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The effects of uro-oncology nursing education on quality of life in patients with prostate cancer

Ismail Selvi*

Department of Urology, Karabuk University Training and Research Hospital, Karabuk, Turkey

Abstract

Objective: Our aim is to evaluate the effects of uro-oncology nursing education program on quality of life, general health status and cancer related well-being conditions in patients with prostate cancer.

Materials and methods: The datas of 194 patients with prostate cancer who were treated and followed up between January 2013 and June 2017 were retrospectively evaluated. We achieved Uro-Oncology Nursing Education Program in our department with regular weekly trainings after January 2015. Patients were divided into two groups: 92 patients before Nursing Education and 102 patients after Nursing Education. We compared the satisfaction rates of patients and evaluated the quality of health care given to the patients by nurses in the periods before and after Nursing Education.

Results: Although the numbers of patients with metastatic stage and the rates of hypertension, gynecomastia, osteoporosis and decreased muscle mass were significantly higher in the period following the initiation of the Uro-Oncology Nursing Education Program, we observed that the satisfaction rates of the patients and their relatives were significantly higher in this period (94.1% vs. 82.6%, p=0.012). Moreover, the patients and their relatives felt themselves more confident in coping with prostate cancer in parallel with the increased awareness of the nurses on "Uro-Oncology Nursing Education Program" (p<0.01).

Conclusion: The standardization of uro-oncology nursing care practices in worldwide will develop the evidence-based medicine by providing more alleviation of symptoms related prostate cancer and increasing quality of life in patients.

Introduction

Prostate cancer is the most common non-cutaneous malignancy in men worldwide and it is the fifth most common malignancy in the total population. Considering cancer-related deaths, it ranks second with a rate of 9% after lung cancer [1]. The risk of prostate cancer occurring in a man during his lifetime was 16.72%; the mortality rate related to prostate cancer is 2.57% [2]. According to the 2014 datas of the Prostate Cancer Association, the prevalence in the whole world is 28 in 100,000 [2]. The most common cause of death due to cancer among men over 75 years of age has been reported as prostate cancer in a population-based study in the United States of America [3]. Currently, 10–20% of patients are diagnosed at the metastatic stage. 20–30% of patients who are diagnosed with localized disease will develop metastasis during follow-up [4]. Median survival of patients with newly diagnosed metastases is declared as about 42 months [5].

In patients with metastatic disease, cancer-specific survival has been increased, and prostate cancer has been followed as a chronic disease through the development of new treatment alternatives, as well as androgen deprivation therapy (ADT). Complications such as erectile dysfunction, urinary incontinence and urethral stricture may develop due to surgery or radiotherapy applied at localized stage. On the other hand, side effects associated with ADT in the metastatic stage are sexual dysfunction, vasomotor symptoms, cardiovascular side effects, anemia, gynecomastia, decreased muscle mass, osteoporosis, cognitive disorders. All of these conditions cause a significant decrease in quality of life, despite an increase in cancer-related survival.

It is believed that complementary and integrative nursing care may deal with disease symptoms and complications of treatments, increase the quality of life and provide psychosocial well-being. Our aim is to evaluate the effects of uro-oncology nursing education on quality of life in patients with prostate cancer.

Materials and methods

The datas of 194 patients with prostate cancer who were treated and followed up between January 2013 and June 2017 at Department of Urology, Ankara Oncology Training and Research Hospital were retrospectively evaluated. In our department, demographic datas and cancer related symptoms of the patients were filled in all patient files by nurses at the beginning of hospitalization.

The following questions were asked to the patients and their relatives by the nurses as a mini survey before discharge: "Do you think you are sufficiently informed about your disease?"

"Do you think you can get adequate counseling by nurses whenever you need after discharge?"

"Do you think you have enough training to take care of yourselves at home?"

Correspondence to: Ismail SELVI, MD, FEBU, Affiliation and address: Department of Urology, Karabuk University Training and Research Hospital, 78200, Karabuk, Turkey, Tel: 9003704158000, Fax: 9003704125628, E-mail: ismselvi33@hotmail.com

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Responses and patient satisfaction rates were recorded in patient files.

