of 62.7±6.7 years and serum PSA of 6.2±4.6 ng/mL. Median operative time was 190 minutes and estimated blood loss was 75 mL. 3 (1.3%) patients required bladder neck reconstruction, while 198 (85.0%) had bilateral, 20 (8.6%) had unilateral and 15 (6.4%) did not undergo nerve sparing prostatectomy. 199 (85.4%) patients had negative surgical margins. Median hospitalization and urethral catheter duration were 1.0 and 5.0 days, respectively. At 6 weeks, a median 1.0 pad per day usage was reported and mean AUASS (9.7±7.3 vs. 5.7±2.8, p=0.001) and QoL (1.9±1.4 vs. 1.4±1.0, p=0.001) were significantly improved from baseline. 69.1% of patients achieved urinary continence without pads at the 3 month follow-up interval and 95.7% of patients were continent at 12 months. 52.3% of patients having a nerve sparing procedure achieved potency within 24 months following RALP. The incidence of adverse events were low: 5 (2.1%) patients had prolonged urine leak, 3 (1.3%) patients experienced a pelvic hematoma, 1one (0.4%) patient had a urinary tract infection, and 2 (0.9%) and 5 (2.1%) patients developed deep vein thrombosis and bladder neck contractures (BNC), respectively. BNCs developed at an average 5.3 (4-7) months postoperatively and were successfully managed by transurethral incision (TUIBNC) using the holmium laser. 95.3% and 96.5% of patients at 12 and 24 months, respectively, had an undetectable serum PSA (<0.2 ng/mL). Five patients had adjuvant radiotherapy for positive surgical margins or PSA recurrence.
Conclusions: RALP is an effective treatment option for clinically localized prostate cancer that preserves ones quality of life with low patient morbidity.