RESEARCH ARTICLE

Anxiety and Symptom Assessment in Turkish Gynecologic Cancer Patients Receiving Chemotherapy

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Abstract

　Diagnosis and treatment procedures in cancers and resulting anxiety negatively affect the individual and the family. Particularly treatment methods may generate psychological symptoms. The aim of this study was to determine the level of such symptoms in Turkish gynecologic cancer patients receiving chemotherapy. A total of 41 patients who were referred to our gynecologic oncology research clinic between January-March 2012, receiving 3 months or more chemotherapy and who agreed to participate were enrolled in study. All the data were collected using a personal information form, Edmonton Symptom Assesment System and State-Trait Anxiety Inventory. Patients received highest point average from fatigue symptom (6.53±2.67) and lowest point average from dyspnea (1.53±3.03) according to Edmonton Symptom Assesment System. The mean State Anxiety score of patients was 43.1±9.77 and mean Trait Anxiety score was 46.7±7.01. Comparing symptoms of patients and mean State Anxiety score it was found that there was a statistically significant corelation with symptoms like pain (p<0.05), sadness (p<0.001), insomnia (p<0.05), state of well being (p<0.001) and dyspnea (p<0.05). Similarly comparing symptoms of patients and mean Trait Anxiety score demonstrated significant correlations for fatigue (p<0.05), sadness (p<0.01), insomnia (p<0.01) and state of well-being (p<0.01). As a result, patients with gynecological cancers experienced symptoms related to chemotherapy and a moderate level of anxiety. In accordance, appropriate interventions should recommended for the evaluation and improvement of anxiety and symptoms related to treatment in cancer patients.

Keywords: Gynecologic cancer - symptom control - anxiety - chemotherapy

Introduction

　Patients with chronic illness such as cancer experience different symptoms as a result of the pathophysiological mechanisms underlying the disease and/or the treatments given to remedy the disease (Shoemarker et al., 2011). The goal of cancer therapy is to maximize both length and quality of life. Patients with cancer experience significant symptom burden throughout their treatment, which negatively impacts their quality of life. Akın and Durna's study in 119 patients receiving chemotherapy, the patients reported severe tiredness, loss of well-being, anxiety, drowsiness, appetite changes, depression, pain and nausea (Akın & Durna, 2012). A systematic review of 44 studies of symptom prevalence in patients with incurable cancer found fatigue, pain, lack of energy, weakness and appetite loss occurred in more than 50% of patients (Teunissen et al., 2007). In Karabulu et al. study (2010); the most common symptoms experienced were fatigue, difficulty remembering, sadness, loss of appetite, lack of enjoyment of life, pain, distress, difficulty walking and dry mouth (Karabulu et al., 2010). The least experienced symptoms were shortness of breath and vomiting. Overall, 37.5% of the patients experienced moderate symptoms

and 12.5% experienced severe symptoms. Among the severe symptoms were loss of appetite, fatigue, sadness, dry mouth and distress; however, 48% rated these as moderate or severe (Karabulu et al., 2010). Sun et al. (2005); assessed 70 patients with ovarian cancer undergoing chemotherapy for primary or recurrent disease (Sun et al., 2005). In this study, the patients reported lack of energy, difficulty sleeping, worry, pain, sadness, drowsiness, alopecia, constipation, nausea and vomiting. Von Gruenigen et al (2006) conducted a study in patients with gynecological cancer and weakness was the most common symptom reported.

　Patients with cancer suffer from a multitude of intense physical and psychological symptoms, regardless of the stage of the disease. While physical and psychological symptoms occuring due to chemotherapy adversely affects the health, family and work life problems and uncertaties for the future life impairs his social and spiritual health. These symptoms tend to be highly distressing to patients and are associated with reduced quality of life (Redeker et al., 2000; Beesley et al., 2011). The frequency of psychological distress, such as depression and anxiety, ranges from 0% to 44% in patients with cancer (Ciaramella and Poli, 2001; Massie, 2004). The relationship between

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symptoms and psychological distress was found in studies. (Mystakidou et al., 2005; Delgado et al., 2009; Salvo et al., 2012).

Considering the variety of medical and psychological problems in cancer patients, the significance of symptoms control and evaluation is underlined in many sources (Karabulu et al., 2010; Molassiotis et al., 2010; Yeşilbakan and Okgün, 2010; Shoemaker et al., 2011; Rezky et al., 2011). Therefore; this research was conducted to determine their levels of symptoms and anxiety in gynecologic cancer patients receiving chemotherapy.

Materials and Methods

Design
This study used a cross-sectional survey design.

Setting and Sample
The 41 patients having 3 months or more chemotherapy who admitted to gynecologic oncology clinic at a university hospital from January to March 2012 and not having any comminication problem and who agreed to participate in study were included.