After January 2015, we tried to give more adequate and necessary informations to our nurses about the diagnosis, stage, treatment options, post-treatment care, complications, treatment side effects about prostate cancer. Because the importance of urological nursing education in terms of patient follow-up, treatment and general well-being is emphasized by European Association of Urology Nurses, we achieved Uro-Oncology nursing education programme with regular weekly trainings [6]. General information about prostate cancer was given during the determined training hours. In addition, presentations were done about urethral catheter care, how to perform pelvic floor muscle exercise in incontinent patients, how to perform clean intermittent catheterization in urethral stricture, importance of continuity of ADT, awareness of patients about side effects related to ADT, how to help family members to motivate the patients.

We divided patients into two groups. Group I consisted of 92 patients who were treated between January 2013- December 2014. During this period, our nurses were not given any extra education about urooncology nursing care. Group II consisted of 102 patients who were treated between January 2015- June 2017. In this period, we provided Uro-Oncology nursing education programme to our nurses. In this study, we compared the level of distress about specific symptoms related to prostate cancer, the results of the mini survey conducted by our nurses and the patient satisfaction rates between two groups.

Statistical analysis

To compare the differences between the two groups, the normality status was evaluated by Kolmogorov-Smirnov and Shapiro-Wilk tests. Pearson chi-square analysis for categorical variables; Independent sample t test for continuous variables was used. The analyzes were performed using IBM SPSS Statistics 21 (IBM, Armonk, NY USA) software. $p < 0.05$ was considered statistically significant.

Results

The mean age of the 194 male patients included in the study was 72.83 ± 10.08. At the time of presentation to our clinic, 114 (58.8%) patients were in the localized stage, 80 (41.2%) patients were in the metastatic stage. 38 (19.5%) patients had biochemical recurrence after the treatment. All of the metastases were in bone and no solid organ metastasis was detected. Table 1 shows the demographic and clinical datas, oncologic outcomes of the patients, presence of specific symptoms related to prostate cancer and the results of the mini survey conducted by our nurses.

Although the numbers of patients with metastatic stage and the rates of some health problems (hypertension, gynecomastia, osteoporosis and decreased muscle mass) were significantly higher in the period following the initiation of the Uro-Oncology Nursing Education Program, we observed that the satisfaction rates of the patients and their relatives were significantly higher in this period (94.1% vs. 82.6%, p=0.012) (Table 1).

After the Uro-Oncology Nursing Education Program, we observed that the satisfaction rates of the patients and their relatives were significantly higher due to the increased awareness of nurses and providing better health services to patients. Moreover, the patients felt themselves better and in confidence about coping with prostate cancer (Table 1).

Discussion

The purposes of cancer treatment are to provide curative treatment or at least to supply reduction/control of symptoms and a better quality of life for the patients [7]. The importance of palliative care to reduce the symptom burden and improve quality of life in life-threatening illnesses such as metastatic prostate cancer was shown in some studies [8-10]. The additional medical support and nursing care can improve life quality in both early and advanced stage cancers. It is obvious

Table 1. Demographic and clinical datas of the patients and the results of the mini survey conducted by our nurses

Parameters	Group I (n:92)	Group II (n:102)	Total (n:194)	p value
Age (mean±standard deviation)	72.40±10.00	73.22±10.16	72.83±10.08	† 0.211
Localized disease (n,%) Present Absent	 61(66.3) 31(33.7)	 53(51.9) 49(48.1)	 114(58.8) 80(41.2)	‡ 0.043*
Biochemical recurrence (n,%) Present Absent	 20(21.7) 72(78.3)	 18(17.6) 84(82.4)	 38 (19.5) 156(80.5)	‡ 0.473
Metastatic disease (n,%) Present Absent	 31(33.7) 61(66.3)	 49(48.1) 53(51.9)	 80(41.2) 114(58.8)	‡ 0.043*
BMI (kg/m^2) (mean±standard deviation)	24.45±2.12	25.05±2.31	24.60±1.98	† 0.752
Smoking (n,%) Yes No	 64(69.5) 28(30.5)	 69 (67.6) 33 (32.4)	 133 (68.5) 61 (31.5)	‡ 0.774
Hypertension (n,%) Yes No	 50(54.3) 42(45.7)	 71(69.6) 31(30.4)	 121(62.4) 73(37.6)	‡ 0.028*
Diabetes (n,%) Yes No	 39(42.4) 53(57.6)	 42(41.1) 60(58.9)	 81(41.7) 113(58.3)	‡ 0.864
Sexual dysfunction (n,%) Present Absent	 52(56.5) 40(43.5)	 71(69.6) 31(30.4)	 123 (63.4) 71 (36.6)	‡ 0.059

