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Studies on the Fear of Disease Progression, Emotion Distress and Quality of Life Associated with Diabetic Prostate Cancer Patients

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ABSTRACT

Three therapeutic modules are evaluated in this study, hormones treatment (HT); a combination of hormones with chemotherapy, radiotherapy or surgery (Mixed therapy, MT); and observation (control group, CG), in prostate cancer patients. Comparison of the fear of disease progression (FoP), emotional distress (ED) and quality of life (QOL) indicated significant differences between the three patient groups. A cross-sectional research design with questionnaires investigating FoP, ED and QOL was used in this study. The participants were prostate cancer patients from a regional hospital in Taiwan. Descriptive statistics were used to analyze data. The control group had less emotional distress and a higher quality of life than the other two treatment groups. This result shows that cancer treatment has a negative impact on patient's life or mood. The results also show that the mixed treatment can reduce patient's fear of cancer.

Keywords: Hormones therapy, Combination therapy, Prostate cancer, Fear of disease progression, Emotional distress, Quality of life

INTRODUCTION

In Taiwan, cancer has been ranked in the top 10 causes of death for 30 consecutive years. The urinary system includes mostly prostate cancer, which has increased year by year. According to the statistics of the Global Burden of Disease Cancer Collaboration, for men, prostate cancer was the world's most common cancer in 2015, with approximately 1.6 million new cases, 66.1% of which were diagnosed in the past 10 years. Prostate cancer ranks as the top cancer among men, fourth among all cancers, and eighth in mortality [1]. Cancer patients experience greater psychological stress and physical discomfort resulting from treatment, which ultimately affects the quality of life of patients and their families. Patient's perception of treatment and prognosis, as well as physical and mental indicators, can assist medical care providers and patients themselves and serve as a basis for making decisions about the future of care and quality of life.

Prostate cancer is a slow progressing disease. Patients who receive proper treatment and control have an average five-year survival rate of over 99% and have a better prognosis and longer survival than other cancer patients [2]. Research suggests that the highest priority of prostate cancer patients is to maintain their ability to live their lives as they want [3]. Therefore, a better prognosis for patients with prostate cancer is important to not only understand the response to treatment but also to not ignore the treatment needs and adaptations. Therefore, we investigated three different treatments, "hormone therapy alone", "combination chemotherapy, radiotherapy or surgery with hormones" and "observation". This study aimed to compare the fear of

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disease progression, emotional distress and quality of life in patients with prostate cancer and to understand the effect of different treatment methods on the fear of disease progression index, emotional distress and quality of life of patients with prostate cancer. The findings provide the medical team with a tailor-made reference for individualized treatment and care to improve the emotional and physical well-being of patients with prostate cancer.

METHOD AND DESIGN

In this study, a cross-sectional study design was used in the urology department of a regional hospital in southern Taiwan for more than three months. The inclusion criteria were: (1) more than 20 years of age; (2) a diagnosis of prostate cancer; (3) being conscious; and (4) understanding that one has a diagnosis of prostate cancer. The exclusion criteria were: (1) patients with a history of mental illness; (2) patients who were unable to communicate; (3) patients how had other cancer diagnoses from January 5 to January 1, 2016. A total of 38 cases were collected. Of these, 12 received the mixed treatment, 17 were treated with sertraline and 9 were in the observation group. The treatment time of each group was three months.

RESULTS

The demographic data showed that all participants were married. In the mixed treatment group, the average age was 70 years. Three participants had metastasis and nine did not. For the hormone therapy group, there were seven participants with metastasis and ten without metastasis. The average age was 76.12 years. In the observation group, no patient had metastasis, and the average patient age was 68.78 years old. **Table 1** shows the fear of disease, quality of life problems and emotional distress for the three treatment groups as well as the pre-test and post-test score differences. The results showed that the mixed treatment group scored better that the hormones treatment and observation group in regard to fear of disease progression and the observation group scored better than the other two groups in terms of quality of life. It is possible that the mixed treatment needed to be given because the patients treatment protocol. There were no side effects of medication or changes in physiological function after surgery in the observation group. Therefore, the observation group had fewer problems regarding quality of life. In terms of emotional disturbance, the observation group also outperformed the other two groups, which may reflect that the side effects of the treatment can cause the patient physical and mental discomfort.

Table 1. Post-test score minus pre-test scores.

