

Outpatient Experience With Extraperitoneal Single-Port Robotic Radical Prostatectomy

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Introduction

The da Vinci SP surgical platform has allowed for the development of novel surgical techniques for radical prostatectomy. Robotic-assisted laparoscopic radical prostatectomy is usually followed by an overnight hospital stay. This study assesses the safety and feasibility of extraperitoneal single-port robotic radical prostatectomy as an outpatient procedure.



Figure 1 – Final Incision

Materials and Methods

114 consecutive patients with clinically localized prostate cancer underwent extraperitoneal single-port robotic radical prostatectomy by a single high volume surgeon. Patients undergoing salvage procedures or who had received preoperative hormone therapy were excluded from the series. Local anesthesia was used intraoperatively to infiltrate the rectus fascia as well as the skin. Minimal intraoperative fluids and in-hospital opiates were used as part of an outpatient enhanced recovery protocol. Patients were discharged the day of surgery if they were ambulatory, tolerating a regular diet and had controlled pain, regardless of surgical start time or case order. All patients were offered the option to stay overnight even if meeting these milestones. Patient data was collected prospectively in an institutional review board-approved database and evaluated retrospectively.

Results

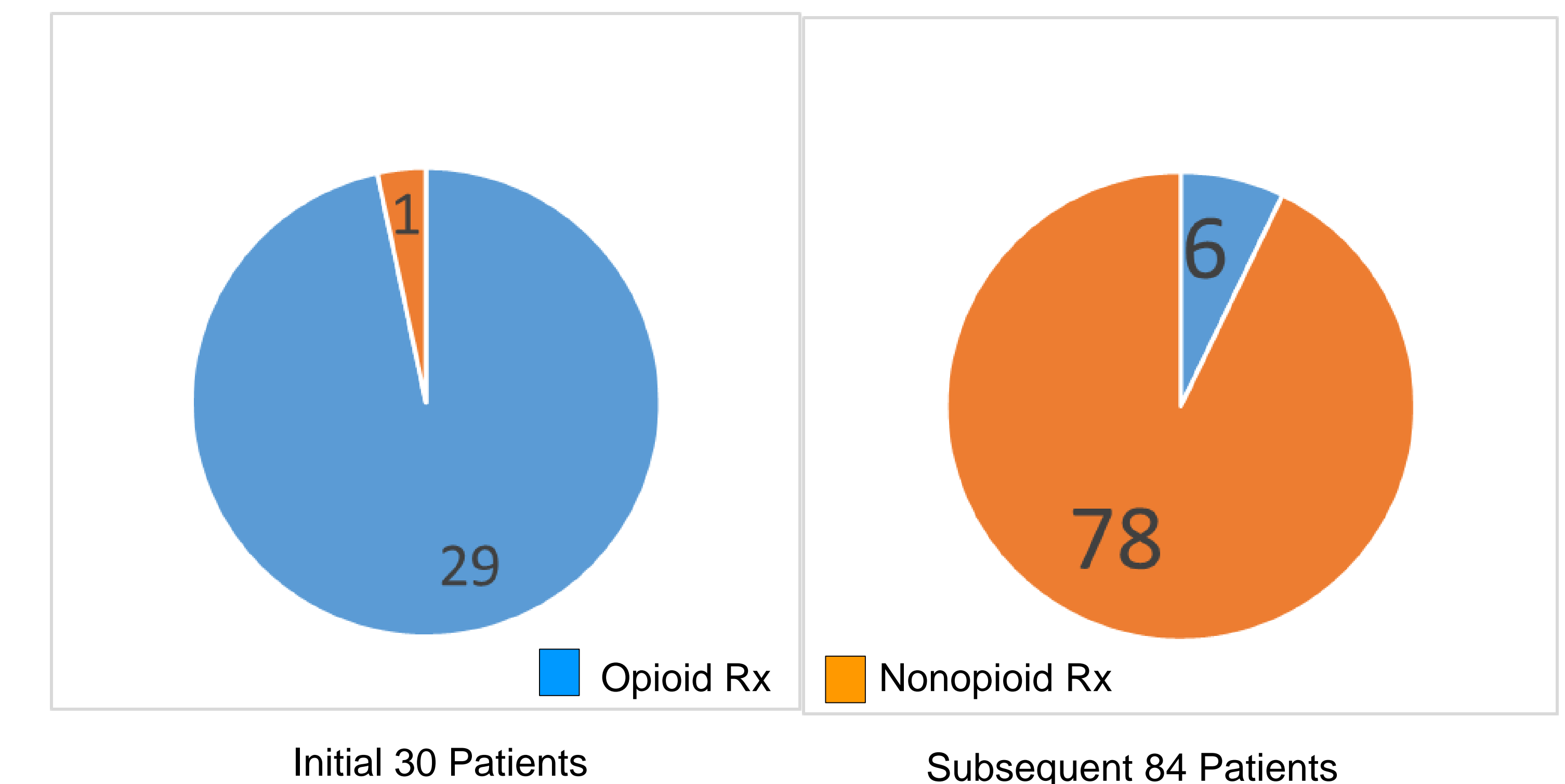
- All cases were completed via an extraperitoneal approach without additional ports placed
- Mean operative time: 202 minutes
- Mean estimated blood loss (EBL): 176 mL
- Median length of stay (LOS): 4.3 hours postoperatively
- Visual analog pain score at discharge: 0-1 in 32% of patients
- 68% of patients were discharged home the day of surgery
- 7 patients developed symptomatic or infected lymphoceles requiring drainage and one patient developed a persistent urinoma requiring drainage (7% rate of Clavien 3a complications)

Surgical Pathology		N (%)
Gleason score	3+3	5 (4.4%)
	3+4	70 (61.4%)
	4+3	25 (21.9%)
	4+4	5 (4.4%)
	4+5	8 (7.0%)
	5+4	1 (0.9%)
pT	T2	59 (51.8%)
	≥T3a	55 (48.2%)
pN	pN0	104 (91.2%)
	pN1	7 (6.1%)
	pNx	3 (2.6%)
Positive surgical Margins (all pts)		24 (21.1%)
+ margins in pts without high risk features (pT3 or greater, N1, >GG3 disease)		8 (14%)
+ margins in pts with high risk features		16 (29%)

Table 1 – Surgical Pathology

- Of the 88 patients with 1 month continence data available, 50% required 0-1 pads/day
- Of the 50 patients with 3 month continence data available, 70% required 0-1 pads/day

Discharge Analgesics



Discharge prescribing practice in our series changed after the initial 30 cases due to low pain medication requirements. 97% of the first 30 patients received opiates at discharge; however only 6% of the subsequent 84 patients received opiates at discharge.

Conclusions

Extraperitoneal single-port robotic radical prostatectomy using the da Vinci SP platform can be performed safely as an outpatient procedure without the need for postoperative opiates in the majority of patients.