Urinary incontinence (n,%) Present Absent	30(32.6) 62(67.3)	26(25.5) 76(74.5)	56(28.8) 138(71.2)	‡ 0.275
Urethral stricture (n,%) Present Absent	9(9.7) 83(90.3)	12(11.8) 90(88.2)	21(10.8) 173(89.2)	‡ 0.657
Pain (n,%) Present Absent	29(31.5) 63(68.5)	38(37.2) 64(62.8)	67(34.5) 127(65.5)	‡ 0.402
Vasomotor symptoms (n,%) Present Absent	28(30.4) 64(69.6)	40(39.2) 62(60.8)	64(32.9) 130(67.1)	‡ 0.120
Cardiovascular side effects (n,%) Present Absent	29(31.5) 63(68.5)	43 (42.1) 59 (57.9)	69(35.5) 125(64.5)	‡ 0.126
Anemia (n,%) Present Absent	32(34.8) 60(65.2)	40(39.2) 62(60.8)	67(34.5) 127(65.5)	‡ 0.523
Gynecomastia (n,%) Present Absent	23(25) 69(75)	39(38.2) 63(61.8)	62(31.9) 132(68.1)	‡ 0.025*
Decreased muscle mass (n,%) Present Absent	19(20.7) 73(79.3)	42(41.1) 60(58.9)	61(31.4) 133(68.6)	‡ 0.002*
Osteoporosis (n,%) Present Absent	25(27.1) 67(72.9)	43(42.1) 59(57.9)	68(35.1) 126(64.9)	‡ 0.029*
Cognitive disorders (n,%) Present Absent	18(19.6) 74(80.4)	29(28.4) 73(71.6)	47(24.2) 147(75.8)	‡ 0.150
Anxiety (n,%) Present Absent	32(34.8) 60(65.2)	38(37.2) 64(62.8)	70(36.1) 124(63.9)	‡ 0.523
Patient satisfaction (n,%) Yes No	76(82.6) 16(17.4)	96(94.1) 6(5.9)	172(88.6) 25(11.4)	‡0.012*
"Do they think they are sufficiently informed about their disease?" Yes No	66(71.7) 26(28.3)	93(91.1) 9(8.9)	159(81.9) 35(18.1)	‡ <0.001*
"Do they think they can get adequate counseling by nurses whenever they need after discharge?" Yes No	67(72.8) 25(27.2)	91(89.2) 11(10.8)	158(81.4) 36(18.6)	‡ 0.003*
"Do the patients and their relatives think they have enough training to take care of themselves at home?" Yes No	65(70.6) 27(29.4)	92(90.2) 10(9.8)	157(80.9) 37(19.1)	‡ 0.001*

† Independent sample t test ‡ Chi-square
* p <0.05 (There is a significant difference between the groups)

that not only patients with longer life expectancy but also metastatic patients in terminal phase need to complementary and integrative care practices [10,11].

The roles of nurses on the effectiveness of complementary and integrative care practices in cancer treatment are obvious [7]. One of the most common examples of this situation is nursing care in breast cancer. Breast cancer is the most common cancer among women-specific cancers. Nowadays, breast cancer is evaluated as a curable disease due to the developments in treatment options. This increases life expectancy of patients, so it can be traced as a chronic disease [12]. In a study, acupuncture, hypnosis, music therapy, meditation, yoga, relaxation, foot massage, scalp cooling and use of ginger were used as complementary and integrative care practices in symptom management of patients with breast cancer [13]. It was found that physcïal actïvïty programme and exercise have created a positive effect on fatigue, depression, anxiety, cognitive capacity, muscle strength, inflammatory parameters and quality of life [14,15].

The importance of palliative care in improving the quality of life in prostate cancer, which is the most common cancer among men-specific cancers, is also well known [10]. The main goal, especially in

the metastatic phase, is to alleviate symptoms and to extend overall survival by improving the quality of life as much as possible. The most important problems in these patients are bone-related events, pain, fatigue, urinary and sexual dysfunctions, side-effects associated with hormone treatment such as diarrhoea, nausea/ vomiting, hot flashes, dyspnoea, insomnia, loss of appetite, constipation. Symptom alleviation is one of the most important goals of palliative support care in metastatic patients.