Instruments
The data were collected using patient information form, Edmonton Symptom Assesment System and State -Trait Anxiety Inventory .

Patient information form, patient information form established under the guidance of literature and includes personal and disease related variables. Personal characteristics are composed of questions related to age, education status, occupation, social security, monthly income level, marital status, number of children and type of family which showed in first chapter.The second chapter is formed with the variables of disease and these are clinical diagnosis, clinical stage, the name of treatment protocol,time of diagnosis, treatment duration, adaptation to the disease status and drug therapy, disease perception status, opinion about drugs, whether to have a stressful life situation, smoking and alcohol use.

Edmonton Symptom Assessment System (ESAS), the ESAS scale was developed by Eduardo Bruera et al. with the aim of improving the management of care for patients with cancer (Bruera et al., 1991). The main rule (golden rule) of the symptom assessment is based on the opinion of a patient of the severity of his/her symptoms (Guidelines for using the ESAS, 2005). The ESAS is designed to assist in the assessment of nine symptoms that are common in patients with cancer: pain, tiredness, nausea, depression, anxiety, drowsiness, appetite, loss of well-being and shortness of breath (there is also a line labelled "Other Problems"). The patients were asked if, in addition to the nine listed symptoms, they have other symptoms. The additional symptoms reported by patients were as follows: (1) skin and nail changes, (2) mouth sores, and (3) hand numbness. The severity at the time of the assessment of each symptom was rated on a numerical scale from 0 to 10, with 0 meaning that the symptom was absent and 10 denoting the worst possible severity. The research nurse provided the patients and caregivers with instructions on how to complete the instrument (Guidelines for Using the ESAS, 2005)

In the reliability and validity study of the Turkish version of the scale, for the period before chemotherapy, Cronbach's alpha coefficient was measured as .83. After chemotherapy, Cronbach's alpha coefficient was reported as .76 (Kurt Sadirli and Unsar, 2008). In this study, the Cronbach's alpha coefficient of the ESAS was .70 for the patients.

State Trait Anxiety Inventory (STAI), STAI was developed in 1970 by Spielberger and colleagues. The reliability and validity of the Turkish version of the STAI was conducted in 1985 by Öner and Le Compte. Cronbach's alpha internal consistency level was found to be 0.94. State anxiety scale measures how a person feels in a certain situation at a certain period of time. The STAI consists of 20 statements and subjects are asked to indicate how they felt 'at the moment' using a Likert 4 point scale ranging from 'not at all' to 'very much so'. Total scores obtained from the STAI range from 20 to 80.

The anxiety level is evaluated from the total score obtained from the STAI. A score between 1 and 20 is deemed to be not anxious; 21 to 40 as mild anxiety, 41 to 60 as moderate anxiety, and 61 and higher as severe anxiety (Öner and Le Compte, 1985). In this study, the internal consistency of the STAI was calculated giving a Cronbach's alpha of 0.92.

Procedures
Because the clinic chief's approval is enough to carry out the descriptive studies, the study was approved by the chief of Obstetric and Gynecologic Clinic of Balcalı Hospital, Çukurova University. In order to obtain patient's verbal consent, all participants were informed of the purpose of the study, ensured that the collected information would be used solely for scientific purposes, would be kept confidential and not shared by others except the researchers.

A face to-face interview method to administer the questionnaires by the researcher was used. The interviews, which lasted for about 15 minutes, were conducted by the investigator in the patient's room. Disease-related characteristics of the patients were obtained from patients files.

Data Analyses
The statistical analyses were performed using SPSS for Windows version 13.0. For analysis of research finding, the number and percentage distribution and Pearson correlation test were used. P<0.05 was accepted as the level of prespecified statistical significance.

Results

Average age of the patients was 56.73±11.28. It was found that 34.1% of patients were not literate, 14.6% illeterate, 48.8% first-secondary education and 2.4% were high school graduates.97.6% of patients were not working, 68.3% were married and 82.9% had lived in nuclear family. Of the patients 51.2% was found to have

4 or more children.

It was determined that 78% of patients had ovarian cancer, 12.2% had cervical cancer and 44.7% of them were in stage 3. 65.9% of patients were diagnosed of cancer more than 6 months and 58.5% were received 3-12 months of chemotherapy treatment. 78% of patients provided compliance with the disease, 65.9% of them were thinking disease as a long term therapy requiring disease. 26.8% of patients provided compliance to the medication and 61% believed such drugs would treat them (Table 1). 19.5% of patients were cigarette smokers, of them 50% used 10 or more cigarette per day. No patients were consuming alcohol.

