Lower Urinary Tract Symptoms after Prostate Cancer Treatment

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Introduction

Prostate cancer is the most commonly diagnosed non-cutaneous cancer in Australian males and incidence rates have increased between 1982 and 2007 [1].

Lower urinary tract symptoms (LUTS) are a significant clinical problem and a common complication after prostate cancer treatment such as prostatectomy, radiation therapy and brachytherapy [2] and can adversely affect quality of life [2,3].

Aim

This cross-sectional study aimed to examine the prevalence and severity of LUTS after prostate cancer treatment in men who attend community-based prostate cancer support group meetings.

Methods

Between July 2010 and March 2011, men attending prostate cancer support group meetings in Australia were invited to participate. Recruitment was undertaken from 28 sites (Figure 1) across urban and rural New South Wales (NSW), Queensland (QLD) and Northern Territory (NT).

Participants were asked to report:

- Storage LUTS (i.e. urinary incontinence, including urgency, stress incontinence, overactive bladder (OAB) symptoms)
- Voiding LUTS (i.e. hesitancy, straining, slow stream, intermittency)
- Post-micturition LUTS (i.e. incomplete emptying, post-micturition dribble).

They were also asked :

- Whether they had been informed about potential side effects of their prostate cancer treatment
- Which healthcare professional provided that information
- Whether they carried out pelvic floor muscle training before undergoing prostate cancer treatment.

Permission was obtained to use the validated [4] ICIQ-MLUTS instrument to measure symptoms and ethics approval was obtained from the Human Research Ethics Committees of the University of South Australia and the University of Newcastle.

Results

355 eligible current members of prostate cancer support groups across NSW, QLD and NT agreed to participate. The majority of participants resided in an urban area (62%) and their mean age was 70 years (SD: 7.8; Range 45-95 years).

Radical prostatectomy (RP) was the predominant prostate cancer treatment (71%) followed by a combination of treatment options (Table 1).

Table 1. Prostate cancer treatments (N=355)

	n	(%)
Surgery	180	(51%)
Radiation therapy	8	(2%)
Androgen deprivation therapy (ADT)	29	(8%)
Surgery and radiation	22	(6%)
Surgery and ADT	21	(6%)
Radiation and ADT	28	(8%)
Radiation and surgery and ADT	20	(6%)
Radiation and ADT and brachytherapy	22	(6%)
None	15	(4%)
Other	10	(3%)

After prostate cancer treatment, 95% of participants reported at least one LUTS. Storage symptoms were the most commonly reported LUTS, with symptoms related to OAB the most prevalent storage LUTS (see Table 2). Men also reported voiding LUTS (22%) and post-micturition symptoms (30%).

Table 2 Severity of storage LUTS (N=355)

Storage symptoms[†]	No Symptoms		Mild to Moderate		Severe	
	n	(%)	n	(%)	n	(%)
OAB[§] Wet	92	(26.1%)	236	(67.0%)	24	(6.8%)
OAB[§] Dry	333	(94.3%)	2	(0.6%)	18	(5.1%)
Stress Incontinence	155	(44.0%)	157	(44.6%)	40	(11.4%)
Other leaking	147	(41.6%)	173	(49.0%)	33	(9.3%)

[†] Some men may have a combination of symptoms

[§] Overactive Bladder Symptoms

About 84% of the participants recalled being given information related to potential treatment side effects before undergoing treatment. Of these, the majority of men received that information from their treating specialist (96%). Although rural clinicians were generally more likely to discuss treatment side effects than metropolitan clinicians (Figure 2), the difference was not statistically significant.

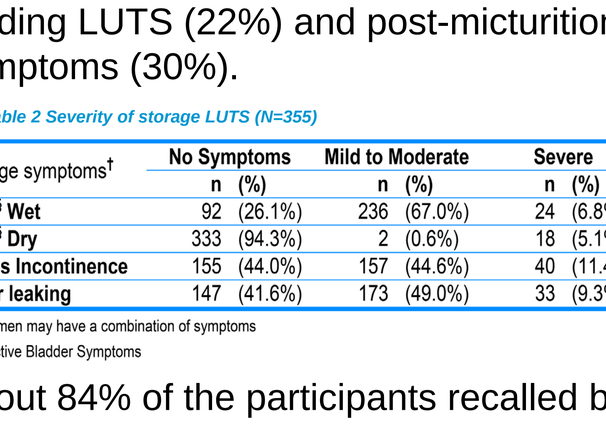

Figure 2. Proportion who recalled being told about treatment side effects (N=355)

The 144 participants (42%) who carried out pelvic floor muscle training before undergoing treatment for prostate cancer were significantly less likely to report LUTS symptoms after treatment (OR: 0.34, 95%CI: 0.22-0.53, *P* = 0.019).

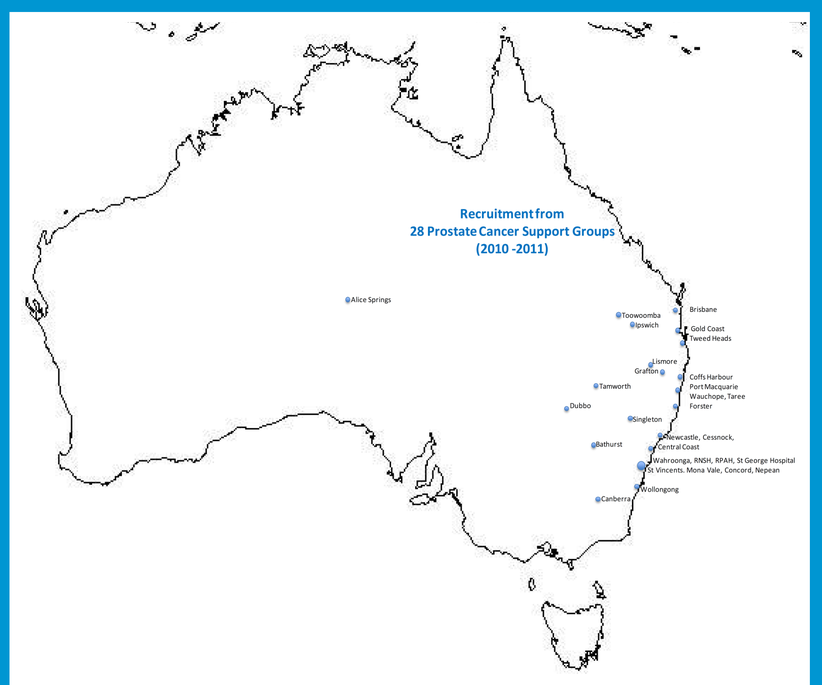

Figure 1. Study recruitment centres: 28 Australian prostate cancer supports groups

Conclusions

Our findings indicate that while regional differences exist in regard to treatment protocols received by men attending prostate cancer support groups, there were no apparent regional differences in the way participants received information about potential treatment side effects. Men who carried out pelvic floor muscle training before their prostate cancer treatment significantly reduced the likelihood of developing LUTS after treatment.

Despite improved treatment techniques, LUTS remains prevalent after prostate cancer treatment in this population group.

Although the risk of developing LUTS increases with age, it can be exacerbated by prostate cancer treatment and more needs to be done to deal with male LUTS after prostate cancer treatment, including more research into the prophylactic aspects of pelvic floor muscle training.

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