The European Organization of Research and Treatment of Cancer Quality of life Questionnaire version 3.0 was used for evaluating global health and quality of life in patients with cancer. The Prostate Cancer Symptom Scale was developed to determine the level of distress by prostate cancer specific symptoms such as general symptoms, bladder symptoms, bowel symptoms, and sexual function. According to the results of these evaluations, it is aimed to provide a more comprehensive palliative care support by determining individual care needs of patients [16-18].

Nowadays in most countries, The Uro-Oncology nursing teams have been established. These teams are multidisciplinary units that are formed from health care professionals, specialized in uro-oncology. Urologists, uro-oncologists, uro-pathologists and uro-radiologist may often support the trainings and skills of uro-oncology nurses. For example, in the United Kingdom multidisciplinary teams ensure personalised information about patients' cancer stages and treatment options, self management programmes to cope with cancer. They also try to be helpful with medical support via telephone advice whenever the patients and their relatives need [19]. The National Cancer Patient Experience Survey was conducted to evaluate the feedback of the patients in England. The survey was reported that patients with cancer understood their disease process better and they believed that they could achieve better health care because of access a clinical nurse specialist [20,21].

When we review the literature, we found many studies about complementary and integrative palliative care applications in prostate cancer [10,16,22-24]. However, we could not find a study comparing the satisfaction rates of patients and evaluating the quality of health care given to the patients by nurses in the periods before and after Uro-Oncology Nursing Education Program. We aimed to compare the effects of uro-oncology nursing education on general health status and prostate cancer related well-being conditions.

We have been achieving Uro-Oncology Nursing Education Program in our department with regular weekly trainings since January 2015. For this purpose, our nurses were given clinical presentations by our urology specialists. General informations about diagnosis, treatment and follow-up period of prostate cancer were told. Besides this general informations, the practical applications were performed about urethral catheter care, how to perform pelvic floor muscle exercise in incontinent patients, how to perform clean intermittent catheterization in urethral stricture and how to help family members to motivate the patients.The importance of continuity of treatments and awareness of patients about side effects related to treatments were also among the topics described in the education programme. Before 2015, our nurses had been providing general nursing care, but they did not have urooncology-specific detailed health care. After Uro-Oncology Nursing Education Program started and our nurses had more practical skills, we observed that our patients felt themselves more confident in coping with prostate cancer.

The main limitations of our study are its retrospective design, low number of patients and therefore non randomized formation. Because our study contains the results of a single center, it should be supported by the results of multicentre publications. Moreover, we did not use external validated international surveys in our assessment such as The European Organization of Research and Treatment of Cancer Quality of life Questionnaire, The Prostate Cancer Symptom Scale or the 36-Item Short Form Health Survey (SF 36). Although we have tried to give nursing education programme recommended by the European Association of Urology Nurses, we think that a more standard and homogeneous programme can provide a better evaluation.

Conclusion

Urology nurses should be made aware of the importance of the Uro-Oncology Nursing Education Program and they should be encouraged to receive special trainings on this issue. We believe that the standardization of uro-oncology nursing care practices in worldwide will provide better palliation of symptoms related prostate cancer and increase quality of life in patients. As a result, this can develop the evidence-based medicine. Nevertheless, multicenter, prospective, randomized, controlled, long-term follow-up studies with larger numbers of patients are needed to support our results and clarify the issue.

Conflicts of interest

None.