Table 1. Distribution of Findings Related to Disease of Gynecologic Cancer Patients

Properties	N	%
Diagnosis: Overian ca	32	78.0
Cervix ca	5	12.2
Endometrian ca	4	9.8
Clinical stage: Stage I	9	23.7
Stage II	11	28.9
Stage III	17	44.7
Stage IV	4	2.7
Time at which the disease is diagnosed		
Less than 6 months	14	34.1
More than 6 months	27	65.9
Duration of treatment: 3-12 months	24	58.5
Over 12 months	17	41.5
Adaptation to the disease status: Yes	32	78.0
No	9	22.0
Disease perception status		
An incurable disease	3	7.3
Disease requiring long term therapy	27	65.9
The disease is easy to treat	11	26.8
Status of compliance to medication: Yes	11	26.8
No	30	73.2
Opinion about drug		
Believe that it will treat	25	61.0
It will treat but have many side effects	14	34.1
Believe that it won't treat	2	4.9

Table 2. Distribituon of Symptoms Experienced by Gynecologic Cancer Patients

ESAS*	Absent[a] %	Mild Severity[b] %	Moderate Severity[c] %	Worst Possible Severity[d] %
Pain	7.3	7.3	58.5	26.9
Fatigue	2.4	2.4	60.9	34.1
Nausea	17.1	4.8	56	21.9
Depression	19.5	2.4	58.6	29.5
Anxiety	19.5	7.3	51.2	21.9
Drowsiness	12.2	7.3	48.8	31.7
Appetite	19.5	9.7	44	26.8
Loss of well-being	2.4	9.7	80.5	7.3
Shortness of breath	75.6	-	17	7.3
Skin and nail changes	29.3	7.3	46.4	17.1
Mouth sores	56.1	20.5	14.5	9.8
Numbness in hands	34.1	4.9	36.7	24.4

*The Edmonton Symptom Assessment System, [a]Absent: 0 score, [b]Mild Severity: 1-2 scores, [c]Moderate Severity: 3-4-5-6-7 scores, [d]Worst Possible Severity: 8-9-10 scores

Table 3. Severity of Symptom Experienced by Gynecologic Cancer Patients

Semptomlar	X±SD
Pain	5.58±3.03
Fatique	6.53±2.67
Nausea	5.19±3.28
Sadness	5.00±3.21
Anxiety	4.97±3.12
Insomnia	5.82±3.45
Loss of appetide	4.90±3.59
State of well-being	4.70±2.14
Dyspnea	1.53±3.03
Changes in the skin and nails	3.90±3.31
Mouth sores	2.12±3.28
Numbness in hands	4.51±3.93

Table 4. Comparison of Mean Score of Edmonton Symtom Assesment System and Mean Score of State Trait Anxiety Inventory

Symptoms	State anxiety	Trait anxiety
Pain	r= 0.324*	r= 0.264
Fatique	r= 0.219	r= 0.337*
Nausea	r=0.114	r= 0.075
Sadness	r=0.605**	r=0.470**
Insomnia	r=0.433**	r=0.398**
Loss of appetide	r=0.102	r=0.210
State of well being	r=-0.625**	r=-0.512**
Dyspnea	r=0.315*	r=0.227
Changes in the skin and nails	r=0.232	r=0.158
Mouth sores	r= 0.098	r= 0.285
Numbness in hands	r=0.395	r=0.346

*p<0.01, **p<0.05

The patients most often reported that they experienced loss of well-being (98.6%), tiredness (98.6%), pain (92.7%), anxiety (80.5%), depression (80.5%) and appetite changes (80.5%). The most rarely reported symptoms were shortness of breath(24.4%), mouth sores (43.9%) (Table 2).

When the severity of symptoms experienced by patients were examined; average score of pain symptom 5.58±3.03, fatique symptom 6.53±2.67, nausea symptom 5.19±3.28, sadness symptom 5.00±3.21, anxiety 4.97±3.12, insomnia symptom 5.82±3.45 and mean score of loss of appetite was found 4.90±3.59. It was found that patients received highest point average from fatique (6.53±2.67) and lowest point average from the dyspnea (1.53±3.03) according to Edmonton Symptom Assesment System (Table 3).

We found that the mean State Anxiety score was 43.09±9.77, and mean Trait Anxiety was 46.73±7.01. When was compared the symptoms experienced by patients and average score of State Anxiety; pain (r= 0.324, p<0.01), sadness (r=0.605, p<0.05), insomnia (r=0.433, p<0.05), dyspnea (r=0.315, p<0.01), it was found that there was a significant relationship between the symptoms. Likewise with the comparison of symptoms experienced by patients and mean score of Trait Anxiety; a positive relationship were found between symptoms (fatique (r= 0.337, p<0.01), sadness (r=0.470, p<0.05), insomnia (r=0.398, p<0.05)). A negative relationship were found between state of well-being (r=-0.625, p<0.001; r=-0.512,

p<0.01) and State Trait Anxiety (Table 4).