		Mean	Std	Min	Max
Fear of Disease Progression	Control group	-2.67	4.44	-13.00	1.00
	Mixed treatment	-7.42	12.57	-34.00	2.00
	Hormone treatment	-1.24	3.85	-9.00	8.00
Quality of Life	Control group	3.22	8.93	-15.00	11.00
	Mixed treatment	-1.25	9.02	-14.00	15.00
	Hormone treatment	1.82	9.68	-17.00	16.00
Emotional Distress	Control group	-1.11	3.18	-7.00	4.00
	Mixed treatment	-0.25	2.56	-5.00	5.00
	Hormone treatment	-0.06	3.65	-5.00	7.00

Table 2 shows the differences between the three treatment groups before and after treatment for the three outcomes of fear of illness progression, quality of life and emotional distress. The results showed that there was no significant difference between the three treatments in regard to fear of illness Nevertheless; we can see from the p-value that the three treatments had a greater impact on fear of disease progression, which is reflected in **Table 1**. Because of the small number of cases involved in this study, it was difficult to attain statistical significance.

Table 2. ANOVA

Variables	F	P-value
Fear of Disease Progression	2.276	0.118
Quality of Life	0.667	0.520
Emotional Distress	0.323	0.726

DISCUSSION

This study site was conducted in a regional hospital in a non-metropolitan area of southern Taiwan. Most of the cases were older and the average age was 73 years old, which was in line with their age of onset. The respondents were retired and did not obviously respond to the impact and pressure of illness because they may not have been required to go to work. Prostate cancer treatment includes prostatectomy, prostatectomy, radiation therapy, hormone therapy and chemotherapy [4] and the mainstay of clinical practice is hormone therapy. The majority of cases received hormone therapy in this study, which accounted for 17.7% of the primary treatment options for treatment with simpler hormones, which is close to half of the total patients.

Emotional distress is common in cancer patients because it can be difficult to accept the facts of living with cancer: a disrupted lifestyle, unbearable side effects of treatment and uncertainty of the disease and treatment, along with the inability to grasp the fear and fear of approaching death and other factors. The results of this study have put forward the idea that the side effects of drugs used in cancer can cause discomfort and lead to physical and psychological problems. Although the literature shows that once a person has been diagnosed with cancer, negative emotions, such as distressed sadness, fear of fear, disgust, rejection or avoidance and censure and other negative or irrational thoughts and behaviors, may occur [5,6]. However, the patient may be less psychologically responsive because of being older and instead focus more on physical changes. Therefore, future care for prostate cancer cases should be based on reducing physical emotions as the primary goal of medical care. In addition, the patient's fear of being exposed to an unpredictable process during treatment, such as incontinence, pain, tiredness, nausea, vomiting, and loss of body, home and social functions, should be considered. The year-long follow-up results indicate that patients undergoing radical surgery have more post-operative erectile dysfunction and urinary incontinence and are 3 to 5.5 times more likely to have long-term negative effects than healthy men [7], which affects the quality of life of patients with prostate cancer [8]. The results are consistent with an issue that must be taken seriously.

Regarding the fear of disease progression, the literature shows that suffering from a disease is a life-threatening process. In particular, when patients face the impact of cancer, they can experience physical and psychological distress and fear due to the illness [9]. Fear of the progression of the disease is experienced through personal feelings because the unknown course of the disease threatens physical health, which is an emotion stemming from the fear of a possible future recurrence of serious illness experiences and the inability to control their thoughts regarding these issues the series of treatment [10,11]. In recent years, for prostate cancer, monitoring behavior and providing additional support to the high-risk group of patients has been applied, similar to the additional support provided to breast cancer patients [12]. Studies of rectal cancer and lung cancer have shown that fear of disease progression or relapse has become a problem for the most common or second most common cancer patients, with 49% of prostate cancer patients showing fear of disease progression or recurrence [13,14]. A European study of patients with cancer showed that 13% of cancer patients had moderate or severe fear of disease progression, which was associated with the prognosis of their cancer. The length of diagnosis was not correlated with the type of cancer. There were no statistically significant differences between the three groups in this study, mainly due to the small number of cases.

In terms of quality of life [15] concluded that quality of life of cancer patients should include both positive and negative feelings of physical, emotional, social and cognitive functions. The most important subjective feelings are the mood of the patients and the treatment side effects. Cognition and quality of life are mostly biased subjective concepts, that is, they stem from the individual's subjective cognitive, positive and negative emotional response, and physical, mental and spiritual health are used to assess overall satisfaction with life. For cancer patients, quality of life can be used as an important indicator for evaluating health and medical measures [11,16]. Arndt et al. [17] and is particularly important in young adults younger than 50 years of age compared to older patients. Most of the cases in this study were retired, and therefore had less stressful lives. In addition, regarding the idea of "functional life quality", the simpler hormone therapy had a lower functional quality of life than the observational group, but the mixed treatment and simpler hormone therapy still had a functional quality of life at a high standard. Although the statistical tests did not reach significant levels because of the small number of cases, we can still make some reasonable inferences from the means.

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