

COMPARATIVE URINARY FUNCTION AND INTERVENTIONS FOR VOIDING DYSFUNCTION AFTER RADICAL PERINEAL PROSTATECTOMY VERSUS ROBOTIC-ASSISTED LAPAROSCOPIC PROSTATECTOMY

Hypothesis / aims of study

Radical perineal prostatectomy (RPP) is an alternative to minimally invasive procedures such as robotic-assisted laparoscopic prostatectomy (RALP) that has been shown to be associated with lower mean health care expenditure and similar oncologic outcomes. The purpose of the study is to compare functional voiding outcomes and interventions after RPP vs RALP.

Study design, materials and methods

Following IRB approval, we performed a review of patients who underwent RALP or RPP from 2009-2015 at a single institution. One surgeon performed all RPPs and 4 surgeons performed all RALPs. We compared baseline demographics, perioperative data, and post-operative outcomes including International Prostate Symptom Score (IPSS), quantitative pad use, continence rates defined as no pad use on follow-up visit, and voiding dysfunction interventions at 3, 6, 9, 12, 24 and 60 months.

Results

256 men underwent RALP and 157 RPP. Mean follow-up was 26 months for RALP and 27 months for RPP with follow up as follows: 86% at 3 months, 75% at 6, 65% at 9, 72% at 12, 49% at 24, and 14% at 60 months. When comparing direct procedure costs of RALP versus RPP at our institution for fiscal year 2016, RALP was associated with an average incremental cost increase of \$2800 compared to RPP. Baseline clinical data was similar between groups, except BMI, which was greater in RPP (29.9 vs 28.7, $p=0.002$). Prostate cancer parameters were similar between groups with no difference in Gleason score, margin status, recurrence or salvage radiation noted. RPP patients were noted to have higher rate of seminal vesical invasion ($p=0.00001$). Patients who underwent RALP had larger average gland size (46.1 vs 40.3 grams, $p=0.0008$). Average operative time was shorter in RPP vs RALP (153 vs 313 min, $p<0.00001$). At baseline, mean IPSS scores were similar. At all post-operative time points, IPSS scores were lower for RPP than RALP. Continence rates were greater for RPP vs RALP at all time points except 60 months, with lower mean pad use for RPP vs RALP. There was no significant difference between RPP and RALP in medical or surgical interventions for voiding dysfunction including anticholinergic use (25% vs 22%), cystoscopy (12% vs 11%), sling (1% vs 4%), or artificial urinary sphincter (1% each). Bladder neck contracture (BNC) rates were similar (4% each), as were urethral stricture rates (1% vs 2%).

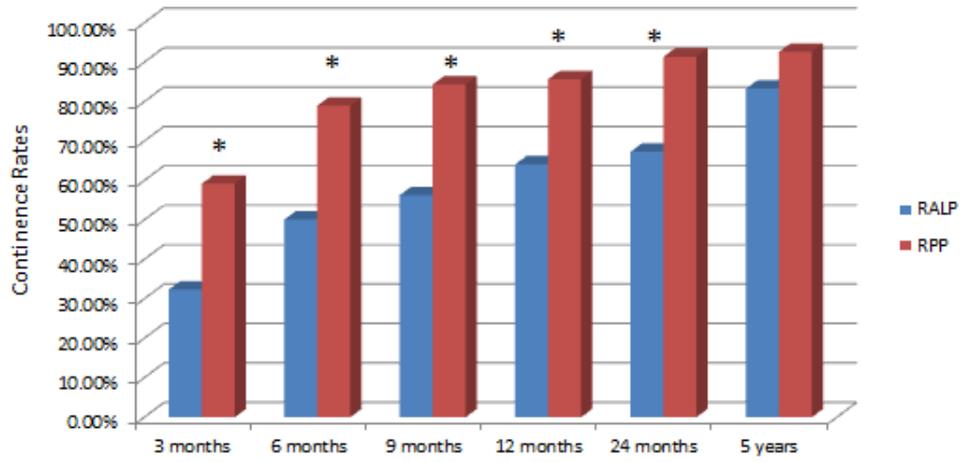
Interpretation of results

Patients who underwent RPP had similar oncologic outcomes to those who underwent RALP, with less associated direct costs, with a more rapid and complete recovery of continence following prostatectomy.

Concluding message

Patients who underwent RPP had a more complete and rapid recovery of continence in the first two years compared to RALP; however, overall rates of interventions for voiding dysfunction were similar for RPP and RALP, and no differences in continence persisted at 5 years.

Post-op Voiding Intervention	RALP	RPP	P value
Alpha blocker	10 (3.9%)	7 (4.5%)	0.78
Anticholinergic	57 (22.3%)	39 (24.8%)	0.55
UDS	11 (4.3%)	4 (2.7%)	0.36
Cystoscopy	29 (11.3%)	18 (11.5%)	0.97
Bladder neck contracture	10 (3.9%)	6 (3.8%)	0.97
Bladder neck contracture treatment	5 (50%)	6 (100%)	0.04
Stricture treatment	2 (0.8%)	3 (1.9%)	0.31
SPT	1 (0.4%)	2 (1.3%)	0.29
CIC	2 (0.8%)	2 (1.3%)	0.62
Advance sling	9 (3.5%)	2 (1.3%)	0.17
AUS	3 (1.2%)	1 (0.6%)	0.59
Interstim	1 (0.4%)	0	0.43
Botox	0	1 (0.6%)	0.20
IPP	9 (3.5%)	2 (1.3%)	0.17



Disclosures

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