References

1. Siegel R, Naishadham D, Jemal A (2012) Cancer statistics, 2012. *CA Cancer J Clin* 62: 10-29. [Crossref]
2. Loeb S, Eastham J (2016) Diagnosis and Staging of Prostate Cancer. In: Wein AJ, Kavoussi LR, editors. Campbell- Walsh Urology. 11th edn, Philadelphia: Elsevier.
3. Murphy GP, Natarajan N, Pontes JE, Schmitz RL, Smart CR, et al. (1982) The national survey of prostate cancer in the United States by the American College of Surgeons. *J Urol* 127: 928-934. [Crossref]
4. Felici A, Pino MS, Carlini P (2012) A changing landscape in castration-resistant prostate cancer treatment. *Front Endocrinol (Lausanne)* 3: 1-8.
5. James ND, Spears MR, Clarke NW, Dearnaley DP, De Bono JS, et al. (2015) Survival with Newly Diagnosed Metastatic Prostate Cancer in the "Docetaxel Era": Data from 917 Patients in the Control Arm of the STAMPEDE Trial (MRC PR08, CRUK/06/019). *Eur Urol* 67: 1028-1038. [Crossref]
6. Punshon G, Endacott R, Aslett P, Brocksom J, Fleure L, et al. (2017) The Experiences of Specialist Nurses Working Within the Uro-oncology Multidisciplinary Team in the United Kingdom. *Clin Nurse Spec* 31: 210-218. [Crossref]
7. Pehlivan S, Lafçi D, Vatansever N (2017) Complementary and integrative care practices in symptom management in breast cancer patients. *Nurs Palliat Care* 2: 1-4.
8. Sanford MT, Greene KL, Carroll PR (2013) The argument for palliative care in prostate cancer. *Transl Androl Urol* 2: 278-280. [Crossref]
9. Anagnostou D (2017) Palliative care improves quality of life and reduces symptom burden in adults with life-limiting illness. *Evid Based Nurs* 20: 47-48. [Crossref]
10. Holm M, Doveson S, Lindqvist O, Wennman-Larsen A, Fransson P (2018) Quality of life in men with metastatic prostate cancer in their final years before death - a retrospective analysis of prospective data. BMC Palliat Care 17: 126.
11. Rabow MW, Lee MX (2012) Palliative care in castrate-resistant prostate cancer. *Urol Clin North Am* 39: 491-503. [Crossref]
12. Greenlee H, Sardo Molmenti CL, Falci L, Ulmer R, Deming-Halverson S, et al. (2016) High use of complementary and alternative medicine among a large cohort of women with a family history of breast cancer: The Sister Study. *Breast Cancer Res Treat* 156: 527-538. [Crossref]
13. Witt CM, Cardoso MJ (2016) Complementary and integrative medicine for breast cancer patients - Evidence based practical recommendations. *Breast* 28: 37-44. [Crossref]

14. Lipsett A, Barrett S, Haruna F, Mustian K, O'Donovan A (2017) The impact of exercise during adjuvant radiotherapy for breast cancer on fatigue and quality of life: A systematic review and meta-analysis. *Breast* 32: 144-155. [Crossref]

15. Schmidt ME, Wiskemann J, Krakowski-Roosen H, Knicker AJ, Habermann N, et al. (2013) Progressive resistance versus relaxation training for breast cancer patients during adjuvant chemotherapy: design and rationale of a randomized controlled trial (BEATE study). *Contemp Clin Trials* 34: 117-125. [Crossref]

16. Snyder CF, Blackford AL, Okuyama T, Akechi T, Yamashita H, et al. (2013) Using the EORTC-QLQ-C30 in clinical practice for patient management: identifying scores requiring a clinician's attention. *Qual Life Res* 22: 2685-2691. [Crossref]

17. Giesinger JM, Kuijpers W, Young T, Tomaszewski KA, Friend E, et al. (2016) Thresholds for clinical importance for four key domains of the EORTC QLQ-C30: physical functioning, emotional functioning, fatigue and pain. *Health Qual Life Outcomes* 14: 87. [Crossref]

18. Giesinger JM, Aaronson NK, Arraras JI, Efficace F, Groenvold M, et al. (2018) A cross-cultural convergent parallel mixed methods study of what makes a cancer-related symptom or functional health problem clinically important. *Psychooncology* 27: 548-555. [Crossref]

19. Punshon G, Endacott R, Aslett P, Brocksom J, Fleure L, et al. (2017) The Experiences of Specialist Nurses Working Within the Uro-oncology Multidisciplinary Team in the United Kingdom. *Clin Nurse Spec* 31: 210-218. [Crossref]

20. Department of Health (2014) National cancer patient experience survey programme.

21. National Health Service England. Cancer patient experience survey.

22. Sonnek FC, van Muilekom E (2013) Metastatic castration-resistant prostate cancer. Part 2: helping patients make informed choices and managing treatment side effects. Eur J Oncol Nurs 17: S7-12.

23. Groenvold M, Klee MC, Sprangers MA, Aaronson NK (1997) Validation of the EORTC QLQ-C30 quality of life questionnaire through combined qualitative and quantitative assessment of patient-observer agreement. *J Clin Epidemiol* 50: 441-450. [Crossref]

24. Wintner LM, Sztankay M, Aaronson N, Bottomley A, Giesinger JM, et al. (2016) The use of EORTC measures in daily clinical practice-A synopsis of a newly developed manual. *Eur J Cancer* 68: 73-81. [Crossref]