Discussion

Patients with cancers experience many symptoms related to disease process itself as well as side effects of chemotherapy. Patients with gynecologic cancer experience significant symptom burden throughout their disease course and treatment, which negatively impacts their quality of life. Good symptom management begins with routine symptom assessment and use of a standardized screening tool can help identify patients with high symptom burden (Casey et al., 2011; Rezky et al., 2011).

In this study, patients with gynecolgic cancer most frequently reported symptoms tiredness, loss of well-being, pain, drowsiness, nausea, anxiety, appetite. Akın and Durna's study (2012), patients with cancer most frequently reported experiencing tiredness, loss of well-being, anxiety, drowsiness, appetite changes, depression, pain and nausea. In general, patients with cancer report numerous symptoms and significant impairments in physical, functional, and emotional well-being (Northouse et al., 2002; Sun et al., 2005).

All the gynecological cancer patients included in the study experienced more than one symptom. This result raises concerns about the adequacy of current symptom assessment and management by oncology clinicians and nurses. This result also underscores the critical need for ongoing palliative care for cancer survivors, perhaps through the vehicle of survivorship clinics.

Patients received highest score average from the symptom of fatigue (6.53±2.67) and lowest score average from the dyspnea (1.53±3.03). In Akın and Durna's study (2012), patients with gynecolgic cancer received highest score average from the fatigue (4.96±3.47). Sun et al. (2005) assessed 70 patients with ovarian cancer undergoing chemotherapy for primary or recurrent disease. While nausea and vomiting were the most problematic, fatigue also was a significant problem and higher levels of distress were associated with recurrent disease. Von Gruenigen et al. (2006) reported that weakness was the most common symptom among gynecologic oncology patients during palliative chemotherapy. In Kurt Sadırlı ve Ünsar's study (2008), It was also found that cancer patients receiving chemotherapy taken highest score average from loss of appetide (4.7 ±3.9) and lowest score average from the skin and nail changes (0.5±1.2). Deshields et al. (2010) found that gynecologic cancer patients had high symptom scores. The most commonly occurring, and by far most distressing, symptom in patients with cancer is the lack of energy (Molassiotis et al., 2010). Common reported symptoms include lack of concentration, diffi-culty sleeping, shortness of breath, coughing, pain, dry mouth and drowsiness (Molassiotis et al., 2010).

Cancer is a disease that adversely affect human life. During the recent years with the progression of diagnosis and treatment modality early diagnosis could be possible and thus life span extends. Increased life expectancy of the individual patient with cancer face more years to stay, fight with cancer and raises the need to maintain a life with certain quality. Learning to live with cancer requires coping against the cancer symptoms and reorganizing life for the development of new living standart. During this course individuals try to cope with an illness that affects their whole life but expectation of something that will be bad and uncertainity will cause the individual to live in anxiety. Long lasting cancer treatment and side affects turns the family, work and social life upside down and as a result loss of role, hopelessness, helpnessness, social isolation, exhaustion and anxiety can lead to live. Some studies showed that the anxiety level was higher in patients with gynecological cancer (Fowler et al., 2004; Powell et al., 2008; Bisseling et al., 2009). In this study anxieties of gynecologic cancer patients was found to be moderate.

When the symptoms experienced by patients at the avarage score of state anxiety was compared, it was found that there were significant relationship with respect to pain, sadness, anxiety, sleep, state of well-being, dyspnea and numbness. It was also found that there was statistically significant correlation between fatigue, sadness, anxiety, sleep, state of well-being and numbness when the mean trait anxiety scores compared to symptoms of patient's live. By using ESAS in cancer patienst, Salvo et al. (2012) state that there was a positive relation between the pain, insomnia, state of well-being, dyspnea and anxiety. Researches have shown some factors to be correlated with a higher prevalence of anxiety, including the presence of physical symptoms (Mystakidou et al., 2005; Delgado-Guay et al., 2009; Salvo et al., 2012). It is important to identify patients who are at a higher risk of developing anxiety in its early stages in order to provide adequate treatment.

In conclusions, in the current study, all the gynecological cancer patients receiving chemotherapy experienced more than one symptom and experienced moderate level of anxiety. Chemotherapy-related symptoms need to be appropriately assessed and managed for patients to receive the optimal benefits of therapy. Assessments should evaluate the frequency and severity of symptoms, as well as whether cancer patients attribute their symptoms to cancer or to other conditions. Oncologists and cancer care nurses should be responsible for the identification of patients who have problems with anxiety. Healthcare professionals should pay greater attention to identify signs of anxiety in patients and design interventions to help alleviate it earlier.

Acknowledgements

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