Exploring the impact of providing men with information about potential prostate cancer treatment options prior to receiving their biopsy results

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Introduction

- Prostate cancer (PCa) is one of the most commonly diagnosed cancers in men worldwide [1]
- Receiving a diagnosis of localised PCa requires men to make decisions regarding treatment choices based on preferences and medical advice [2]
- 71-76% of patients consider only one treatment option and may make a treatment choice almost immediately after a cancer diagnosis [3,4] due to anxiety about cancer progression

Figure 1. Localised prostate cancer, where cancer cells have grown but remains in the prostate

Image from <http://urologyspecialist.com.au/a-overview-of-prostate-cancer-types-risks-symptoms-and-treatment/>

- Higher anxiety levels pre-biopsy have been associated with lesser knowledge of PCa treatment options [5]
- Few studies have explored the impact of providing men with information about PCa treatment options before biopsy [6].

Aim

- To determine:
- Whether Australian patients found it acceptable to receive information about PCa treatment options at time of biopsy referral, before receiving a diagnosis
 - Whether receiving this information at this time influenced changes in anxiety, depression and distress from pre- to post-biopsy, and impacted treatment decisional conflict post-diagnosis

Methods

Inclusion criteria

1. Men referred for an initial prostate biopsy for an elevated PSA or suspicious digital rectal exam
 2. Men not suspected of having metastatic cancer
- Between June 2016 and September 2017, 126 consecutive patients who met eligibility criteria were invited to participate in the study.

- 98 returned the baseline questionnaire (response rate = 78%).

Procedure

- All patients received a standard biopsy instruction sheet. A randomised block design was used to allocate patients into the intervention or control group.

- Patients in the intervention group were provided with an information booklet about treatment options.
- Questionnaires were completed pre-biopsy (Time 1) and at 2-3 weeks post-biopsy (Time 2).

Measures

- Distress Thermometer (DT)
- Generalised Anxiety Disorder-7 (GAD-7)
- Patient Health Questionnaire (PHQ-9),
- Decisional Conflict Scale
- Acceptability of the intervention, and usefulness of the booklet in improving patient understanding was assessed at Time 2

Intervention

- Intervention booklet is second in a series of 4 developed by the Prostate Cancer Foundation Australia for men with localised PCa
- Written as a standalone booklet

Figure 2. Cover and Contents page of Intervention booklet

Statistical Analyses

- Controlling for baseline differences and attrition propensity, changes from baseline to follow-up in anxiety, depression, and distress scores were compared for the two groups using an intention-to-treat mixed model repeated measures (MMRM) analysis assuming AR(1) dependence.
- Appropriate transformations were applied to the DT, PHQ-9, and GAD-7
- Paired t-tests were used to assess if there were significant changes in scores in the intervention and control groups

Results

- N = 98, Mean (SD) age = 64.6 (7.1) years
- No significant differences between the control (n = 40) and intervention (n = 58) groups across demographic characteristics and baseline scores.
- 82% of men were married, 92% were Caucasian, 67% received a positive biopsy result

- MMRM analyses showed no significant differences between control and intervention groups in changes in symptoms (p>.05) from pre- to post-biopsy.

Table 2: Time 1 and Time 2 Scores and Change Score Analyses (Time 2 minus Time 1) for Control and Intervention Groups

Positive Biopsy Result	Control Group				Intervention Group				d	power
	N	Mean(SD)	Mean(SD)	p-value	N	Mean(SD)	Mean(SD)	p-value		
DT	22	2.00(1.98)	2.86(2.12)	.031*	3	2.75(2.51)	3.63(2.74)	.092	0	.05
GAD-7	25	1.93(2.90)	2.52(3.36)	.173	3	2.80(3.87)	2.89(3.47)	.859	.05	.18
PHQ-9	25	1.62(2.78)	2.72(3.76)	.046*	3	2.04(3.66)	2.12(3.44)	.835	.42	.46
Negative Biopsy Result										
Measures	Control Group				Intervention Group				d	power
	N	Mean(SD)	Mean(SD)	p-value	N	Mean(SD)	Mean(SD)	p-value		
DT	9	2.89(3.30)	1.18(1.72)	.046*	1	0.92(1.00)	0.83(1.03)	.830	1.03	.73
GAD-7	11	2.73(3.55)	1.36(1.86)	.188	1	1.20(1.57)	1.53(2.82)	.645	.57	.40
PHQ-9	11	3.03(3.55)	1.73(3.13)	.062	1	1.21(1.78)	.60(1.12)	.309	.32	.19

Control group:

- Patients with a positive result had significant increases in distress and depressive symptoms from pre- to post-biopsy.
- Patients with a negative result had a significant decrease in distress and trend towards decrease in depressive symptoms.

Intervention group:

- No significant changes from pre- to post-biopsy on any of the measures.
- Treatment decisional conflict did not differ significantly between the groups

Acceptability and usefulness of intervention

98% of patients who read the booklet stated they preferred to be given such information

Conclusions

- Providing information about PCa treatment options prior to diagnosis did not impact on anxiety, depression, distress or decisional conflict
- Changes in psychological symptoms may be influenced by various factors including physician-patient communication and management of patient expectations
- Limitations: Small number of patients in the positive biopsy group; possibly underpowered to detect changes in symptoms across time
- Patients preferred to be given information about treatment options pre-biopsy as it eliminated the need to search for information from other sources

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