

Acute pain outcomes after open and minimally invasive robotic-assisted surgery for localised prostate cancer



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Introduction

In Australia each year, 12,000 men are diagnosed with prostate cancer and many elect to have surgery. In a climate of rapidly changing surgical technology, advances include minimally invasive surgery where it is expected that men will experience less postoperative pain and earlier recovery than those who have open surgery.

A prospective, longitudinal, matched cohort design was used to evaluate and compare recovery of a consecutive sample of men over 24-months following open radical retropubic (RRP), robotic-assisted radical (RARP) and laparoscopic radical prostatectomy (LRP) for localised prostatic cancer. The analyses presented in this poster represent the acute pain outcomes for men undergoing RRP and RARP.

Aim

To describe and compare acute pain outcomes (first 24 hours) of men during the acute recovery period immediately after two surgical approaches used for prostatectomy to treat localised prostatic cancer: open radical retropubic (RRP), robotic-assisted radical (RARP).

Materials and Method

Patient recruitment commenced in 2009. The full study procedure is illustrated in Figure 1.

Acute pain outcomes measurement :

- American Pain Society Pain Outcomes
- The McGill-Melzack Pain Questionnaire
- Pain intensity scores were derived via a 0-10 point numerical rating scale (NRS)

Procedures

Measures were applied via interview 24 hours after surgery

Recruitment

- 87% of consecutive, prostatectomy patients under the care of 13 surgeons were successfully recruited into the project

Sample

Analyses were conducted for two subgroups of men undergoing RRP (n=50) and RARP (n=50), randomly selected from the population of participating men (N=300).

Results

Pain intensity

- 229 (76.3%) of the 300 patients recruited had experienced pain in the previous 24 hours. (see Table 1)

Table 1. Pain intensity

Pain Intensity (N=300)	RRP	RARP	
Experienced pain in previous 24 hours	79.3%	73.3%	p<0.05
Mean pain score (at interview)	2.6 (SD=2.6)	2.9 (SD=1.8)	p=.965
Worst pain in previous 24 hours	5.8 (SD=2.9)	5.9 (SD=2.6)	p=.167
Average pain in previous 24 hours	2.9 (SD=1.7)	3.4 (SD=1.8)	p=.014

Type of Pain

- There were differences in the type of pain experienced by men in the 2 cohorts in the immediate postoperative period (see Table 2)

Table 2. Type of Pain

Pain (N=100)	RRP (n=50)	RARP (n=50)	
Puncture/incisional	100%	77.6%	p=.001
Bladder spasm	2.4%	12.2%	p=.088
Catheter irritation	14.6%	24.5%	p=.185
Wind pain	4.9%	36.7%	p<.001
Referred shoulder pain	0	34.7%	p<.001
Perineal discomfort	2.4%	6.1%	p=.379

Pain locations

- The locations of pain differed between the 2 patient cohorts.(see Table 3)

Table 3. Pain Locations

Pain location (N=100)	RRP (n=50)	RARP (n=50)	
General abdominal	0	81.6%	p<.001
Lower abdominal	97.6%	22.4%	p<.001
Penile tip	4.9%	22.4%	P=.017
Wound/s	75.6%	10.2%	p<.001
Shoulder tip	0	34.7%	p<.001
Perineum	2.4%	6.1%	p=.379

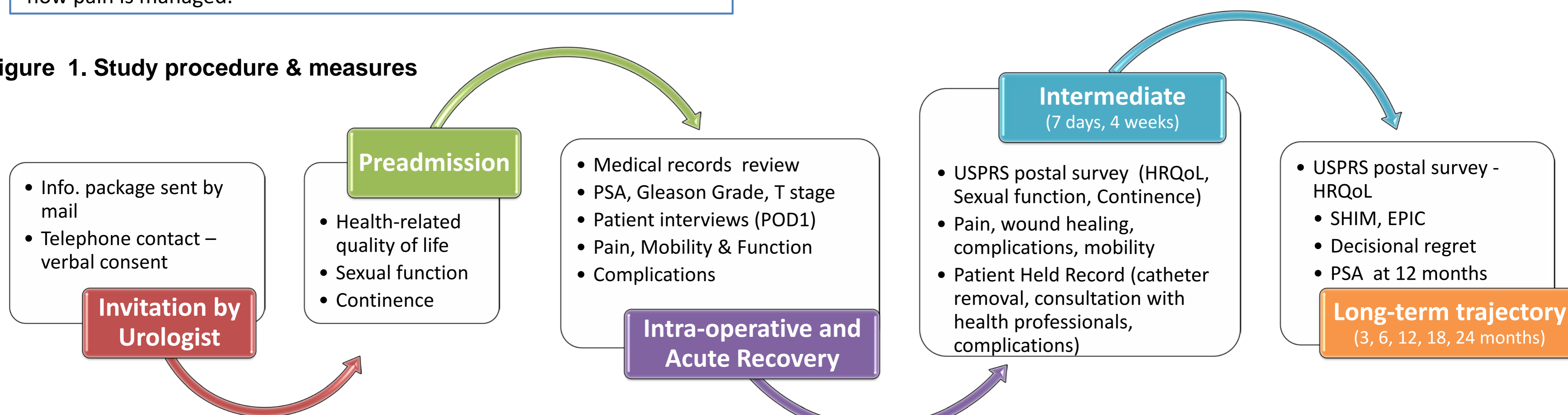
Quality of Pain

- No differences in the sensory, affective or evaluative aspects of pain were detected between the 2 patient cohorts.

Conclusions

Acute postoperative pain following surgery for localised prostate cancer is prevalent after surgery. Differences in the way pain manifests in patients who undergo RARP and RRP have implications for the way men are prepared for surgery and how pain is managed.

Figure 1. Study procedure & measures



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